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Phd Thesis

Local food policies as drivers to innovate the Italian public sector

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Affidav	vit
	I declare that I wrote my PhD thesis "Local food policies as drivers to innovate the Italian public sector" independently under the guidance of the thesis supervisor and using professional literature and other information sources that are cited in the thesis and listed in the list of sources used at the end of the thesis. As the author of the said PhD thesis, I further declare that I have not infringed the copyrights of third parties in connection with its creation.
In Praș	gue on the date of submission

Acknolegments

This thesis wouldn't be possibile without the help of many people that invested in this work and in me, with their time and energy. During these four years of research, I had the great opportunity to work with many women and men, in the research field, that I have to thank not only for this thesis but for the researcher I am today.

I thank Prof. Zagata and Prof. Lostak for believing in this project from day one and giving me the opportunity to do this research.

I thank my collegue Holly Barlow for walking this crazy path with me.

I thank the University of Gastronomic Sciences in the person of Franco Fassio for beliving that I could work in the food policy field years before my PhD started.

I thank the University of Pisa and all the team of La Piana del Cibo for being my first case study and one of the places where my heart will always be.

I thank the team from Rome, in particular Davide Marino, for teaching me so many things I cannot even believe I actually learned.

I thank all the team at Està for showing me the best side of research (and of Milan): your work inspired me to persue this career and I am excited for its next chapters with you. In particular, thank you to Andrea Calori, your works introduced me into the world of food policies and I would never be thankful enough.

A special thank you to all the authors of the articles that you will find in this thesis and to all the people that took some time to make an interview with me: it literally would not have been possibile without you.

And to all my friends and family who listened to me talking about food policies way more than needed: this is only the beginning.

This thesis is dedicated to my grandmas and great haunts who taught me that learning is a privilege and that sharing knowledge with others is a duty.

Local food policies as drivers to innovate the Italian public sector

Abstract

The thesis analyses the topic of local food policies as drivers of governance innovation into the public sector. The research starts from the assumption that local food policies all over the world are one of the answers to sustainable development as they aim to meet local needs of a food system by introducing new forms of collaboration and partecipation among food system stakeholders. In particular, this thesis focuses on the role of the administration within these food governance systems in order to understand what is their current role and what could be improved through food policies. To do so, the research considers the case study of Italy, declined in four cities (Lucca, Milan, Turin and Rome), as examples of four different contexts that have been implementing local food policies. Through four years of partecipative observation and thirty six semi-structured interviews, the research observed how local food policies emerge in different territorial context, aiming to understand what challenges and solutions alternative governance systems and integrated policies have in dealing with food system issues and local administration. The outcome of these research activities are four peer reviewed articles, one for each context selected, that bring insights into each local food system and policy context, along with general lessons to be learned on food policies in Italy. Findings show that alternative and collaborative food governance can bring innovation into the Italian administrative system. The main innovation is related to the introduction of a new narrative on the role of cities as gamechanger for global sustainable development. The thesis shows how innovation of the administration can be achieved using already existing instruments such as councils, joint managements, trans-disciplinary working groups inside the municipality, with the aim to achieve integration of departments, cooperation among actors of the food system and coherence among policies.

Keywords:

Food; food system; food policy; local government; public sector; Italy; public administration; governance; food council; innovation; policy integration

Contents

1.	Introd	duction 1
2.	Aim o	of the study and methodology 3
	2.1	Aim of the study 3
	2.2	Methodology 5
		2.2.1 Methodology and methods 5
		2.2.2 Research activities and outputs 6
		2.2.3 Key findings from research activities 15
3.	Theor	retical framework 20
	3.1	The role of rural-urban areas in the food sustainability challenge 21
	3.2	The world of integrated food policies 31
	3.3	Local governance and policy integration in integrated food policies 42
	3.4	The Italian administrative system 50
	3.5	The food policy movement in Italy 58
4.	Result	ts 65
5.	Discus	ssion 130
	5.1	On urban food policies in Italy 130
	5.2	On collaborative governance and innovation 136
6.	Concl	usion 143
7.	Refer	ences 145
8.	List of	f figures, tables, graphs, and abbreviations 161
	8.1	List of figures 161
	8.2	List of tables 161
	8.3	List of graphs 161
	8.4	List of abbreviations 162

1. Introduction

The rise of urban food policies has become a prominent research topic in the past years all over the world, as social and political movements born from the need to tackle the challenges of the globalised food system at a local level (Sonnino, 2014). Starting by the assumption that the current global food system needs a paradigm shift (Linseisen et al 2002; FAO 2012; Tukker 2006; Westhoek et al 2014; Bailey et al., 2016; Lang and Heasman, 2015; Springmann et al., 2018; Willett et al., 2019; Barilla Foundation, 2021; IPES-Food & ETC Group, 2021), these food policies aim to integrate many disciplines and policy areas by including actors from the entire food chain in the policymaking (Lang et al., 2009; Calori and Magarini, 2015). Using food as a vector, they include into a government agenda a new vision that integrate policy sectors and goals that are linked to food: health, education, environment, welfare, social justice and more (Cretella and Buenger, 2015).

These policies aim to be multilevel involving local governmental and non-governmental institutions into a global discourse. Since, food and city have always had a symbiotic relationship that nowadays has been lost (Haysom, 2015), food system policies tend to have strong implications for urban-rural connections as they root in the idea that cities do not stand alone but support and are supported by rural areas (Lang et al., 2009; Calori and Magarini, 2015; Hawkes and Halliday, 2017). Previous policies, those related to rural development, often distinguish rural and urban, missing the interconnections (Akkolyunlu, 2013). For this reason, urban food policies aim to create rural-urban linkages where development is seen as multiple, non-linear and made by multiple actors (Healey, 2004, p.46 in Shucksmith, 2009, p.6). The role that the institutions have in creating rural-urban policies that rotate around food, is fundamental in achieving the paradigm shift that these policies aim towards. The relationship between territorial and food system actors with the local administrative system in the country of analysis is extremely relevant when talking about food policy. Governance and government are, in fact, at the core of urban food policies (Calori and Magarini, 2015) aiming to understand how cities can respond to the new relationship that globalisation is creating with food, if they maintain the same governance and political system (Haysom, 2015).

To answer this question, this research investigates the case of Italy. The country in fact has been impacted by the challenges of a globalized food system as much as the rest of the world. Italy is experiencing a nutrition transition from the Mediterranean diet towards a diet with excessive saturated fatty acids, added sugars and sodium and reduced fiber consumption, resulting in a negative impact on health, water consumption and ecological footprint (De Marco et al, 2014). At the same time, the rate of people at risk of food poverty is growing, particularly after Covid-19 emergency (Galli et al., 2018; Action Aid, 2020).

Moreover, the case of Italy is particularly interesting for governance research as the current public system and the territorial government has been highly criticized (Atkinson, 2007). Critics related to the functioning of the Italian administrative system are many, especially related to education, health, social security, justice, transport (Hine, 1993). The continuous decentralization and regional division carried on by the Italian government has exacerbated many territorial inequalities. The country is living demographic depletion, a strong rural-urban dichotomy, economic, social, and environmental inequalities (Mazzocchi, 2020; Barca, 2017).

All these conditions have created an awakening movement where many territories have started to design and implement food policies (Berti and Rossi, 2019; Arcuri et al., 2022; Bottiglieri et al., 2016; Forno et al., 2020; Minotti et al., 2022). These food policies have different types of relations with the local government and institutions and therefore create interesting cases of how a local food policy can integrate into the public system and ultimately change the way local administrations work.

2. Aim of the study and methodology

2.1 Aim of the study

The research "Local food policies as drivers to innovate the Italian public sector" aims at studying the local food policy movement in Italy and in particular what kind of food governance could help western cities to re-build a connection with rural areas. The idea is to research the local food policy movement, focusing on the link between territorial actors and the administrative local government, and build on how to create an alternative food governance system that would facilitate governance innovation in a sustainable way. For this reason, the research will look at examples of alternative governance structures and integrated local food strategies, that are currently growing in Italian territory, with a particular attention to the role of local administrative system in these new policy systems. These initiatives, along with other local food projects flourishing all around the world, are the answer to the need to reconnect rural and urban areas and build a path towards a sustainable transition.

The analysis is based on four Italian areas (Turin, Lucca, Milan, Rome), selected because of their innovation in the field of food policy and because of their different level of government —rural area, urban area, metropolitan area—which guarantee a greater and broader understating of the territoriality of these policies. The purpose of the study is to observe how local food policies emerge in different territorial context, aiming to understand what challenges and solutions alternative governance systems and integrated policies have in dealing with food system issues and local administration.

Hence, with the help of primary and secondary data, the research aims at answering the following general research question:

To what extant an alternative urban food governance can bring innovation inside the administrative structure of a local government?

Within this research question, the research also aims to answer some more specific questions:

- What could be the most suitable form of alternative urban food governance to reconnect rural-urban areas?

- How does an alternative urban food governance integrate with the traditional administration system?
- Who are the main actors involved in an alternative urban food governance? What type of power do these actors have and how do they influence the political process?

To answer general and specific research questions, a comprehensive literature review has been conducted (chapter 3) on how food policy came across, their current role in local governments -with a deep dive in the Italian government structure-, and how are food policy developing in Italy. Then, a collection of published scientific articles is presented to show the work done by the author during the PhD studies (chapter 4). Each article has their own context, literature review and research method, however, all together they aim at answering the research questions previously described. The literature review here presented has the purpose to set the ground for a discourse, broader than the single article, on food policy in the Italian context. For this reason, the thesis ends with a general discussion of all results from the articles from which conclusions are drawn (chapters 5 and 6).

2.1 Methodology

2.1.1 Methodology and methods

Starting from the literature review, the research has been following the methodology of case studies to answer to the previously presented research question: *to what extent an alternative urban food governance can bring innovation inside the administrative structure of a local government?*

Although case studies method is one of the most frequently qualitative methodology used (Yazan, 2015), it does not have a well-defined and structured protocol (Merriam, 1998; Yin, 2002). According to Yin (2002) case study is an empirical inquiry that investigate a case, intended as

"a contemporary phenomenon within its real-life context, especially when the boundaries between a phenomenon and context are not clear and the researcher has little control over the phenomenon and context" (p.13).

Indeed, the study of cases relates to the analysis of "an integrated system" (Stake, 1995, p.2) which has specific boundaries and purposes (Stake, 1995; Merriam, 1998; Yin, 2002). According to Stake, case study methodology has four characteristics which can also be found in this study:

- to be holistic, meaning that the research focusses not only on a phenomenon but on the context that surrounds it as an inseparable intercorrelation.
- to be empirical because the researcher bases the study on their observation on the field.
- to be interpretative as it is based on a research-subject interaction.
- and emphatic because it reflects the perspective of the subjects involved and their direct experiences.

According to Merriam (1998) a case (i.e., unit of analysis) can be a person, a program, a group, a policy, any phenomenon that occur inside specific boundaries. Hence, the design of those boundaries is necessary to develop the method. Yin (2002) attempts to give instructions on how to design case study research by suggesting five necessary components:

1) a research question and its proposition; 2) research units of analysis; 3) the logic linking the data to the propositions; 4) the criteria for interpreting the findings.

Indeed, four cases have been selected for this study with the following characteristics, which set the case study boundaries and help gather information to answer to the research questions:

- Italian cities with different sizes, territories, and population.
- Cities that are implementing or have been implementing local food policies at different level of government.
- Cities that are working on alternative governance structures to build local food policies where the administration plays a key role.

Hence, in this thesis, the author is presenting the results of a case study research published in 4 different papers, which, for the purpose of the PhD defence are here framed as one case study.

2.1.2 Research activities and outputs

After a deepened literature review on scientific and grey literature, the author selected Turin, Lucca, Milan, and Rome as the four case studies, each one based on the same research methods, that followed the boundaries imposed with the aim to answer the general research question previously described. The author had the opportunity to collaborate with several universities and research stakeholders on local projects within the selected cities, which helped gather empirical data. Besides visiting the context of the case studies, interacting with local actors, and participating to local events, formal and informal meetings, the author collected thirty-one interviews. The author used as evidentiary sources documentation, interviews, direct observation and participant observation, all sources suggested from Yin to be necessary when conducting case study research (2002).

In particular:

Lucca: from 16/09/2019 to 20/12/2019, the author had the opportunity to participate to the Erasmus + program with the Department of Food, Environment and Agriculture of the University of Pisa (Italy) which was working on the creation and implementation of the Piana del Cibo di Lucca (Lucca Plain of Food). The author worked side by side with the researchers that helped the creation and implementation of the strategy by attending several public events involving different categories of actors, individual interviews to stakeholders and internal discussions. Moreover, the author was able to collaborate with the European

research project ROBUST- Rural-Urban Europe, which is working on the development of the food policy and the reconnection of rural-urban in the area. During this traineeship, the author gathered a total of six interviews and the opportunity to write the joint scientific article, which is part of this thesis:

Arcuri, S., Minotti, B., & Galli, F. (2022). Food policy integration in small cities: The case of intermunicipal governance in Lucca, Italy. *Journal of Rural Studies*, 89, 287-297.

Milan: from 22/06/2020 to 16/03/2021 the author had the opportunity to participate to the Erasmus + program with Està – Economia e Sostenibilità¹, a research centre based in Milan which has been working in the development of the Milan Food Policy. The traineeship encompassed the participation and direct observation of the work of Està, main research partner of the Milan Food Policy Office. The trainee worked side by side with the researchers that helped the creation and implementation of the strategy, conducting eleven interviews to key stakeholders and recreating the process and governance of the Milan Food Policy. Moreover, the author was able to collaborate with the other researchers in writing an academic article on the research conducted during the Erasmus, that is part of this thesis:

Bianca Minotti, Valentino Affinita, Andrea Calori & Francesca Federici (2022): The integration of food policies in a local administration system: the case of the Milan food policy, *Agroecology and Sustainable Food Systems*, DOI: 10.1080/21683565.2022.2091718

Rome: from 30/01/2021 to 30/09/2021 the author had the opportunity to work with CURSA - University Consortium for Socio-Economic Research and the Environment, to the designing and writing of the "Food Plan" of Rome Metropolitan City as part of the Metropolitan Agenda for Sustainable Development of the city. During this project, the author observed the whole process of creating a metropolitan food plan while gathering nine interviews to key stakeholders of the city of Rome. Those interviews have been used to analyse the way food policies are implemented in the city of Rome, through the scientific article, which is part of this thesis:

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¹ Research center based in Milan which works on the topic of food policies in Italy: https://assesta.it/

Minotti, B., Cimini, A., D'Amico, G., Marino, D., Mazzocchi, G., & Tarra, S. Food Policy Processes in the City of Rome: A Perspective on Policy Integration and Governance Innovation. *Frontiers in Sustainable Food Systems*, 540

Turin: at the beginning of the PhD, the author had the opportunity to follow the work of one strategic partner of one of the most important food policy projects in the city of Turin, from which a joint scientific article was born. This is part of the thesis:

Fassio, F., & Minotti, B. (2019). Circular economy for food policy: the case of the RePoPP project in the City of Turin (Italy). *Sustainability*, 11(21), 6078.

In the years that followed, the author kept following the evolution of Turin and had the opportunity to produce four more interviews, participate to internal meetings and event thanks to the collaboration with Està – Economia e Sostenibilità. This research centre started a project within the EU project FUSILLI towards the design and implementation of a food policy council for the Municipality of Turin. The author had the opportunity to follow the process from September 2021 to June 2022.

To better understand the context of research Table 1 shows key socio-economic characteristics of the four areas selected, followed by a graphical representation of their geolocalisation (Graph 1).

Table 1: Socio-economic characteristics of the four areas of research (source: author)

Area of	Region	Population	Population	Area total
research		Total	Density	
Lucca	Tuscany (centre)	89,346	480/km2	185.5 km2
Milan	Lombardy (north)	1,371,498	7,500/km2	181,67 km²
Turin	Piedmont (north)	847,287	6,500/km2	130.17 km2
Rome	Lazio (centre)	2,860,009	2,236/km2	1,285 km2

Graph 1: Geolocalisation of the four areas of research (source: author)



In addition, the author also conducted six interviews to researchers and key stakeholders that work on food policies at a national level in Italy, to gather more information on how food policies work besides the specific case studies. These final six interviewees have been selected among the Italian Network for Local Food Policies, the first Italian network made by researchers, local councillors, civil society with the aim to share information on the topic of local food policies. The author is part of the secretariat for this network and is therefore able to observe in person the evolution of food policies in Italy and discuss challenges and solutions with the most prominent Italian thinkers in this field.

The following table 2 catalogues and describes the thirty-one interviews conducted. The interview codes found in this table are the same that will be found in the articles and in the thesis. Table 3 summarizes, on the other hand, the lived experiences previously explained.

Table 2: list of interviews gathered for the purpose of the articles collection in this thesis (source: author)

	Interview	Type of	Location	Time
	code	stakeholder		
1	Staff 1	Local	Lucca	September 2019-April 2020
		administration		
2	Researcher 1	Researcher	Lucca	September 2019-April 2020
3	Deputy	Politician	Lucca	September 2019-April 2020
	Mayor			
4	Researcher 2	Researcher	Lucca	September 2019-April 2020
5	Staff 2	Local	Lucca	September 2019-April 2020
		administration		
6	Staff 3	Local	Lucca	September 2019-April 2020
		administration		
7	Research 1	Research	Milan	September 2020- March
				2021
8	Research 2	Research	Milan	September 2020- March
				2021
9	Staff 1	Local	Milan	September 2020- March
		administration		2021
10	Staff 2	Local	Milan	September 2020- March
		administration		2021
11	Civil society	Civil society	Milan	September 2020- March
	1			2021
12	Civil society	Civil society	Milan	September 2020- March
	2			2021
13	Staff 3	Local	Milan	September 2020- March
		administration		2021
14	Staff 4	Local	Milan	September 2020- March
		administration		2021
15	Civil society	Civil society	Milan	September 2020- March
	3			2021

16	Staff 5	Local	Milan	September 2020- March
		administration		2021
17	Staff 6	Local	Milan	September 2020- March
		administration		2021
18	Interview 1	Politician	Online	January 2021 – September
				2021
19	Interview 2	Politician	Online	January 2021 – September
				2021
20	Interview 3	Research	Online	January 2021 – September
				2021
21	Interview 4	Civil society	Online	January 2021 – September
				2021
22	Interview 5	Civil society	Online	January 2021 – September
				2021
23	Interview 6	Local	Online	January 2021 – September
		administration		2021
24	Interview 7	Civil society	Online	January 2021 – September
				2021
25	Interview 8	Civil society	Online	January 2021 – September
				2021
26	Interview 9	Civil society	Online	January 2021 – September
				2021
27	Network1	Researcher	Online	July 2021-October 2021
28	Network2	Researcher	Online	July 2021-October 2021
29	Network3	Researcher	Online	July 2021-October 2021
30	Network4	Researcher	Online	July 2021-October 2021
31	Network6	Researcher	Online	July 2021-October 2021
32	Turin 1	Local	Turin	September 2021- June 2022
		administration		
33	Turin 2	Local	Turin	September 2021- June 2022
		administration		

34	Turin 3	Research	Turin	September 2021- June 2022
35	Turin 4	Civil society	Turin	September 2021- June 2022

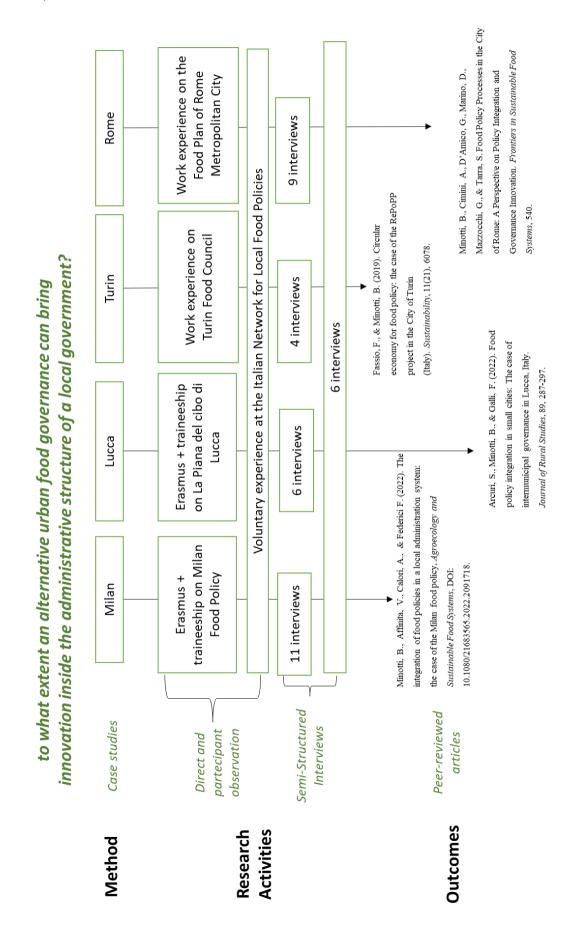
Table 3: list of lived experiences gathered for the purpose of the articles collection in this thesis (source: author)

Lived experience	Date
Erasmus + traineeship on La Piana del cibo di Lucca	16/09/2019 to
	20/12/2019
Erasmus + traineeship on Milan Food Policy	22/06/2020 to
	16/03/2021
Work experience on the Food Plan of Rome Metropolitan	30/01/2021 to
City	30/09/2021
Work experience on Turin Food Council	09/2021 to 06/2022
Voluntary experience at the Italian Network for Local Food	01/2020 to present
Policies	

Regarding the analysis of these interviews and of the case studies in general, the author produced four separated articles with different frameworks of analysis, selected according to the case study context and focus. Hence, no specific strategies on how to analyse case studies have been suggested by the literature (Yazan, 2015) as, according to Stake (1995) analysis is "a matter of giving meaning to first impressions as well as to final compilations" (p.71). Merriam (1998) and Stake (1995) both stress the idea that data collection and analysis should be conducted simultaneously, with a strong focus on the researcher's impression and intuition. The fact that the author visited the context of the case studies and experienced in person what it means to work on food policy process at local level, really helped in better understanding how to interpret the data. Besides the interviews collected, in fact, many informal conversations and participative observation where made, which helped better understanding and interpreting the data collected in the interviews. For each interview, the author recorded and listened many times, taking notes and adding impressions near the words of the interviewees. Then, according to the theoretical framework selected for each article, the interviewees concepts and words were categorized according to each framework.

However, "analysis become more intensive as the study progresses and once all the data are in" (Merriam, 1998, p.155). For this reason, those interviews that have not been analysed (interviews from 27 to 35) in the articles presented, inform the discussion and conclusions of this thesis. Then, a final comment will be drawn thanks to a comparison between the four case studies analysed in the articles presented, which will be fundamental to create a discussion on the topic and answer to the research questions of this research.

Graph 2: Graphical representation of method, research activities and outcomes (source: author)



2.1.3 Key findings from research activities

Fassio, F., & Minotti, B. (2019). Circular economy for food policy: the case of the RePoPP project in the City of Turin (Italy). *Sustainability*, *11*(21), 6078.

Circular economy for food (CE) and food policies (FP) are two emerging but already prominent research areas, particularly when talking about the cities of the future. This paper analyzes the dynamics between these two fields of research, starting from review articles and the analysis of a case study, underlying the fundaments that FP and CE share. This paper focuses on using circular economy (CE) indicators and strategies to shape urban food policies (FP) to create a new business and political model towards sustainability. It introduces four converging perspectives, emerging from the literature, and analyzes how they have been integrated in the case study RePoPP (Re-design Project of Organic waste in Porta Palazzo market), a circular project born from the FP of the City of Turin (Italy). RePoPP is a multi-actor project of urban circular food policies against food waste, which demonstrates how a circular approach can be the turning point in the creation of new food policies. This article define for the first time a new research framework called "circular economy for food policy", along with its characteristics: the application of a systemic approach and CE to problems and solutions, the need for a transdisciplinary and integrated project design for the 9R (responsibility, react, reduce, reuse, re-design, repair, recover, recycle, and rot), the use of food as a pivot of cross-sectoral change, and a new form of collaborative and integrated governance.

For the sake of this thesis, it is an interesting piece of work as it shows how most food policies start with a project, experimenting new ways of approaching a topic and interacting with stakeholders. Starting from the collection of the unsold food, the project had positive impacts on waste, society, and education. The success of the project is due to the creation and use of a new governance structure that welcomes actors of various kinds and backgrounds united by common and shared goals. RePoPP is, in fact, one of the first projects that helped the municipality of Turin to find an institutionalized cooperation between the administration and the territorial stakeholders, putting the base for a collaborative integrated governance.

Arcuri, S., Minotti, B., & Galli, F. (2022). Food policy integration in small cities: The case of intermunicipal governance in Lucca, Italy. *Journal of Rural Studies*, 89, 287-297.

In this study, the authors examine a unique case study and process that led to the establishment and further development of the first intermunicipal food policy (IFP) in Italy, called *Piana del Cibo* (literally "Plain of Food"), a governance arrangement through which five municipalities within the province of Lucca (in the Tuscany region, central Italy) reach out beyond their administrative and functional boundaries. Despite the food policy agenda in Lucca being currently underway, this research contributes to a deeper understanding of the possible pathways of policy integration and of the implications of such processes in small cities, highlighting potential enablers and obstacles to integration. In fact, food and food security are not areas where municipalities have roles prescribed by law; nonetheless, they are responsible for a range of overlapping services and functions related to food. Competences for policymaking are divided across many different departments, local authorities, and agencies whose functions involve multiple actors, and both scholars and policymakers have called for a more integrated approach to food policies and for cities to play a prominent role in addressing food system challenges through new, place-based, and carefully crafted governance systems.

The findings of the study indicate that the governance structure currently tested is an institutional unicum in the Italian food policy landscape and is shaped as joint management of food policy functions (*gestione associata*) combined with an elaborate structure of participatory governance. The presented case study illustrates how a process of (food) policy integration should be understood as processes entailing different and mutually interacting dimensions.

This work is particularly important in this thesis as it is located at an unusual scale for urban food policies, a group of small municipalities in a rural-urban setting, which give an interesting perspective on the relationship between rural and urban. Also, because of the context, as it will be better explained in the article, this case study has a strong focus on participation which is a key concept in urban food governance. The case of the IFP of the Plain of Lucca showcases a set of factors that can reveal potential enablers and obstacles in such processes, defining elements of the governance identified as three target levels of integration. The study shows that the participatory food governance topic is in constant

balance between high and low level of integration because of the complementary framings of responsibility and citizen engagement mutually reinforcing and/or weakening.

Bianca Minotti, Valentino Affinita, Andrea Calori & Francesca Federici (2022): The integration of food policies in a local administration system: the case of the Milan food policy, *Agroecology and Sustainable Food Systems*, DOI: 10.1080/21683565.2022.2091718.

The city of Milan has developed a local food policy since 2014, that works from inside the municipality as part of the local administration. Today, it is considered one of the most important food policies in Italy and a best practice at the international level. The aim of this research is to analyse the process that led to the implementation of the Milan food policy. The Milanese example can help understand how to build a policy context in support of the formulation and implementation of a food policy that would respond to the principles and methods of agroecology within an urban dimension. The methods used to analyse this policy process, through the policy cycle framework, are a content analysis of key documents and interviews with key stakeholders. Because of the complexity of the study, due to the long period of time considered (2014-2021), lived experiences are at the core of the analysis. This research has worked on the knowledge of one of the main partners of the Municipality of Milan, namely EStà, which is an independent research centre that facilitated the entire process. The research highlights key information on the agenda setting, the policy formulation, the policy adoption, and the policy implementation, trying to break down the process, understand the dynamics and the power relations. Main results of the analysis show some of the most important characteristics of the Milanese case along with underlying motivations and drivers that created the current food policy.

Inside this thesis, this article gives the opportunity to resonate on the process that led to the creation of a successful institutionalized food policy, by retracing the entire evolution of the Milan Food Policy. The study brings the perspective of a big, international city and the role that international projects and local funders can have in the development of a food policy. It gives important insights into the topic of integration of cross-cutting issues in the administrative body and of adapting to a vertical structure. Here, collaborative governance works very differently from the previous case study on Lucca area which is why this article

is pivotal to answer to the research question of the thesis. In the case of Milan, indeed, there is a lack of bottom-up engagement blocked by a top-down mindset which, however, create very efficient and performative projects, known and awarder all around the world. Because of the relationship with the local administration, the FP of Milan seems to have a dual nature: on one side is very much integrated into the administration to the point that it does not involve other stakeholders in other ways than with partnerships on specific projects; on the other side, this integration seems to be only partially formalized, since it is not regulated through innovative formal governance structures.

Minotti, B., Cimini, A., D'Amico, G., Marino, D., Mazzocchi, G., & Tarra, S. Food Policy Processes in the City of Rome: A Perspective on Policy Integration and Governance Innovation. *Frontiers in Sustainable Food Systems*, 540.

In the food policy arena, the topic of governance and how to create a governance system that would deal with cross-cutting issues, including new ways of perceiving the public sphere, the policymaking, and the involvement of the population, has become an important field of study. The research presented in this article focuses on the case study of Rome, comparing different paths that various groups of actors have taken towards the definition of urban food policy processes: the Agrifood Plan, Food Policy for Rome and Community Gardens Movement. The aim of the research is to understand the state of the art about different paths towards food strategies and policies that are currently active in the Roman territory while investigating the relationship between policy integration and governance innovation structures. This paper dives into the governance structure of three food policy processes, the actors and sectors involved, the goals and instruments selected to achieve a more sustainable food system for the city. In this context, their characteristics are analyzed according to an innovative conceptual framework which, by crossing two recognized theoretical systems, on policy integration and governance innovation frameworks, allows to identify the capacity of policy integration and governance innovation. The analysis shows that every process performs a different form of governance, implemented according to the actor and backgrounds that compose the process itself. The study demonstrates that governance innovation and policy integration are strongly linked and that the conception and application of policy integration changes according to the governance vision that a process has.

The case of Rome brings to the table an urban perspective with, however, a very strong rural connotation, where the institutions and the civil society concur to create projects, strategies, and policies on food in the same territory. The results provided by this study show three different concurring processes happening in the city of Rome around the topic of food and food policies. What can be drawn from this analysis is that every process performs a different form of governance, implemented according to the actors - and their backgrounds - that compose the process itself. It describes the important relationship between innovation in governance and policy integration. This study adds new discussion on collaborative food governance as a structure that might be more inclusive and democratic but does not always bring good governance structure. The study also shows an integrated mindset which sees food from different perspectives is necessary to achieve good food governance.

3. Theoretical framework

3.1 The role of rural-urban areas in the food sustainability challenge

In 1992 at the Rio de Janeiro United Nations Conference on Environment and Development, intentions and objectives were outlined "from now to the 21st century" regarding the environment, economy, and society, now known under the name of "Agenda 21". In chapter 28 of this document, the United Nations invited local authorities around the world to create "Local Agendas 21" to analyse and solve the problems of sustainable development. This vision outlined a new way of perceiving the role of cities in the international political environment, as fundamental actors in the transition towards sustainability, intended as "the satisfaction of the needs of the present generation without compromising the possibility of future to realize their own " (Brundtland, 1987).

The 2030 Agenda reiterate this concept (United Nations, 2015), the Sustainable Development Goals (SGDs) document was signed by the 193 UN member countries in September 2015 and consists of 17 objectives to be achieved by 2030 in terms of sustainable development. The 11th goal refers precisely to "Sustainable Cities and Communities" with the aim of "making cities and human settlements inclusive, safe, long-lasting and sustainable" (United Nations, 2015, p. 26) by implementing policies that allow all urban populations to have free access to adequate accommodation, food, and water. Citing milestone 11.3, countries commit themselves by 2030 to "enhance inclusive and sustainable urbanization and the ability to plan and manage a human settlement that is participatory, integrated and sustainable in all countries" (United Nations, 2015, p. 26). A further key role for sustainable development was given to cities during the bi-decennial United Nations Habitat III conference on "Housing and Sustainable Urban Development" held in Quito between 17 and 20 October 2016. The conclusion of this conference has generated the "New Urban Agenda" based on the 1996 "Habitat Agenda of Istanbul". This important document promotes the city as a key element of sustainable development in sectors such as economic, ecological, urban planning, social cohesion and equity, energy.

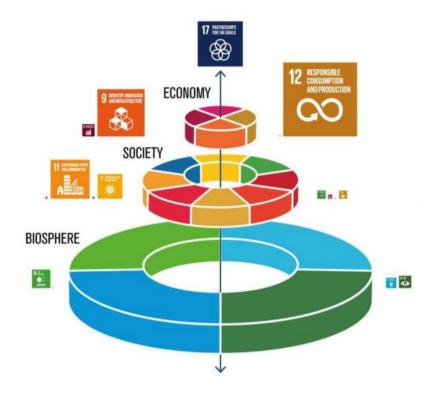
City can, indeed, be considered a living organism within which 50% of the population now resides and where 80% of world GDP is generated (United Nations, 2018). As Calori and Magarini (2015) state, some cities are economic giants, producing like entire states as they

are the arrival point of most of the raw materials and finished products that move within a nation; they contribute to the production, transformation, and consumption of goods. They are the major exit point for scraps and emissions becoming an interesting arena to develop alternative economic systems (Ellen McArthur Foundation, 2019). Cities are the main collection centre for immigration and the consequent social inclusion or exclusion of foreigners and disadvantaged people (De Shalit, 2018). These are the areas in which national health is managed, both thanks to the presence of more advanced and efficient health facilities, but also due to the growing numbers of diseases related to pollution and nutrition (Hawkes and Halliday, 2017). In essence, they are the places where society, economy, health, and the environment embrace and confront each other (Calori and Magarini, 2015). Moreover, a large share of agricultural production can be found in peri-urban and rural areas near cities (Mazzocchi, 2020), as Thebo et al. (2015) indicates 60% of all irrigated land and 35% of all cultivated land is within 20 kilometres from city limits.

Hence, the role of food in shaping modern cities and their potential in being the lever of change for a systemic transition has been confirmed by many, first SGDs themselves (Rockström and Sukhdev, 2016). The model called "The Wedding Cake" developed by Rockström and Sukhdev of the Stockholm Resilience Centre (Rockström and Sukhdev, 2016) show that food is the only element in relation to all 17 Sustainable Development Goals (Figure 1).

This model has at the basement of the "cake" the dimension of the biosphere, which contains and supports the social and economic structure. Food is, in fact, a multisectoral topic. It includes, in its very definition, health, social inclusion, national economy, environmental impact and, in the wake of all the "new" problems arising from the challenges of the current food system, also sustainability (Lang et al., 2009; Calori and Magarini, 2015; United Nations, 2015; Hawkes and Halliday, 2017; IPES-food, 2019).

Figure 1: The Wedding Cake model from Rockström and Sukhdev of the Stockholm Resilience Centre (Fassio and Tecco, 2019)



Although food-related issues have often been relegated by the common thought to the poorest countries and rural areas (Hawkes and Halliday, 2017), more than half of the world's population lives in cities, and it is estimated that this percentage will increase by 18% by 2050 (United Nations, 2018). In fact, starting from 2007, the number of citizens has exceeded that of inhabitants of rural areas (United Nations, 2018). Although cities occupy only 3% of the earth's surface, they are responsible for 60-80% of energy consumption and 75% of global carbon emissions (United Nations, 2015). World urbanization involves not only the physical expansion of cities but above all the modification of the environment, society, and the surrounding economy.

Hence, today, one fundament of sustainable development, especially related to food system, is the idea that cities do not stand alone but live and breathe thanks to their surrounding rural areas (Lang et al., 2009; Calori and Magarini, 2015; Hawkes and Halliday, 2017). The need to create rural-urban linkages is one of the core issues that many, including United Nations, are trying to address (UN-HABITAT, 2019). The New Urban Agenda recognizes that

urbanization has increasingly linked cities with their peri-urban and rural hinterland, spatially and functionally, calling for coordination between food systems and agricultural policies. It is also stated that it is necessary to coordinate food policies with those relating to energy, water, health, transport and waste and that actions are put in place to maintain genetic and seed diversity and reduce the use of dangerous chemicals (Mazzocchi, 2020).

The way rural-urban linkages are intended have been changing during the years and policy coherence and coordination has not always been the priority. The field of rural sociology was rather born to understand the social and economic problems of farmers after the economic crises in the late 1800-early 1900. Much emphasis was placed on the structures of community life and the composition of rural populations, on their relationships with land and the social aspects of agricultural production, where rural often got defined as the opposite of urban. Some of the earliest studies on rural urban linkages focused on the diffusion of modernization from the city to the countryside (Gould, 1969; Rostow, 1960; Friedman, 1966; Vance, 1970 in Lynch, 2005). Those studies mainly focused "on settlement hierarchies rather than on the interaction between town and country, suggesting an urban focus, although they are used to theorize about rural—urban interaction" (Lynch, 2005).

For long time, sociological and political studies have theorized that town and countryside are part of a continuum that have two extreme poles in which people have opposite social life: urbanism and ruralism. The first one was embedded with impersonal relations, individualism, division of labour, all related to high population density, number, and heterogeneity, while the second one, was characterized by tradition, custom, folk culture, and community (Bell, 1992). These two ways of living were considered as part of one interconnected path in which they shared institutional sources such as marriage, religion, employment, opportunities etc. Indeed, after 1950s, the theory of ruralism and urbanism has been long criticized, reformulated, and refused as only related to popular beliefs. Instead, sociology encountered the problem of defining what rural and urban are. Dewey argues that

"The only thing that seems to be agreed upon generally by the writers on rural or urban topics is that in some vague way the terms in question one related to city and county, to community variations in size and density of population" (Dewey, 1960 in Bell, 1992).

Many argued that there are no criteria to universally distinguish rural from urban environments: "what we need to know is what kind of urban society, under what conditions of contact and a host of other specific historical data" (Bell, 1992, p.62). Culture, habits, identity cannot be locked in urban and rural as they vary according to the context and the history of the area (Bell, 1992). Sociology used to associate urban areas with cities which historically were cultural and artistic centers, normally divided from the rest of the territory from physical walls (Giddens and Sutton, 2017). However, in the modern era, with the industrialization process, cities started spread in the surrounding territory, blurring their boundaries with the so-called rural (Giddens and Sutton, 2017). Therefore, what was at the beginning only enclaved dense settlement of large population, started to become first interdependent to the rest of the territory, and second, interdepended from other cities as centers of control for globalization processes (Giddens and Sutton, 2017). For this reason, rural-urban borders are not seen as fixed anymore since human settlements processes are dynamic and characterized by movements of people and resources (Giddens and Sutton, 2017). As a matter of fact, what characterized the first urbanization movements were migrations from outside to inside the city: nowadays the migration is more complex. The phenomenon of suburbanization for example is a movement of inside-outside to search for better housing, schools, and amenities, which were the same reasons people started to first migrate inside cities (Giddens and Sutton, 2017).

"Urban and rural are social constructs that is that they have no objective, inherent essence, but are brought into being discursive practice and social convention" (Woods and Heley, 2017, p.5). These terms are just important to inform regulations as much as all the other terms that have been coined around them such as "peri-urban" which is an hybridation of rural and urban but not necessarily embrace all the dynamics of both (Woods and Heley, 2017). The distinction between urban and rural is very old in Europe: in classic era it was a binary relationship that was never equal, where the city was the object of policies while rural was the *other*, the *non-urban* and therefore these areas always had different models of social organisation (Woods and Heley, 2017, p.2). However, the connections have always been prominent: cities always depended on rural areas as "sources of foods, minerals, building materials and labour as well as for recreation and as defensive buffer, and the reliance of

rural communities on cities as sources of capital, manufactured goods and protection" (Woods and Heley, 2017, p.2). Rural and urban are therefore not easily dividable: "the idea of rural-urban differences is an abstraction which is a principle for organization and a system of values" (Mormont, 1987, p.19 in Bell, 1992, p.79).

Hence, rural-urban linkages are flows of people, goods, money and information between urban centres and rural regions and help showing that these areas are interdependent, intertwined, and complementary (Akkolyunlu, 2013, p.4). They can be intended as spatial and sectorial movements but also as "structural social, economic, cultural and political relationships maintained between individuals and groups in the urban environment and those in rural areas" (Ndabeni, 2016, p.1). Before 1970-1980, from a policy and development point of view the investments were made on urban centers with the idea to create a sort of virtuous domino effect that from the city would bring innovation to rural areas, however, this brought to the exploitation of rural resources and society (Akkoyunlu, 2013, p.14). Europe started to face a decline of rural areas from 1970 because of rural inhabitants moving to urban areas, leaving their employment in agriculture sector (Lowe et al, 1998). In Italy, for instance, in 1977, 15.8% of national population had agriculture jobs, while in 1990 only 9% (Lowe et al, 1998). Some areas received investments from non-agriculture businesses leaving the rural areas without investments (mountains, islands, more far away from cities) in continue decline (Lowe at al., 1998). Those areas that had easy access to urban settlements stayed "under the pressure of modern life" as rural development (RD) was only focusing on making rural areas more productive to meet the demand of the growing cities (Lowe at al., 1998). Therefore, these development strategies created marginalized areas, not only from a geographical point of view for those areas that were far away from urban centers, but also economically, socially, culturally, and politically (Lowe at al., 1998). Moreover, they helped the spread of an unsustainable food system based on productivism and commodification of goods. Indeed, this exogenous model of RD failed because it was "dependent, distorted, destructive and dictated" (Lowe at al., 1998, p.9).

After the 80s, the idea that rural development would be best achieved with comprehensive development framework that would link rural and urban development at the local level with popular participation, started to become part of the discussion (Lowe at al., 1998). For

instance, from a "growth pole approach" that was proposing urban nodes as most important actors in regional development, with top-down policies that regulated the economic growth of urban industry, a new "regional network cluster" concept was proposed, which saw different sources of growth not exclusively urban based (Lowe at al., 1998). This second approach was suggesting decentralization for planning, proposing a diversified and multistranded system with the use of "localized capacity to coordinate interrelated rural-urban activities" (Lowe at al., 1998, p.15). According to this type of rural development, small centers were ideal key point of policy intervention (Ndabeni, 2016, p.29), since they could help "make urban and rural areas more interdependent" - which should be the real scope of urban policies (Douglass, 1998 in Akkoyunly, 2013, p.29).

An endogenous model emerged with the aim to use specific resources of a territory to reach sustainable development (Lowe et al., 1998). This model aimed at capacity building - namely skills, institutions, and infrastructure - to local people and enterprises, and overcome social exclusion (Lowe et al., 1998). Participation became, therefore, the most important pillar of a territory integrated approach with the aim to improve the efficiency and effectiveness of policies as more adapted to local need and circumstances (Lowe et al., 1998). This type of rural development had been called "integrated rural development" by Shucksmith (2009) and emblematic of it in EU was the program LEADER: a territorial approach added to the CAP that seeks partnership between sectors and levels of government with the aim for local actors and EU Commission to find innovative solutions to rural problems. However, according to Shucksmith, this program misses vertical and horizontal integration working together to achieve shared goals (2009).

The endogenous model has been critized to not be a "realistic paradigm" (Gkartizios and Lowe, 2019) and many suggested the need of a hybrid model that would go beyond the two previous models. Hence, the idea proposed by Ray (2001) of a neo-endogenous development that would have three main characteristics: first to be rooted in local areas; second to be supported by national and EU governments; third to be animated by an intermediate level composed by non-governmental organizations. Namely, a new model that would incorporate both the exogenous and the endogenous model of development incorporating three levels of actors and governance. "Neo-endogenous thinking embraces the previous endogenous

model, in the way for example that rural development is multi-sectoral, territorial and moves this forward by focusing on networks, realising that the development potential requires the merging of both internal and external networks" (Gkartizios and Lowe, 2019, p.10). A model that would work to integrate institutions – local, regional, national, and European – seeking for connection between urban and rural, local, and global.

For this reason, a "new rural governance" is now proposed, since the implementation of the previous form of rural management failed: a shift from governments levels that work together towards a governance system that include actors without hierarchical boundaries (Shucksmith, 2009). In this new type of development policies, the State is seen as coordinator, not provider or director, and flexible hierarchies, alliances, and network, along with new partners (private and voluntary) manage a rural-urban territory (Shucksmith, 2009). This vision of rural development is radically different from the past and current one and would consequently create a radically different food system. The globalized food system, which is characterized by productivism, commodification, industrialization, overuse of technology, lack of food security, food safety and food sovreignty² in developing and developed countries, unhealthy and unbalanced diets and access, great ecological impact (Lang and Heasman, 2015) was also strongly influenced by the exogenous rural development policies, in EU by the CAP (Bailey et al., 2016). The CAP's model has always had an impact on economy, society, human and animal health and welfare, environment, contributing to most challenges of the EU food system. Indeed, Bailey at al. (2016) argue that the CAP helped distance producers and consumers, homologate the agricultural production by funding large corporation rather than promote small producers, increase the innovation and development gap between rural and urban areas, exacerbate climate change and environmental issues, intensify the loss of cultural identity etc.

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² The term food security and food sovreignity refers to the World Food Summit 1996 definitions: "food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (World Food Summit, 1996); while food sovreignity is "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations" (World Food Summit, 1996).

According to Akkoyunlu (2013), one of the main problems in rural development policies is that the distinction between rural and urban is still present in policy making, missing the important linkages that exists between rural and urban activities. For the author, only considering the linkages we can reach sustainable development and adopt appropriate economic and social policies:

"At micro-level, rural-urban linkages are important tools for understanding the complexities of people livelihoods and their strategies which involve mobility, migration and the diversification of income source and occupation [...]; at macro level, the demand created by the urban based markets is crucial for rural producers and it is these same urban-based markets that link rural producers to regional and international markets" (Akkoyunlu, 2013, pp.3-4).

Development needs to be seen as multiple, non-linear and made by multiple actors (Healey, 2004, p.46 in Shucksmith, 2009, p.6). Rural-urban linkages can have a strong impact on a more equitable food system and therefore territory development. This vision has been shared by many, starting by UN-Habitat, to the Committee on World Food Security (CFS), FAO with the program Food for Cities and many more (Mazzocchi, 2020). For instance, RUAF and FAO proposed in 2015 a new approach called City Region Food System (CRFS) which sees regional landscape across flows of people, goods, and ecosystem services: "cities exist within a geography and rural and urban areas need to be considered as a single interconnected unit to produce outcomes that are equitable, integrated and long term" (Blay-Palmer et al., 2015, p.10).

The main goal of this approach is to improve rural-urban connectivity creating a virtuous domino on the entire food system. CRFS aim to:

- Increase access to food
- Generate decent jobs and income
- Increase the region's resilience
- Foster rural-urban linkages
- Promote ecosystem and natural resources management
- Support participatory governance
- Extra space after the bullet list needed

It is an initiative that bridges development and planning - normally divided between rural and urban areas - and it is now used in the global South. The main idea is that "rural-urban linkages viewed through a food lens help planners and policy-makers consider more interconnected development as food production is linked to multiple resources" (Blay-Palmer et al., 2015, p.7). In fact, rural-urban divide is not the only issue of RD policies, but it is "a source of inequality and a potential source of both social and political instability as well as vital indicator of economic inefficiency" (Ndabeni, 2016, p.43) in the food system at first.

Figure 2: Flows across the rural urban continuum from Forster and Escudero, 2014, p.10

Rural-urban linkages

Rural-Urban Flows Rural systems Urban systems Non-agricultural **People** employment **Urban services Production** Socio-economic **Production supplies** structure and Commodities Non-durable and relations durable goods Rural economy Capital/Income Markets for selling rural (sectors) products Information Processing/ **Rural production** manufacturing regimes **Natural Resources** Information on employment, produc-**Waste and Pollution** tion, prices, welfare services

However, the food system challenges previously cited, have strong implications for urbanrural connections and the living conditions of small and medium-sized producers: the exclusion of a large part of small producers from dynamic markets, usually those linked to long supply chains and controlled by a few large companies; the concentration of a growing part of added value in the hands of the actors downstream of the supply chain (transformers, intermediaries, distributors, etc.); the weakening of traditional retail and wholesale channels; a strengthening of the relative weight, in terms of employment, of the economies of the secondary and tertiary sectors; the increase in the sale of super-processed foods, even in the diets of the most disadvantaged sections of the urban and rural population (Mazzocchi, 2020). The need to fulfill New Urban Agenda policy coordination demand previously mentioned, start by the idea that rural and urban areas exchange material and immaterial flows (Figure 2) which need to be addressed with integrated policies. Among these integrated policies, there are those regarding food and food system.

3.2 The world of integrated food policies

Evidence on the need of a paradigm shift from current global food system for their negative impact on environment, health, and society, are thriving (Linseisen et al 2002; FAO 2012; Tukker 2006; Westhoek et al 2014; Bailey et al., 2016; Lang and Heasman, 2015; Springmann et al., 2018; Willett et al., 2019; Barilla Foundation, 2021; IPES-Food & ETC Group, 2021). Food systems are understood as "that flow of goods, processes, knowledge, symbolic and cognitive values that regulate the movements of food along all stages of the supply chain: from production - which also involves entrepreneurial choices relating to production techniques, the technologies involved, the localization and management of production factors - up to the consumption and treatment of food waste" (Mazzocchi, 2020, p.18). According to Bricas, the industrialization processes of the food supply chain that have characterized the last decades, have created in many areas an internal disconnection of these food systems and an increased distance between food production and consumption involving different levels (2015):

- Geographic: complexity of long supply chains,
- Economic: high number of stakeholders and intermediary involved in the production of food,
- Cognitive: complexity in understanding how the food system works,
- Social: trust and distrust in the relations between producers and consumers,
- Political: complexity in having a control over the food system for consumers but also States.

Modern societies are facing the consequences of the difficulty of controlling, on one hand, the methods of production and processing, together with the increase in the consumption of heavily processed products, which imposes significant health costs with negative economic repercussions on local medical assistance systems; on the other hand, the current food paradigm dominated by large-scale retail trade de-legitimizes urban and peri-urban agriculture in favour of large extensions and large-scale intensive production methods, poorly integrated into the territory and the local community (Mazzocchi, 2020). In fact, dietary patterns changed dramatically in the past fifty years representing a threat to health and well-being of populations and environment. One in nine people suffers from hunger or

undernourishment while, at the same time, one in three is obese or overweight, resulting in the well-know "triple burden of malnutrition" (Global Nutrition Report, 2020).

Regarding Italy, where this study is located, the country is now experiencing a nutrition transition: 37% of children and 59% of adults are overweight and the per capita daily quantity of sodium consumed highly exceeds the recommendation (Barilla Foundation, 2019; Vitale et al., 2020). Although Conforti and D'Amicis' study (2007) shows that Italy has been moving in the past 10 years towards more healthy eating, food consumption still results to be high in meat and fats and low in fiber and vegetables (Conforti and D'Amicis, 2007; Donati et al., 2016), characteristics recognized to be related to chronic disease incidence (De Marco et al., 2014). Indeed, De Marco et al. (2014) show that the Mediterranean diet adherence has been decreasing from 1961 to 2007 by 56% in the Mediterranean European countries, where the population fails to meet dietary recommendations with excessive saturated fatty acids, added sugars and sodium and reduced fiber consumption, resulting in a negative impact on health, water consumption and ecological footprint.

Along this transition, in 2015, the rate of people at risk of poverty or social exclusion in Italy exceed 25% while more than 10% of the total population was unable to afford a meal with meat, fish, chicken or a vegetarian equivalent every second day (Galli et al., 2018). Covid-19 exacerbated this situation, increasing the number of families in total poverty from 1.7 million in 2020 to 2.1 million expected after the pandemic crisis (Action Aid, 2020). Also, the current agricultural system is putting Italian agricultural land at risk of desertification: the carbon content of soil as a percentage of weight is only 1.1%, falling short of the 1.5% threshold below which land is at risk (Barilla Foundation, 2019). In Italy, agriculture is the economic sector that generates more atmospheric methane (44.7%) and nitrous oxide (59.4%), while activities related to animal production generate two thirds of the emissions of the agricultural sector, which in Italy are worth 29.383 Gg of CO2eq (Barilla Foundation, 2019). Moreover, 115,000 tons of pesticides are used every year on national plantations, making Italy the third EU country for pesticides usage after France and Spain (Istat, 2021).

Starting from Lang and Heasman 2015 Food Wars thesis, the world of food policy is shaped and influenced by three main paradigms: Productionist, Life Science Integrated, Ecologically Integrated. The first one can be called **Productionist** and started to shape food policy in the late 1940s, due to the WWII, after the global agricultural depression and collapse of the markets in 1930s (Lang et al., 2009). Strongly based on the idea that the world needed agricultural reform and a better use of the land to feed a post-war population, Productionist paradigm was committed to raise output through agricultural intensification (Lang and Heasman, 2015). The pursuit of quantity and productivity, cheap food and technical advance was at the base of a set of international food policies for many years. During the early years of productionism, the Common Agriculture Policy (CAP) was created (1957) explicitly aiming at protectionism and competition in agricultural field (Petrick, 2008). From the 1950s until 1970s, agricultural productivity and competitiveness were leading the main agricultural policies, including CAP, mainstreaming industrial agriculture and green revolution (Holt Giménez and Shattuck, 2011). A heavy use of pesticides, fertilizers, irrigation systems, the increase power of large landowners along with the weakening of peasant agriculture, fed the world for almost two decades (1950s-1970s) (Holt Giménez and Shattuck, 2011; Lang et al., 2009).

However, two international "shocks" showed to the world the consequences of this paradigm, namely the famines in Sudan and Bangladesh (1971-1974) and the rise of oil prices (and consequent food prices) by Middle Eastern oil states (Lang et al., 2009). Besides, in the same period, environmental issues started to enter the public space with fundamental researchs such as the 1962 "Silent Spring" by Rachel Carson³ and the 1972 report "Limit to growth" by Medows et al.⁴. These publications, along with the events previously described, demonstrated that on one side productionist policies where not actually able to maintain food security and that western societies were too oil-dependent creating an instable food system. For the first time, the idea that global population was dealing with finite supplies that needed to be preserved instead of exploited started to become global.

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³ Carson, R. (2009). Silent spring. 1962.

⁴ Dennis L. Meadows et al. THE LIMITS TO GROWTH Universe Books, New York, 1972

Moreover, in Europe during the same years the CAP was hit by an increase in production surpluses and an exploitation of public expenditure which showed the dysfunctionality of this policy as well (Petrick, 2008). As a response to the breakdown of the productionist policies, two main paradigms started to shape the food policy discourse, starting from the beginning of 1980s (Lang and Heasman, 2015). The first one, called by Lang and Heasman, Life Science Integrated, has been intended by many as the continuation of the productionist one with the addition of technological advances. This paradigm is based on market liberalisation and neoliberal capitalism and sees technology and technical advances as panacea to food security. According to this discourse, agricultural support -which was the base of productionist policies- should be reduced to let markets drive food supply dynamics (Lang et al., 2009). Hence, this paradigm shaped a food system led by companies and corporations, with a strong consumers sovereignty rhetoric and global ambitions to dominate a highly capitalised system (Lang and Heasman, 2015).

In Europe, the massive reduction of people employed in agriculture and the increased side-effects of industrialisation, brought to the attention of the CAP a new value for rural amenity and *sustainability* (Petrick, 2008). Especially the Buckwell Report "Towards a Common Agricultural and Rural Policy for Europe" in 1997 signed "the paradigm shift towards the semantics of sustainability" (Petrick, 2008, p.6). This report, in fact, pushed the Cork declaration in 1996 to put the attention on environmental and cultural value of landscapes, market stabilisation and rural development incentives, adding for the first time to CAP the term "multifuncionality", namely the idea that farmers were not only food and fibre producers but also custodians of the countryside (Petrick, 2008).

Multifuncionality puts the attention of rural development on the matter of synergy as a strategic element in the "creation of cohesion between activites not only at farm level (through the active construction of new multifunctional rural enterprises) but also between different farms and other rural enterprises" (Van der Ploeg and Roep, 2003). As supported by many (Brunori et al. 2000; Knickel and Renting 2000; Ventura 2001; Miele 2001; de Roest 2000; Van der Ploeg and Roep, 2003) multifuncionality embodies a model of rural development that goes beyond the model of modernized agricultural production, which sees a detachment between production and other rural activities, and embrace the idea that the

synergy between different activites is strategic and fundamental for rural development and "living countryside⁵" (Gorman et al., 2001). In fact, Knickel et al. (2004) argue that most farms in Europe are already by nature multifunctional as primary agricultural production is not the only element of their activites and income. Van der Ploed at al. (2002) show that 60-70% of all European farms can already be considered multifunctional farms.

The multifunctionality discourse in its policy application, when introduced in the CAP, however, was never seen as a paradigm shift but more of a cover of the neoliberal discourse of CAP with environmental components (Erjavec et al., 2015). Holt Giménez and Shattuck's (2011) food regime theory can help understand to what paradigm multifunctionality belongs to. According to their theory, from 1980s until today, we are living in what they called the corporate food regime, characterized by neoliberal capitalist expansion, namely: market power, profits of monopoly agrifood corporations, globalized animal protein chains, supermarket expansion, liberalized global trade in food, concentrated ownership and overuse of natural resources. This food regime is composed by two main trends: neoliberal and reformist. The neoliberal trend is grounded in the intellectual tradition of economic liberalism. It perfectly fits the features of what Lang and Heasman, 2015, called Life Science Integrated paradigm: market-based, driven by corporations, focus on commodity output with strong role of hi-tech and biotechnology. The reformist trend, on the other side, "has the mission to mitigate the social and environmental externalities of the corporate food regime" (Holt Giménez and Shattuck, 2011). This trend focusses on mild reform to the regime that will not change the regime itself but reinforce it. They are two directions of the same paradigm:

"the double movement within the corporate food regime - in which reform is largely subjugated and instrumentalized by liberalization - results in more of a fine-tuning of the neoliberal project rather than a substantive change of direction" (Holt Giménez and Shattuck, 2011).

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⁵ The concept of "living countryside" seeks for a unity between agriculture, society and the environment. In order to achieve this concept and create sustainable rural livelihoods, Gordman et al. (2001) believe that not only agricultural production but also many other rural activites need to be implemented in synergy with each other. Hence, the link to multifunctionality.

In opposition but simultaneously, a new paradigm emerged from the productionist failures, which Lang and Heasman (2015) called **Ecologically Integrated**. This paradigm started to appear in the food policy discourse of the 1980s where on one side there was the neoliberal language of markets – as previously described- and on the other side, new evidence about environment, health, food safety and security started to become relevant (Lang et al., 2009). Especially during the last quarter of 20th century, more evidence about the unsustainability of the food system shaped a new discourse that was focusing on the idea that, as resources are finite, food policies need to focus on the whole-chain trying to reduce environmental, energy and waste impact, promote diet diversity and short supply chains, and create an integrated set of policies that would aim at an interdisciplinary eco-systems resilience (Lang and Heasman, 2015).

Nowadays, according to Lang et al. (2009), this paradigm is strongly influenced by (Lang et al., 2009):

- Food prices crisis of 2006-2008
- Drop in world grain stocks and per capita grain availability
- World fish stocks collapse in early 2000s
- Concern for meat consumption impact and nutrition transition all over the world
- Concern on the consequences of climate change all over the world
- Water shortages
- Rise of oil prices in mid-2008
- Non-stop food insecurity in many countries
- Rural areas dependency on urban area
- Ecological crises threatening food capacity, biodiversity and soil
- Waste in all part of the food chain

The structural changes of the CAP made during 1960s-1970s to encourage competitiveness, didn't have a clear vision to set a firm price level so national governments set their prices creating regional disparities (Petrick, 2008). The flexibility given to national agricultural policy over the years, reinforced these disparities also in rural development policies (Goodman, 2004).

"The almost total reliance on price policy which differed between products and in effect between countries, the divergent expenditures of national governments and the differing economic climates has in general led to a widening of the income gap between farmers in the different regions of the EEC" (Cuddy, 1981, p.205).

The divergence in the income per labour unit in agriculture between regions in each country and regions among different countries kept growing. Also, at the international level, the disparities in food policies among countries in the North and in the South of the world are strongly related to the nature of the corporate food regime itself, which put its roots into the colonialism and food aids regimes (Holt Giménez and Shattuck, 2011). However, even if there were differences among countries, especially those divided by the Cold War, in who owned the land and how centralized the agricultural systems were, all states "shared a vision of progress, [...] all states created funding schemes to support food production and distribution (Lang et al., 2009).

Hence, new food movements started to appear all around the world, asking for land reform, food sovereignty, sustainable and agroecological agriculture, fair trade, local food systems, community food security (Holt Giménez and Shattuck, 2011). The growth of Alternative Food Networks (AFNs) is part of this trend, as

"a transition from the 'industrial world,' with its heavily standardized quality conventions and logic of mass commodity production, to the 'domestic world,' where quality conventions embedded in face-to-face interactions, trust, tradition and place support more differentiated, localized and 'ecological' products and forms of economic organization" (Goodman, 2004, p5).

Their birth is normally attributed to a turn away by consumers from industrial food production towards quality after the food scares that characterized the late 1980s, called the "quality turn", which spread the rise of the organic movement, the premium quality brands, multifunctional farms, farmers markets etc (Goodman, 2004). These food movements are characterized by either a progressive or a radical narrative but claiming a change in favour of smallholders and an equitable/healthy food system (Holt Giménez and Shattuck, 2011), seeking to reach the Ecologically Integrated paradigm. AFNs have and have had an important role in rural development as considered to be a "potentional solution to the problem of peripheral rural regions" (Renting et al. 2003, 395), as new forms of food supply chains aim for new rural development practices. The work of Renting and others (Renting et al. 2003; Renting et al., 2008; Renting et al., 2012; Van der Ploeg et al., 2017) show the

impact of AFNs in Europe which today are bringing an important shift in food production, rural landscapes and livelihoods, and ultimately on how rural development is seen.

As the neoliberalism paradigm focus on global ambition to dominate the food world with transnational companies, food movements and new discourses (such as the ecologically integrated) tried to aim at integration rather than enforcing the differences among regions of the world. An example to this, at the European level, is the Common Food Policy Proposal by IPES food that was asking for a more coherent and balanced European food policies that would be common for all member states but localized to the needs of each territory (IPES food, 2018). The global vision of this food movements, which are trying to create international and national networks seeking integration and coherence in the food system, is, however, strongly characterized by the narrative of local, place-based, traditional, and culturally appropriate food sovereignty, putting a different type of attention to the regional dimension (Morgan, 2009; Moragues-Faus and Morgan, 2015).

In the context of the Ecologically Integrated paradigm and its consequent narrative, the term "food policy" was born, referring to the set of policies that shape and regulate the food system as a whole.

"In general, they mainly refer to governance tools that help connect stakeholders and food-related issues, defining spheres of action, objectives and procedures needed to define, implement and measure policy" (Calori and Magarini, 2015, p.39).

Tim Lang, food policy professor at City University of London and one of the founding fathers of the concept of "food policies", describes them as those policies that deal with "who eat what, when, and how, whether people (and animals) eat and with what consequences" (Lang et al., 2009, p. 21). Although many claim the need for a paradigm shift (IPES-food, 2019), food policies are too often managed in a sectorial and discontinuous way, as previously explained, while they require, by nature, an integrated management, not only horizontally between policy sectors but also and above all through different levels of governance (Barling et al., 2002).

Integrated food policies have, indeed, the characteristic of being multilevel, multi-sector and transversal to many disciplines, involving several broad policy areas and including actions

at all levels, both governmental and non-governmental: national laws, regional laws, actions of NGOs, citizens food councils and much more (Lang et al., 2009; Calori and Magarini, 2015). The wave of new urban food policies can be intended as a social and political movement, born from the need to tackle the challenges of the globalised food system at a local level: "a collective attempt to further common interests or secure common goods through actions outside the sphere of established institutions" (Giddens and Sutton, 2017, p.936).

In fact, globalisation created a society where people are more interconnected, interdependent, and geographically mobile but also a trend of glocalization which strengthens local tradition and culture (Giddens and Sutton, 2017). Urban Food Policies (UPFs) are

"a self-conscious collective effort to re-imagine a city, urban region or wider territory and to translate the result into priorities for area investment, conservation measures, strategic infrastructure investments, and principles of land use regulation" (Healey, 2004, p.46 in Shucksmith, 2009, p.6).

They aim at integrating different policy sectors and goals that are linked to food: typically, health, education, environment, welfare, social justice and more, using food as a vector (Cretella and Buenger, 2015).

Food and city have always had a symbiotic relationship, but colonialism, industrialisation and globalisation have changed the dynamics between these two-macro systems bringing to the current problems of food availability and access (Haysom, 2015). Food in UFPs is intended as the natural outcome of an alliance between parts of a system and, therefore, the pivot for a domino of changes (Fassio and Tecco, 2018). The intrinsic nature of food is to influence health, the environment, society, and all sectors related to them. The food chain is a bundle, an intricate network of actors, powers, and sectors, connected to each other by those products that we find on the plate every day. The cities that UFPs are trying to build, will therefore have to put food at the core of their political agenda and "use food as a key to stimulate innovation in other sectors" (Calori and Magarini, 2015).

Starting from food as a link, UFPs focus on the emergence of a more integrated vision of a local space where rural and urban areas along with their actors are connected in a web of

synergistic relationship (Sonnino, 2014). They are based on the will to solve food security problems, which are assuming a more and more urban dimension, by reconnecting and relocalising local food system (Sonnino, 2014). Rural-urban linkages, are, therefore, very important for UFPs, since they offer the opportunity to identify leverages to stimulate rural economy and innovative production that involve rural and urban goods without being harmful to one another (Ndabeni, 2016). Consequently, they are important when talking about sustainable development. When social sciences arrived at the understanding that city and rural are part of a "multi-polar landscape", urban studies started to work on sustainability by looking at the interactions between cities and their surroundings (Woods and Heley, 2017, pp. 21-23).

Today, in an increasingly urbanized context, food systems are unable to sustainably meet the city's growing demand for food, which has a huge impact on rural areas and agricultural supply chains (Marsden, 2013; Sonnino, 2009). Therefore, the issue of urban food consumption is very central: institutions are faced with the challenge of planning and implementing food policies capable of guaranteeing access to healthy food, supporting rural development and local supply chains, and encouraging sustainable agriculture (Hawkes and Halliday, 2017). The urban agroecological transition, under which food policies are included, is an important topic at the global level, intended to be a key to unlock farming and environmental challenges, but also political and social issues with a strong political tool: the agroecological framework (Isaac et al., 2018). Many are the case studies of "agroecology territories", namely spaces in which actions and policies related to food system improvement, biodiversity, and environmental conservation along with sustainable agricultural practices are engaged (Wezel et al., 2015).

Hence, many food policies are being implemented at urban level with different framework according to the extension and geographical characteristics of the city, the particularities and size of the population, the state of health of citizens, climatic conditions, local and national economy, the relationship between city and rural areas, the presence of research and innovation centres in the food sector in the area, the functioning of public services and more. The Milan Urban Food Policy Pact, created in 2015 as the first network of cities specifically

on food policies, defines the six categories of actions in which local governments implement policies (MUFPP, 2015):

- 1. Governance: facilitate collaboration between city bodies and departments, improve stakeholder participation, integrate local initiatives into programs and policies, develop urban food policies and action plans, multi-sector information systems for policy development, adopt a disaster risk reduction strategy.
- 2. Sustainable nutrition and diets: promoting sustainable diets, tackling non-communicable diseases such as obesity and diabetes, developing sustainable dietary guidelines, making drinking water and sustainable diets accessible to all, promoting joint actions between the health and food sectors.
- 3. Social and economic equity: reorient school feeding programs, promote decent work in the food and agricultural sectors, encourage social and solidarity activity, promote networks, and support social inclusion through food, promote education, training and research on the subject.
- 4. Food production: promote urban and peri-urban food production, promote dialogue between cities and rural areas, protect and allow access to land, support food producers and short food chains, improve wastewater management.
- 5. Food availability and distribution: mapping the city's food flow, reviewing the city's food supply and trade policy, building policies and programs to support municipal public markets, improving, and supporting infrastructure.
- 6. Food waste: raise awareness of food waste and waste, save food by facilitating the recovery and redistribution of safe and nutritious food for human consumption, improve food waste management.

As this list of areas of action highlights, food policies seek a sustainable balance that is much more complex than the classic one between the environment, society, and the economy (IPES-food, 2019). These policies intersect many sectors and, above all, involve actors from diametrically opposed worlds (Lang et al., 2009). This is because the consumption of food is a fundamental part of both daily and historical-cultural human life, influences the health and well-being of our body, has substantial environmental impacts, is one of the pillars of the global and local economy providing jobs to millions of people, is one of the strongest means of communication and education. Today more than ever, there is a need for solid

foundations on which to move, an integrated system, a systematic and systemic plan to make cities resilient in terms of food (IPES-food, 2019). Furthermore, looking at cities from the perspective of food allows us to analyse the social, economic, and environmental factors that characterize urban metabolism.

"In this perspective, talking about food clearly does not mean simply looking at agriculture or rural production chains, but rather adopting an urban gaze on the world, through which the different aspects of the urban development model are considered under the point of the relationship they have with food" (Calori and Magarini, 2015, p. 20).

These policies are rooted in the arguments previously described. UFPs can be considered neo endogenous rural development policies for their integrated and multilevel nature. Synergies are at the core of these policies: between rural and urban areas, between government levels, between government and non-governmental organizations, between global and local systems. UFPs also have their fundament in the need to develop food supply chains alternative to the industrial and productionist one, that would improve rural landscapes and livelihoods, along with changing cities.

3.3 Local governance and policy integration in integrated food policies

Governance is at the core of urban food policies (Calori and Magarini, 2015) since it enables the implementation of all actions related to sustainable nutrition and diets, social and economic equity, food production, availability of food and distribution, food waste, and more. Hence, an issue of governance in local food policies is to find a solution to the fundamental question: how can cities respond to the new relationship that globalisation is creating with food, if they maintain the same governance and political system? (Haysom, 2015).

The term governance can be defined as "a process whereby societies or organizations make their important decisions, determine whom they involve in the process and how they render account" (Graham et al., 2003). It also can be interpreted as "the combination of different actors, levels of government and a complex regulatory system" (Mantino, 2014, p.7). In fact, a good governance seeks facilitating collaboration between public bodies and departments, improving stakeholder participation, integrating local initiatives into programs and policies, developing urban food policies and action plans, multi-sectoral information systems for

policy development, disaster risk reduction strategy etc. For this reason, governance can be considered a horizontal approach compared to current government structures, which result more vertical or top-down. The term governance is currently used to "highlight the quantity and quality of actors involved in public decision and policy implementation as well as their relationship with more formal governmental actors" (Graham et al., 2003).

Even though the term governance has a long history of different understandings and definitions (Bevir, 2009), it refers to "not only where to go but also about who should be involved in deciding and in what capacity" (Graham et al., 2003, p.2). In the case of UPFs, a new governance system to link cities and rural areas is pursued to work with three types of actors: urban authorities, private agents (farmers) and civil society (Duvernoy, 2018). Indeed, a *good governance* is carried out when civic participation and the effectiveness and quality of the public goods and services are ensured (Protik et al., 2018). Governance is therefore a concept that rotates around power and in rebalancing what Protik et al. call "information asymmetry" between food system actors and institutions (2018). The asymmetrical power relations, that characterize our democratic system, distort the communicative action between people leading to misunderstanding and malfunctioning of the political structure (Habermans in Giddens and Sutton, 2017).

Giddens and Sutton (2017) suggest the need of *governance* rather than *government* to deal with the social, political, and economic changes that globalisation is bringing on surface. The new governance should be

"Grounded in democratic legitimacy provided by the association of governance institutions with territorial space but which are also able to engage with relational flows and interactions between the rural and the urban" (Woods and Heley, 2017, p.58).

Since national government are unable to manage global trends, mayors and local authorities are becoming more independent actors achieving forms of personalized leadership that help creating political agendas for areas that lie outside the city limits with new type of partnerships (Giddens and Sutton, 2017). Governance reconceptualize power "as being a matter of social production rather than social control that is *power to* rather than *power over*"

(Shucksmith, 2009, p.4), namely not anymore about domination or subordination but about achieving shared goals.

Food policy councils are one of the forms that UFPs found to deal with a new governance system to address systemic challenges. As stated by Harper et al. (2009) food policy councils have a multisectoral approach, working with different actors of a food system: from government to grassroots, from companies to charities, with the aim to create a space of coordinated action towards the same goals. In fact, introducing this type of governance tool does not take away power to national government but imply that

"Multiple levels of governance are required to address the complex challenge of food insecurity" because "the changing nature of cities [...] and food systems changes mean that food system governance and food security interventions can no longer remain the domain of national government alone" (Haysom, 2015).

Participation is the core of this new governance system: between rural-urban areas, territory, citizens, institutions, businesses. Participation is a matter of power and its redistribution (Lowe et al., 1998, p.26) and it is one of the pillars of UFPs since it "involves the establishment of informal structured and procedure that are additional to and in many cases separate from, local governments" (Lowe et al., 1998, p.25), such as food councils. These councils started to appear in the 1980s in North American cities following the evident need to improve health of citizens (Harper et al., 2009), as places of political dialogue in which representatives of the city food system would converge. From that moment on, alternative urban food governance has taken different shapes according to the context of the city in which they are built. In fact, food council can be defined as: "a structure that brings together stakeholders from diverse food-related areas to examine how the food system is working and propose ways to improve it" (Haysom, 2015). According to a review of the current food councils made by Mac Rae and Donahue (2013) there are six types of food councils:

- Municipality driven
- Hybrid governance with direct government links
- Hybrid governance with indirect government links
- Links to government via a secondary agent
- Civil society organization with limited and informal government links
- Independent organizations with no government links.

As Table 4 shows, these councils differ in the way the obtain fundings, in the type of staff that they have, if they work on an official government mandate or not, and in where they are located (inside or outside the government).

Table 4: Characteristics of food policy councils (source: adapted from MacRae and Donahue, 2013)

Type of FPCs	Funds	Staff	Mandate	Location
Municipality-driven food policy initiatives	gov	gov	yes	gov
Hybrid governance with direct government links	gov	gov and civil society	yes	gov
Hybrid governance with indirect government links	partially gov	gov and civil society	yes	partially gov
Links to government via a secondary agent	partially gov	civil society	on specific projects	non-gov
Civil society organization with limited and informal government links	partially gov	civil society and partially gov	no	non-gov
Independent organizations with no government links	non-gov	civil society	no	non-gov

Many are the pros and cons of having a strong link with the government, the table 5 describe some of the most common. Hence, the relationship with the government is particularly crucial in FPCs as it can also change the role that these councils might have. In fact, according to the level of engagement a FPC can: influence specific stages of a policy process; engage with some policy issues; understand the time frame needed to achieve specific policy goals; understand what type of change is needed to achieve a specific policy goal. On the other hand, the government can engage in FPCs by participating in the councils with staff, partnering to help educate the public, embracing FPCs policy proposals, helping other communities to develop FPCs.

The first food councils or food commissions were created with the aim of gathering the skills and needs of the players in the supply chain - consumers, the third sector and institutional subjects - to generate sustainable solutions to the city's food system (Harper et al., 2009). There are now almost 300 food councils in North America, and more and more are growing in Europe, bringing together representatives of the various sectors of the food system (MacRae and Donahue, 2013).

Table 5: Pros and Cons of a relationship between a FPC and the government (source: adapted from MacRae and Donahue, 2013)

PROS	CONS				
Gives legitimacy and authority	Obstacles in working with other non-gov				
Possibility to develop long and strong long-	actors				
term projects	Resource availability policy influence				
Possibility to have resources (staff and funds) Can bring social change by infiltrating directly inside of political hierarchies More interpersonal relationship with politics can bring higher possibility to reach social change	depends too much on close politicians' connections Greater pressure to align with the general mission of the government Less community inclusive than non-gov FCPs				
					Politics can constrain FCPs action and priorities

Food councils are rising across the world to "connect the dots" (Harper et al., p.8) among food initiatives and communities as they serve as forum for understanding food issues and platform for coordinated actions. Since they see the food system as a whole, "they create an opportunity to discuss and strategize among various issues" to bring social change (Harper et al., p. 16). They act as promoter of the local economic environment as they unite and coordinate all parts of the food system, from fork to table and beyond. Hence, the issue of power is central in UFPs and in those trying to build new ways to govern rural-urban and the food system sustainably. These councils rely on modern theories on power, influenced from Foucault's work, for which power is not only concentrated in institutions but can also be held by any group of individuals since it operates at all levels of social interactions and in all social institutions and groups of people (Giddens and Sutton, 2017).

If we consider Mintzberg organizational theories, food councils try to use a selective type of decentralization, namely an organization where power is diffused widely vertically or horizontally at various level and contains various mixture of line managers and staff specialists (Mintzberg, 1980). Although at different levels, they have the aim to integrate and collaborate with local administrations which still follow Mintzberg machine bureaucracy structure where formal power is in the strategic apex while informal power stays in the technostructure. Food councils, and food policies in general, want to cooperate, and substitute the bureaucratic structure which works on:

"Highly specialized, routine operating tasks, very formalized procedures and largesides units in the operating core, reliance on the functional basis for grouping tasks throughout the structure, little use made of training and of the liaison devices, relatively centralized power for decision making with some use of action planning systems and an elaborate administrative structure with a sharp distinction between line and staff" (Mintzberg, 1980, p.332).

In the food governance arena, the topic of policy integration has been highlighted to be one of the most challenging and important issue that food policies need to address. As anticipated in the previous paragraphs, art. 123 of the New Urban Agenda declares that it is necessary to coordinate food policies with those relating to energy, water, health, transport, and waste, calling for policy coherence and coordination, which is one side of policy integration. In fact, different definitions and approaches to address policy integration have been suggested by academics and practitioners in different fields (Tosun and Lang, 2017). Some refer to policy integration as the will to create coherence between different policies and their goals (Galli et al., 2020) or to the design of policies that are coordinated strategies instead of a series of sectorial public policies (Rayner and Howlett, 2009); others define it as the attempt to place one topic, in particular environmental considerations, at the core of sectorial policies (Jordan and Lenschow, 2010). Candel and Biesbroek (2016) on the other hand, understand policy integration as a process rather than an outcome that evolve during time according to a series of parameters.

Intended as the "cooperation of actors from different policy domains – or policy sectors" (Tosun and Lang, 2017, p. 554), integration is particularly relevant when cross-cutting issues affecting multiple policy domains (Jochim and May, 2010) are targeted, such as food security, climate change, migration and similar "wicked problems" (Termeer et al., 2015). There is a consensus among scholars that so-called policy "silos" approaches might lead to

policy failures (Sibbing et al., 2021; Tosun and Lang, 2017), but it is not yet straightforward that replacing sectorial policies with integrated strategies or participative governance structures leads to a necessarily optimal policy mix (Rayner and Howlett, 2009) or results in better policy outcomes (Candel and Pereira, 2017). In particular, the relationship between new governance structures and policy strategies and local administration, and the relative integration and cohesion, is a crucial topic for food policies all around the world (Mac Rae and Donahue, 2013).

Changing the dynamics between local administration and local actors means improving governance innovation intended as "going beyond organizational boundaries to create network-based decision-making, tapping new pools of resources, exploiting government capacity to shape private rights and responsibilities, redistributing the right to define and judge values and being evaluated in terms of the degree to which they create public value" (Moore and Hartley, 2008, pp.3.20). Current government traditionally codifies the system's regulatory structures, assigns responsibility, openness, participation to specific types of subjects codified in the expression of the representation of public and private interests, but "by its nature, is reluctant to facilitate innovation by opening up to new subjects and new themes" (Mantino, 2014, p.386).

Looking at governing from a governance innovation point of view, on the contrary, means working towards the adaptability of local systems, mobilize the plurality of subjects, public and private, operating on the territories at different scales, and to involve them in social innovation paths capable of elaborating and spreading new visions and practices (Mantino, 2014). The role of innovative governance structure is indeed to hybridize different visions towards a common mission. Hence, according to Mantino (2014), innovation in governance has the following scopes:

- understanding and supporting stakeholders of social innovation practices and the emergence of new solutions,
- incubating and building new visions and planning change among a multiplicity of interlocutors, enhancing the presence of new subjects,
- mediate radical and customary skills, visions, and power structures between subjects,

- experimenting in a controlled manner with new operating methods and new set of rules.
- rapidly absorb innovative initiatives in the ordinary fora of rural governance.

Food is precisely the area in which this type of innovation is needed. Many are the analytical frameworks provided by the literature which focus on the transformations of local food systems, on alternative networks linked to the issue of food (short chains, solidarity and recovery), on the comparison of policy experiences that transform consolidated relationships between actors of production, distribution and consumption. A reflection is also taking place on the characteristics of local-urban food governance (reflexive, trans local, co-governance and collaborative governance) (Moragues-Faus, 2021) which aims to provide an analytical map within which to place and analyze dynamics and characteristics of the many experiences reported in the literature. Urban governance of food policies highlights co-governance and collaborative governance experiments (Ansell and Gash, 2008; Vara-Sanchez et al., 2021) with specific and peculiar traits, where the evolution and transformation of food policies take place through new actors (not only public ones), alternative networks (AFNs) and a public role of mediation and facilitation.

Particularly interesting for this study is the concept of collaborative food governance which considers the involvement, not always on public initiative, of associations, research centers, universities, private companies, and citizens who interact for the purpose of designing and implementing products, services, initiatives made possible by sharing values, objectives, expertise and knowledge (Ansell and Gash, 2008). The collaborative approach, directly involving stakeholders in the definition and subsequent adoption of new policy interventions, favors the creation of consensus around these actions and encourages the creation of shared ownership of the process (Sørensen and Torfing, 2011). Collaborative governance makes innovative and flexible policy solutions feasible, adaptable to contexts, moments (of crisis), therefore it is effective in responding to collective problems at least in the local dimension. The issue of collaborative governance is becoming a crucial aspect to face the ever more rapid change of contexts, to face the emerging problems of allocation of public resources. Consequently, it is useful to rethink the traditional separation between state and market to the advantage of more hybrid forms of governance in which responsibility,

active participation, exchange, reciprocity, acquire new weight and attention (Ansell and Gash, 2008).

3.4 The Italian administrative system

As explained in the previous paragraphs, the relationship between territorial and food system actors, with the local administrative system in the country of analysis is extremely relevant when talking about food policy. Therefore, for the purpose of this research is it important to give some introductions on how the Italian government of the territory works based on the Italian administrative law manual by Merloni (2016).

With the birth of the Italian Republic on June 2nd, 1946, and the entry into force of the Constitution, on January 1, 1948, the ownership of the organizational function was attributed to the Parliament of the Italian Republic, sanctioning the absolute primacy of the principle of legality. From the point of view of the organization of the administrative bodies of the State, the Constitution sanctioned the transition from a centralized organization, where the administrative functions were attributed to the State bodies, to a decentralized organization, where instead the administrative functions were carried out by local authorities at the local level.

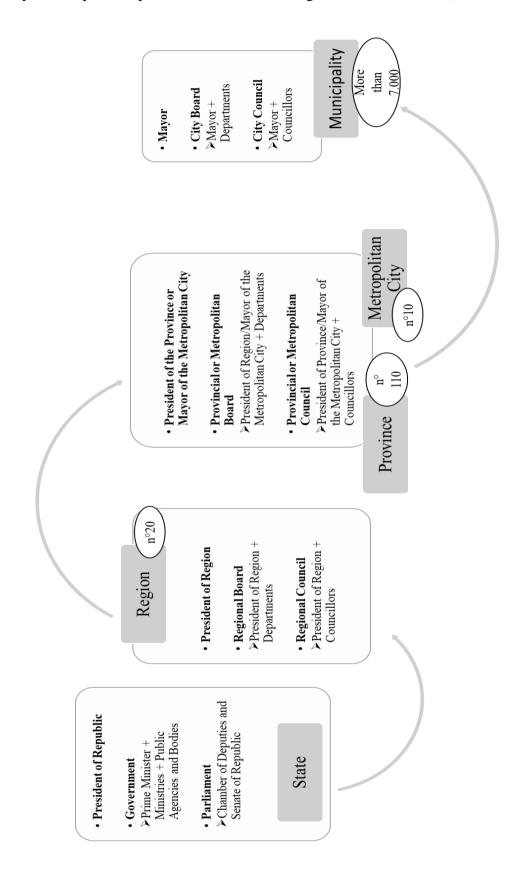
Six are the main principles on which the Constitution is based upon:

- 1) Principle of legality which states that all organs of the State are required to act according to the law. This principle admits that power is exercised in a discretionary way, but not in an arbitrary way, respecting all the regulations on the order.
- 2) Principle of typicality for which the administrative acts are to be considered a "numerus clausus" (closed number) and for this reason they are identified only with those provided by law by the Italian administrative system. According to the principle of typicality, the only possible legislative sources are those expressly provided for by the Constitution.
- 3) Principle of proportionality which affirms that the measures must be preordained, necessary and sufficient for a lawful and legitimate purpose without affecting subjective positions to a greater extent than is objectively indispensable in relation to that purpose.
- 4) Principle of subsidiarity, it is the principle according to which, if an inferior entity can carry out a task well, the superior entity must not intervene, but can possibly support its action.

- 5) Principle of good performance, which guides the activity of the public administration, aimed at achieving the public interest, conforming to the criteria of effectiveness and efficiency.
- 6) Principle of impartiality, which is the legal principle that guides the activity of the public administration, aimed at achieving the public interest, must be carried out with impartiality.

Among these six principles, the principle of subsidiarity, also called of administrative decentralization, is particularly important when talking about local food policies and rural-urban relations as they impact on the government of the territory. Hence, the Italian government is composed by: State, Regions, Provinces and Metropolitan cities, Municipalities.

Graph 3: Graphical representation of the Italian government structure (source: author)



The organization of these entities works on the following bodies (see Graph 3):

Regions:

- Regional board: executive power
- Regional council: deliberative function
- President of the Region

Provinces:

- Provincial board: deliberative function
- President of the Province: elected by the citizens with representative function
- Provincial council: nominated by the President of the Province, it has executive power

Municipalities:

- City board: elected by the citizens, it is an organ of political direction
- Mayor: elected by the citizens and it represent the municipality
- City council: composed by the mayor and councilors which are nominated by the mayor and has executive power.

They all are autonomous bodies with their own statutes, powers, and functions according to what it is stated in the Constitution. In the legislative decree August 18th, 2000, n. 267 "Consolidated text of the laws on the organization of local authorities" - updated to the decree-law March 17th, 2020, n. 18, it states that the region indicates the general objectives of the economic, social, and territorial planning and it distributes the resources destined to finance the investment program of local authorities. Municipalities and provinces contribute to the determination of the objectives contained in the plans and programs of the State and of the Regions and provide, as far as they are concerned, for their specification and implementation.

Besides the matters in which the State has exclusive legislation power, the following are those in which there is concurrent legislation between the Regions and the State:

- international relations and with the European Union of Regions
- foreign trade
- job protection and safety

- education, without prejudice to the autonomy of educational institutions and with the exclusion of education and vocational training
- professions
- scientific and technological research and support for innovation for the productive sectors
- health protection
- Power supply
- sports regulations
- civil protection
- government of the territory
- civil ports and airports
- large transport and navigation networks
- ordering of communication
- national energy production, transport, and distribution
- complementary and supplementary pension
- harmonization of public budgets and coordination of public finance and the tax system
- enhancement of cultural and environmental assets and promotion and organization of cultural activities
- savings banks, rural banks, regional credit companies
- regional land and agricultural credit institutions

The administrative functions related to these matters are attributed to the Municipalities, Provinces, or Metropolitan Cities, based on the principles of subsidiarity, differentiation, and adequacy. Hence, municipalities, Provinces and Metropolitan Cities have their own administrative functions and those conferred by state or regional law, according to their respective competences.

From the list above, it is possible to understand why the local level is so important for food policy development. It is interesting to see how most of these competences have an direct or indirect impact on the food system, on rural development and human livelihoods and health. All competences related to the government of the territory, rural land and landscapes, trade and relationships with higher government levels, health and job protection are at the heart of

integrated food policies. In a more indirect way, competences on energy production, transportation and scientific research are also to be considered when planning and implementing sustainable and coherent policies on the food system.

Unfortunately, critics related to the functioning of the Italian administrative system are many. David Hine (1993, p.255) states: "for a country as prosperous as Italy, the resulting quality of public service – education, health, social security, justice, transport – is exceptionally low". Many are the reasons of this inadequacy of the administrative system, one for all the fact that Italian legislation has been "excessively detailed while simultaneously allowing bureaucrats excessive discretion" (Golden, 2003). However, as Golden (2003) explains, the causes of the bad government in Italy are "endogenous to the political system and not the result of external forces" because of the political choices in the postwar period and the consequences of those choices.

The continuous decentralization and regional division carried on by the Italian government has exacerbated many territorial inequalities. According to Bachtler et al. (2017) phenomenon has been spreading all over Europe in which, from 1995 to 2014, the productivity gap between the most advanced regions and 10% most backward grew by 56%.

"Italy is among the countries most affected by this phenomenon of widespread impoverishment, so much so that it is no longer possible to speak of a rich North and a poor South: very often the poorest municipalities do not locate too far from the richest Italian city, Milan" (Mazzocchi, 2020).

Inland areas, which hosts more than half of the Italian municipalities, 25% of the Italian population and occupy 60% of the total national area (Mazzocchi, 2020), are living a demographic depletion, accompanied by a more general increase territorial inequalities between urban poles and peripheral areas, accentuating the urban-rural dichotomy (Barca, 2017). These inequalities are economic (income, work, lack of labor), social (access to essential quality services, movement of public and private services to cities, divestment in services), of recognition (of the value, role, and aspirations of the person; roles of guardian / regenerator of the unrecognized landscape / environment; perception of lack respect for local values, treated as entertainment producers for urban elites) (Barca, 2017).

Evidence on the need to improve the public system and literature on public management reform are many. Atkinson (2007) highlights the need to change the public policy systems with two main principals, which can relate to any public system but especially to Italy in this case:

- 1) Knowledge and innovation: the knowledge related to a place need to be confronted in a wider context than that delimited by administrative boundaries, with a continuous reference to local and global
- 2) Power and political economy: policymakers need to create change through innovative processes.

In fact, the topic of innovation has always been very important in political agendas, however "the public governance framework has never allowed innovation to become one of its main pillars" (Cepiku et al. 2008, p. 9). Regarding Italy, the main innovations of the public sectors have been dedicated to financial management, organizational structures, human resources management, planning and control, customer relationship, ethics, and transparency and much more. Besides these areas, many sectors have also been involved in the improvements such as, for instance education, cultural heritage, healthcare, at many different levels. However, Italy is the protagonist of a paradox (Mazzocchi, 2020):

"on the one hand, rural areas possess a "diversity advantage" deriving from historical processes and natural characteristics, which determines a great interest in these areas by a diversified global demand and a potential holding of its inhabitants (young "returning" and foreigners employed in business agro-forestry-pastoral care, in new educational and health services and in cultural and artistic projects); on the other hand, in most rural areas, especially in the most remote ones, all the signs of the crisis are present: depopulation; aging; decrease of young people who work the land; declining maintenance of soil, rivers, forests and infrastructure; high risk in the face of floods, earthquakes and droughts; abandonment of public and private services and deterioration of their quality" (2020, p.58).

These are the reflection of many factors, first historical and cultural, but they are also strongly related to the rural and urban development strategies adopted by the government in the past years. According to Mantino (2014), the European rural governance

"Was found to lack an overall vision, split between different horizontal administrations and multiple institutional actors at different territorial levels, organized differently in each member states, hosted by policies with other objectives, with a residual role and with non-institutional actors with capacity of very unbalanced influence and not communicating with each other" (p.88).

The change needed to mitigate these territorial differences and improve policy coherence among territories, actors and policy topics call for "a resizing of public structures and apparatuses with the aim of adapting the public machine and reducing the demand for resources, simplifying the decision-making process and speeding up responses" (Mantino, 2014, p.368). In Italy, decentralization of the administrative scales has aimed to increase the specificity and effectiveness of decision-making programming. According to Mantino (2014), decentralization has helped to mobilize a considerable number of subjects, public and private, in the exercise of programming, "albeit with contradictory outcomes" (p.384). In fact, Innovation has been confronted with an administrative culture and with technical knowledge that is inconsistent with the logic contained in the new tools. "Decentralization has manifested itself, rather than as a process of articulating governance, as a mechanism of (de) accountability towards the bottom" (Mantino, 2014, p.385). The availability of resources given to local authorities has helped to strengthen investment in the local area, but at the same time it consolidated organizational models and solutions, which resulted to be not useful for the challenges of innovation (Ramazzotti, 2009) but only for strengthening local elites.

However, the withdrawing of the State from innovation in administrative and territorial management, brought local authorities to manage many areas of their action governance (Mantino, 2014). Among the competences that local authorities had to deal with because of decentralization, the food system is at the core. "Territorial approaches to the food system imply a reconsideration of the roles of public administrations and private actors" (Mazzocchi, 2020, p.49).

3.5 The food policy movement in Italy

The movement of urban food policies in Italy began in 2009, with the Food Plan of the province of Pisa, a process that led to the adoption, in 2010, by the Provincial Council of Pisa of a Political Act of Direction for the Food Plan, the drafting of the Food Charter, which outlined shared visions and objectives, and the Food Strategy (Brunori et al., 2014; Forno and Maurano, 2016). In the same years, in Milan, a new political sensitivity to the theme was growing, also in view of the World Exposition Milan 2015 (EXPO 2015). In fact, in July 2014, Giuliano Pisapia, former mayor of the city of Milan, signed for the implementation of the Milan Food Policy (FP) on the one hand -today one of the most advanced food policies in Italy-, and the birth of the Milan Urban Food Policy Pact (MUFPP) on the other.

The MUFPP is an international protocol signed on October 15, 2015, by 138 cities around the world aiming to create cooperation on food policies (MUFPP, 2015). This document was produced by the City of Milan in collaboration with 47 cities as a legacy of EXPO 2015, on the theme "Feeding the Planet, Energy for Life". The final aim of this project was to allow an inter-citizen collaboration to help define a framework for action for local food policy guidelines, specific for each city but which would follow at the same time an international direction. The main goals of MUFPP strategy are in line with the global awake regarding sustainability of the food system within the "ecology of the entire food system" (Francis et al, 2003; Mason et al., 2020) framework: they indeed aim at addressing, on one side, the Sustainable Development Goals and related food system challenges, and on the other side, the political dimension and stakeholder bottom-up involvement that agroecology brings within its lens (Wezel et al., 2015; Lopez-Garcia and Gonzales de Molina, 2021). Two factors contributed to the Italian movement of urban food policy to be born: the first is the EXPO 2015 and surely the MUFPP. In fact, between the 138 cities that signed, 18 were Italian (MUFPP, 2015). For some of these cities, "the MUFPP is the very first step of the implementation process of urban food policies (UFPs), and a political, methodological, and legal framework" (Calori et al, 2017), for others it was the reconfirmation of their good work. The second factor is a progressive awareness of the centrality of food in urban development models mixed with a greater awareness of the externalities of the agri-food system (Wiskerke, 2009; Marino and Mazzocchi, 2019).

The idea of MUFPP was certainly born from the example of other cities in the world that have been moving in this direction for many years but also from the observation that many Italian cities have taken the road of sustainability with virtuous and effective municipal and regional actions. Besides, Italy has always been a very fertile ground for alternative food networks, starting from the organic movement in the 1970s (Brunori et al. 2013) and Slow Food in 2006. Nowadays, because of the mainstreaming of organic, many alternatives are flourishing all over Italy as a new way to achieve sustainability (Carzedda et al., 2018). In the Italian context new alternative food networks (AFN) are strongly related to rural development initiatives with a focus on traditional heritage and support of local farmers (Martindale et al., 2018) but also on food waste and surplus redistribution and many other activities related to the sustainability of the food system. In Italian AFN, the importance of food as a cultural object overcome localism per se, which become a manifestation of diffuse traditional culinary varieties (Martindale et al., 2018). Indeed, urban food policies were born with a strong urban dimension that today is changing into a local one - with territorial borders that can go outside the city's boundaries – in accordance with the local food system concept (Hinrichs, 2003). "Local, then, is much more (or perhaps much less) than it seems. Specific social or environmental relations do not always map predictably and consistently onto the spatial relation. Fractures between the spatial, the environmental and the social feed into the sometimes-contradictory politics of food system localization" (Hinrichs, 2003, p.36).

In Italy, in absence of a national strategy dedicated to food systems and agroecology, initiatives related to food policies have developed according to different paths, focusing on local initiatives and often without municipal or wider-scale coordination (Marino and Mazzocchi, 2019). Bottiglieri study (2015) highlights that there are only 100 Constitutions in the world that protect the right to food, among these only 24 explicitly while the other only implicitly, and Italy can be considered one of the former. However, often, even the Municipalities with policies attentive to sustainability and aimed at improving the city food system, are blocked by a lack of uniformity of values and guidelines at a national level (Bottiglieri, 2015).

The push towards sustainability in regulations and legislations has started long since: one example is the law n. 166 of 19 August 2016 on food waste or the law no. 221 of 28 December 2015 on the green economy and limiting the excessive use of food resources. Also, at the regional level it is possible to find regulations that interpret the desire to move towards more sustainable systems, through food education in schools and a healthier and more adequate diet aimed at those who use public services, like for instance, the regional law of the Lombardy Region of 6 November 2015 n. 34 on recognition, protection and promotion of the right to food which "supports and promotes policies to fight food poverty and assumes as a long-term goal the reduction of food waste by fifty percent by 2025, according to the methods and areas of its competence". Or the regional law of the Emilia Region of 29 December 2009, n. 27 on the promotion, organization and development of information and education activities for sustainability; or the regional law of the Puglia Region of 13 December 2012, n. 43 "Rules for the support of solidarity purchasing groups (GAS) and for the promotion of quality, zero-kilometre, short chain agricultural products". However, food is not usually considered among the competences of the city administration. In Italy, for instance, the absence of a national urban policy ended up giving the entire responsibility on municipalities (Moccia, 2015). The lack of intervention by the State involved a similar depletion of urban policies and public policies, leaving social innovation only to private businesses (Moccia, 2015) and social networks. Indeed, the Legge Delrio⁶ aims at reorganizing local authorities by giving more power to the regions but regions are too big to deal with urban issues. For this reason, innovation in the urban-rural field becomes a purely voluntary act that accentuates the geographical differences already extremely present among Italian regions (Moccia, 2015). Urban food policies in Italy aim to create a "horizontal solidarity" (Lacourt and Mariani, 2015) between those sectors that instead of collaborating work separately: urban areas and rural areas, regional, local, and global levels.

"The challenge now is to understand how alternative food systems can in some sense disrupt this dichotomy and become more stable food sources capable of providing both *quantity* (more food for more people) and *quality* (social, economic, health, and environmental benefits) " (Albercht et al., 2013).

⁶ Legge Delrio (art. 1, co. 51, L. n. 56/2014) is the latest Italian national law that reorganize the division of power among the State, the Regions and the Cities.

Today, many local governments have started the path of creating food policies: Livorno (Berti and Rossi, 2019), Lucca (Arcuri et al., 2022), Turin (Bottiglieri et al., 2016), Trento and Bergamo (Forno et al., 2020), Rome (Minotti et al., 2022) and more, all with their differences but following similar narratives and ideas. So many territorial activities started to take place that an informal network of academics, administrators and activists was formed in 2019 with the idea to increase the sharing of knowledge on the topic. While a debate on a national integrated food policy still does not exist at the State level, the urban movement is very prominent, mainly because of the robust background of alternative food networks that have always been characteristic of Italy with which the urban food policy movement shares many narratives (Forno and Maurano, 2016). It is possible to say that the growth of urban food policies is rooted in the history of AFNs, civis food networks and in general the idea of finding a new way to approach, live and govern the food system.

The Italian Network for Local Food Policy (Rete Politiche Locali del Cibo) was born in 2018 with the aim to create a common space of knowledge and discussion among all the projects and activities related to food policies in Italy. They specifically refer to "local" food policy rather than urban "to emphasize, on a cultural and geopolitical level, not only the role of cities, but to include the relations existing in the urban-rural continuum, taking a territorial approach towards urban policies" (Rete Politiche Locali del Cibo, 2018, p.2). Using the world "local", then, give a different dimension to food policy that can be implemented at any local level (regional, provincial, city level) according to the context.

The book published by this network (Dansero et al., 2019) is the first testimony of the Italian food policy movement, showing many different cases of urban-rural food policies and projects that constellate the Italian territory. The variety of initiatives and policies analysed in this book, along with the great number of authors that contributed, show how fertile Italy is around the topic of food and food policies. However, as stated in Dansero et al. (2019), although 27 Italian cities signed the MUFPP, "there is currently no national network of cities, although there are various initiatives of confrontation between city administrations" (p.12). This shows a lack of unity that is on the other side present in many other countries on the same topic (Dansero et al., 2019).

A key element of food policies in Italy, that clearly appears in this book (Dansero et al., 201) is the coexistence of institutionalized approaches and spontaneous processes. In the first case a public body, generally a municipality, together with social and private actors give life to a planned and implemented path through a series of actions, following a specific strategy or policy. There are also cases of policies that are not formalized and that are articulated around a debate involving administrations and institutions giving life to actions that are often not systematized and derive from dialogue with a series of movements producers and / or consumers or other actors of society civil. Hence, "the presence of a large number of initiatives both in urban and in rural areas, which have arisen around the relationship between nutrition, culture, food and sustainability but which cannot be traced back to institutionalized food policies" (Dansero et al., 2019, p. 13). In many cases, Dansero et al. (2019) state these projects and initiatives do not find "that systemic, integrated and in some way holistic vision that food policies would like to bring to the political arena and social".

Another key element is the presence of more food policy projects in the north and centre of Italy showed, also in this case, by the contributions of to the book (Dansero et al., 2019). This phenomenon is related to the fact that the network was born in the north of Italy and therefore the knowledge around this topic still must be enlarged to other areas. But also, to the fact that Italian southern regions are known to be less keen in organising and structuring social phenomenon. This doesn't relate to a lower presence of ferment around this topic in those regions but to a lower propensity to organise and involve the institutions in the organisation.

Figure 3 shows how the Italian cities that signed the MUFPP along with the areas in which the papers present in the collection are localised. Although the map is not exhaustive as it refers to a publication and not to the totality of projects present in Italy, figure 3 helps understand where the interest on food policy is most located.

Figure 3: Local food policies in Italy from the point of view of publications in the book from Dansero et al., 2019.



Although local food policies should be systemic, participative, and holistic as the territorial scale and administrative-managerial complexity increase, Dansero et al. (2019) recognize how certain food policies often develop from single thematic projects:

"Many experiences are pilot actions that act as catalysts for processes that aim to broaden the range of action towards real food policies. In other words, they carry out a cultural and symbolic function that marks the first of the steps that lead, in the best of cases, towards taking charge of systemic and coordinated strategies for governing food systems" (Dansero et al., 2019, p.20).

Numerous are the testimonies of projects and initiatives linked to specific phases of food systems – such as food surplus redistribution or local food gardens –, supported by local administrations or the result of the work of the third sector, which try to dialogue with a network of actors to create the connections and synergies for the triggering of wide-ranging policies (Dansero et al., 2019). Low, on the other side, is the presence of institutionalized food policies, which the most cited is Milan.

4. Results

In this section, the following articles are showed, as results of the research work conducted:

- 1) Fassio, F., & Minotti, B. (2019). Circular Economy for food policy: the case of the RePoPP project in the City of Turin (Italy). Sustainability, 11(21), 6078.
- 2) Arcuri, S., Minotti, B., & Galli, F. (2022). Food policy integration in small cities: The case of intermunicipal governance in Lucca, Italy. Journal of Rural Studies, 89, 287-297.
- 3) Minotti, B., Affinita, V., Calori, A., & Federici, F. (2022). The integration of food policies in a local adiministration system: the case of the Milan food policy. Agroecology and Sustainable Food Systems, DOI: 10.1080/21683565.2022.2091718.
- 4) Minotti, B., Cimini, A., D'Amico, G., Marino, D., Mazzocchi, G., & Tarra, S. (2021). Food Policy Processes in the City of Rome: A Perspective on Policy Integration and Governance Innovation. Frontiers in Sustainable Food Systems, 540.





Article

Circular Economy for Food Policy: The Case of the RePoPP Project in The City of Turin (Italy)

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Received: 18 September 2019; Accepted: 29 October 2019; Published: 1 November 2019



Abstract: Circular economy for food (CE) and food policies (FP) are two emerging but already prominent research areas, particularly when talking about the cities of the future. This paper analyzes the dynamics between these two fields of research, starting from review articles and the analysis of a case study, underlying the fundaments that FP and CE share. In particular, this paper focuses on using circular economy (CE) indicators and strategies to shape urban food policies (FP) to create a new business and political model towards sustainability. It introduces four converging perspectives, emerging from the literature, and analyzes how they have been integrated in the case study RePoPP (Re-design Project of Organic waste in Porta Palazzo market), a circular project born from the FP of the City of Turin (Italy). RePoPP is indeed a multi-actor project of urban circular food policies against food waste, which demonstrates how a circular approach can be the turning point in the creation of new food policies. This article wants to define for the first time a new research framework called "circular economy for food policy", along with its characteristics: the application of a systemic approach and CE to problems and solutions, the need for a transdisciplinary and integrated project design for the 9R (responsibility, react, reduce, reuse, re-design, repair, recover, recycle, and rot), the use of food as a pivot of cross-sectoral change, and a new form of collaborative and integrated governance.

Keywords: circular economy; food policy; sustainable strategies; systemic design; gastronomic sciences; food waste; responsibility; reduce; recover; human health

1. Introduction

Growing urbanization poses new challenges and problems to the world, many of which are related to food production and consumption. The percentage of people living in city environments has recently reached more than half of the global population and is set to grow further [1], reaching 80% by 2050 [2]. As population increases, the demand for resources in urban areas grows, environmental problems increase, socio-economic differences among citizens expand [3], and new energy needs arise [4]. A new food insecurity has crossed the threshold of cities all around the world, no longer relegated to under-nutrition but characterized by a double burden of malnutrition, namely the coexistence of a lack and excess of nutrition [5,6]. In fact, the increased risk of mortality associated with the poor nutritional value of food has exceeded that of diseases relating to lack of calorific intake. While one third of the world's population has food security problems (about 868 million undernourished people), 1.5 billion people are obese or overweight. The approximately 29 million deaths worldwide due to overeating are rapidly reaching the 36 million caused by food shortages [7].

Presently, and most likely in the future, urban environments will be the central point for systemic change, rippling through from local to a global change. The 11th Sustainable Development Goal [8]

Sustainability **2019**, 11, 6078 2 of 17

reminds us that there is a priority to "make cities and human settlements inclusive, safe, durable, and sustainable", and important realities are already following this path [3]. Some examples include cities that are proposing a return to a slower and more traditional life, or a new focus that pushes a proactive role of humans in the system [9], or that aim to create smart cities, sparking many controversies and debates [10–12]. In essence, all the urban projects aiming at creating "the cities of the future" apply different tools but share similar goals [10]. In particular, they all share the desire to move towards a socio-economic paradigm shift. Fundamentally, integrated polices are key, particularly food policies, which strengthen existing economic, social, and environmental ties to improve citizens' wellbeing [1]. This paradigm essentially works to include, as opposed to exclude, citizens and applies a systemic approach to design and analysis of policy.

What will be the role of food in the cities of the future? The intersectoral nature of food plays a primary role in circular and sustainable urban development: from the supply chain to the many cultural links, food has a mass impact on human lives, especially since the globalization of food influences ecosystems and economies, long before it reaches our plate. With this in mind, food can act as the lever for sustainable change in this urban context [3,13], a lens to uncover the interconnected problems and find systemic solutions [14]. Food can help to move away from a classic "anthropocentric" vision that sees man at the center of the urban system, as problem and solution [9], to an "ecocentric" one, which sees humans as an essential part of an ecosystem in which systems exist in relation to other systems [15]. With this vision, actors within the city play an important role, paramount to this is their interaction with each other, the formation of relationships, and the exchange of matter, energy, and knowledge [16]. Therefore, in this heterogeneous worldview [9], what surrounds human in an urban system has the same importance as human themselves.

Humanity needs urban policies that can respond to these new challenges [12], involving more actors, sectors, and political levels [3]. In particular, society needs to stop implementing emergency food policies, namely solutions that do not tackle upstream issues or make effective change [3]. However, which tools should be used to shape future scenarios, adopting an integrated, holistic, system perspective? This paper proposes the use of the principles of circular economy (CE) and a systemic approach as tools to develop urban food policies. Indeed, the CE strategies can help us evolve our intuitions on the entire food system, refine our ability to understand its parts, see the fundamental interconnections needed to challenge the future, to be creative and courageous about the redesign of the system [17].

The Ellen MacArthur Foundation (EMF) opened the path for a new discipline to emerge with the publication Cities and Circular Economy for Food, which addresses the need to apply CE to cities' challenges around the food system [2]. Also, previous studies, such as Fassio and Tecco 2018, associated the strategies of CE with the food system by supporting their fundamental and primordial relations [16]. Starting from these two main previous studies, the aim of the paper is to answer an important, yet complex, question: can the use of CE strategies and worldview help bring a socio-economic paradigm change in food policies design? The case of RePoPP (Re-design Project of Organic waste in Porta Palazzo market) has been selected to illustrate the strength of the circular and systemic approach into the context of anti-food waste urban policies, as the national leader example of a new design of this type of projects.

2. Materials and Methods

This article analyzes the emerging scenario of the circular economy for food, placing it in relation with the food policies world, with the aim of understanding how the two concepts are interconnected. A series of reviews on CE and the most relevant literature on food policies have been selected according to (1) topic of interest and (2) comparison to present economic growth and more alternative sustainable patterns. The literature review for CE was performed using the web of science databases, searching for words like "circular economy", "circular economy for food", "food waste"; while regarding food policy, the data was gathered from a specific body of knowledge that advocates for more integrated food

Sustainability **2019**, 11, 6078 3 of 17

policies. However, the interdisciplinarity of the topic limited the possibility to produce a systematic literature review. In fact, as Table 1 shows, recent review papers, published from 2012 to 2019, were selected, which provided a broad overview of the concept of CE (410 articles, 1270 interviews, over 100 case studies, 45 strategies), along with other important papers on CE and sustainability. Regarding the other two areas of study, a lack of review articles obliged a less comprehensive document selection, and thus only core and fundamental documents were chosen, following previous knowledge (Table 1).

Table 1. Relevant literature on	Circular economy	Circular economy	for food	and Food policy
Table 1. Relevant interature on	Circular economy,	Circular economy	/ 101 100u	, and rood poncy.

Circular	Economy	Circular Economy for Food	Food Policy
Ghisellini et al., 2016 Kirchherr et al., 2017 Geissdoefer et al., 2017 Borrello et al., 2017 Kalmykova et al., 2018 Korhonen et al., 2018	155 articles on CE 148 articles for148 articles for 114 definitions of CE 67 articles on CE and sustainability 1270 interviewees 45 CE strategies and over 100 case studies 40 articles on CE	Fassio and Tecco, 2018 Ellen Mac Arthur Foundation, 2019	OECD, 1981 Nestle, 2002 Maxwell and Slater, 2003 Lang, Barling and Caraher, 2009 Pinsturp-Andersen and Watson, 2011 Lang and Heasman, 2015 Hawkes, 2017a Hawkes, 2017b Lang, 2017

The main conclusion of this first part was the identification of four converging perspectives, common to the circular economy for food and food policies. These perspectives have been selected as bridging points between CE and FP, specifically when CE is directly associated with food, as in the case of the new body of literature CEFF. Namely, they become common perspective only under the lens of a food system. Therefore, since CEFF and FP are new bodies of knowledge, only qualitative data have been harvested and the review on CE has been used to support the very new literature around CEFF.

Then, a detailed analysis of a case history of CE applied to urban food policies in the city of Turin (RePoPP), the outcome of the local policies and the Atlas of Food's research (Appendix A), was analyzed. This case study helped to highlight the effectiveness of strategic projects related to the use of a systemic approach. The application of CE to problems and solutions in the food system, also adopting a transdisciplinary and integrated project design for the 9R (responsibility, react, reduce, reuse, re-design, repair, recover, recycle, and rot) was explained. This case study was chosen because it is an example of how the four converging perspectives were integrated with each other within an applied research project. Furthermore, it is a multi-award-winning project at national and international level (Milan Pact Award, Cresco Award, Oscars of Health) which is independently spreading in the City of Turin and other Italian cities. The data collected on the RePoPP project are the result of the work of all the actors involved in the research and scientifically coordinated by the University of Gastronomic Sciences (UNISG). In particular, Amiat Grouppo Iren, urban waste company of the city of Turin, gathered the data on recycling, while Eco delle Città, local NGO, assessed foodstuff weight. Crossing the design strategies adopted for the realization of RePoPP with the four converging perspectives, four fundamental application strategies emerge, which could become the ground for dialogue about the circular economy for food and the food policies: a first definition of circular economy for food policy.

It is important to underline that the methodological approach used for this article was exploratory. Exploration in social sciences is intended as scientific process which aims to "generate new ideas and weave them together to form grounded theory, or theory that emerges directly from data" [18]. In fact, exploratory research works with posteriori hypotheses by analyzing data and the relationships between them. This methodology is normally used to discover new developments in the research world and can be particularly useful when working with a set of field studies that are linked together,

Sustainability **2019**, 11, 6078 4 of 17

producing what is called a "concatenated exploration" [19]. As in the case of CE and FP, this type of exploratory research works with data from different fields that are linked together in a sort of chain.

3. Results

3.1. Food Policies and Circular Economy for Food: Two Interconnected Concepts

Tim Lang, food policy professor at City University of London and one of the founding fathers of the concept of "food policies", describes them in a deliberately reductive way as those policies that deal with "who eat what, when, and how, whether people (and animals) eat and with what consequences" [20] (p. 21). This definition, generic but accurate and punctual, perfectly delineates the holistic nature of these policies that shape and regulate the food system as a whole [21]. However, these policies are too often managed in a sectorial and discontinuous manner, but instead should require, by their nature, an integrated management, not only horizontally between policy sectors but also and above all through different levels of governance [22]. Within this assumption, this paper inserted the CE model as an umbrella concept that aggregates different approaches and levels, with the aim to give circularity, efficiency, and eco-efficiency to the business as usual (BAU) model. CE is indeed an alternative model based on the assumption that a shift from a linear economy "take, make, and dispose" to a circular and regenerative one which dialogues with nature is needed because the current economy creates an apparent fragile abundance [16].

In this new scenario, several urban food policy strategies are already trying to connect, within a circle, different sectors, such as health and nutrition, education and the environment, work, justice, and social cohesion [23]. However, the process necessary to treat food as an urban infrastructure interconnected with the surrounding environment [13] to adopt this circular perspective is still considerable. The current food system's geopolitical challenge, at a global as well as local level, still remains the transformation of our productive model towards a correct management of natural [24] and cultural capitals [25], by respecting the planetary limits [26] while offering at the same time a fair space for civil society [27]. To reach this transformation, we need to avoid compromising relations with the best raw material supplier mankind ever knew [24] and start proposing urban policies that understand that "circularity" already belongs to humans and the context in which they live. In fact, humans are an open system [28] that develops circular dynamics, like the one that starts inside our body when we eat something. Food is the medium through which the circular process of metabolism in the human body begins and its consequential transformation into energy for life [29]. This same intuition led the German philosopher Ludwig Feuerbach to the conclusion that "we are what we eat".

Circularity is not an invention of our time. It has always been a life companion of sustainability and now it needs to become a tool for food policies. Therefore, mentioning the CE does not mean only reducing waste by finding a new destination of use for a by-product or waste, namely trash to treasure strategies. Starting from food to develop a paradigm shift in a circular framework means bringing attention back to communities, quality of relationships, and substance of behavior [30]. It means not only dealing with what keeps us alive, but exploring complex territories that relate to sociality, to personal and public identity, to the spirituality of each human being. It means recognizing the central role of food for our survival in the urban context, the sustainability of our planet, the value of food for the health, well-being, and prosperity of all humans. Food is an interconnected urban infrastructure [13] that has to be designed and managed in a circular way.

3.2. Four Converging Perspectives

Currently, the worlds of food policy and circular economy for food share principles and mutually influence each other, generating shared solutions in a way that is not yet evident. The vast literature on CE enlighten some of the most important fundaments on which this concept is based. Review articles such as Ghisellini et al. (2016), Kirchherr et al. (2017), Geissdoefer et al. (2017), Borrello et al. (2017), Kalmykova et al. (2018), and Korhonen et al. (2018) help identify the core principles of the CE

Sustainability **2019**, 11, 6078 5 of 17

by analyzing and synthetizing the long history of this world of knowledge. In particular, they show how CE is first of all grown from a specific vision of the world and economy we live in, which sees the current business model as completely unsustainable. Second, they agree upon the idea that CE will help in redefining this system by giving sustainable development a new tool and theoretical background [31]. EMF defines it as an "alternative growth discourse, not an alternative to growth discourse," [31] (p. 12) shining light on the need for a paradigm change.

The systemic approach seems to be essential in the definition of CE, as much as the strong focus on waste management and the 4Rs (reduce, reuse, recycle, recovery) or 3Rs (reduce, reuse, recycle) principle [32]. Also, interdisciplinarity and transdisciplinarity are seen as indispensable for this discipline, along with a united series of bottom-up and top-down approaches [33] to create a new form of cross sectoral and multi actor system [34]. The definition of CE given by Korhonen et al., indeed, is explicit about all these features: "CE is a sustainable development initiative with the objective of reducing the societal production-consumption systems' linear material and energy throughput flows by applying materials cycles, renewable and cascade-type energy flows to the linear system. CE promotes high value material cycles alongside more traditional recycling and develops systems approaches to the cooperation of producers, consumers and other societal actors in sustainable development work" [34] (p. 547).

The same scenario is set by modern food policy literature, which is still too young to have a review article but is deeply analyzed by some authors, such as Lang et al. (2009), Nestle (2002), Lang and Heasman (2015), Hawkes (2017). In fact, the literature selected for this article around FP are a new body of literature that aims to reconfigure food policies all around the world. As previously explained, food policy put food at the core of a new series of change that, from an unsustainable food and policy system [19,35,36], will provoke a domino effect of sustainable solutions exemplified by a new socio-economic paradigm if intended as eco-integrated [36]. Indeed, the food wars theory [36] perfectly explains how the linear economic and political system created an unsustainable system that needs to change into a more radical way of thinking about food and its relationship with society and nature. For instance, the International Panel of Experts on Sustainable Food Systems, promoter of this new way of conceiving food policies since 2015, advocates the need for a more integrated set of European food policies that would transform the Common Agriculture Policy into Common Food Policy [14]—a holistic and sustainable approach towards food, that sees the food system as a whole where sustainable diets should be achieved through "a better alignment of consumption with ecosystems" [37] and societies.

Considering the interesting debate between "old" and "new" food policies [38], along with the emergence of an integrated approach, firstly claimed by OECD in 1981 and then reclaimed by Lang et al. (2009), Lang and Heasman (2015), and Hawkes (2017), they share several preconditions and solutions with CE when applied to food. Indeed, the modern literature on food policies demands the reconfiguration of this type of policy as much as CE for a new economic model. Combining the data from CE and FP literature, it becomes clear how four converging perspectives, usually reported in the introduction or in the final considerations, can be identified as clear areas of research and development, both in the field of CE applied to food and of food policies. Hence, in this section of the article the authors will try to provide a summary of scientific data and considerations deriving from further publications, which highlight the importance of these four perspectives of analysis.

Indeed, a new body of literature is now growing which relates food and CE, considering food as a pivotal element of change but using CE principles and indicators. This concept of a circular economy for food, which was mainly proposed by Fassio and Tecco (2018) and EMF (2019), has been briefly discussed in Section 3.1 and will be the core of this article. The following perspectives are nothing but assumptions and solutions that both CE applied to food and food policies present in their body of knowledge.

1. The current food system is harmful and unsustainable: From an environmental and cultural perspective, we are converging towards the promotion of food commodities, feeding the economy

Sustainability **2019**, 11, 6078 6 of 17

itself rather than responding to the real needs of humanity [39]. A "crisis of reason" is leading our society [40], which is revealed in the total irrationality of food loss and food waste [41,42] and billions of liters of wasted water and hectares of wasted land [43], or the extraction of primary materials (such as metals, biomass, fossil fuels, and minerals) which tripled from 1970 to 2010. It is estimated that in 2050, in order to maintain stability, the current production and consumption rates, about 180 billion tons of natural resources—20 tons per year per capita—will be necessary to feed this system. However, among these tons, around 29 billion will be missing [44]. In 2050, when the world's population will exceed 10 billion people, not only will primary resources be a problem, but energy demands will increase by 30% also due to the fact that we will have to support a 70% increase in agricultural production [45,46]. This is a situation that the world will have to face shortly, as much as reducing emissions harmful to the ecosystem, which should be reduced by 50% before 2030 [47] if we want to avoid unpredictable consequences. Many other indicators, such as animal welfare, water acidification, soil, and human health, show how inside the food system, everything is connected in a relationship of mutual evolution or involution, especially in the urban context. Huge amounts of resources enter our cities daily, to be transformed and consumed, creating mountains of food waste that are almost never re-introduced in the production system [2]. Cities consume 75% of global natural resources and 80% of world energy, and it is estimated that by 2050, 80% of food will be consumed in the same circumstances. The path to improve urban systems is long and complicated, mainly because the current economic model is only 9% circular, and this percentage, already dramatically low, is decreasing [48].

- A paradigm shift is needed: Cities are systems within systems, in which overlapping networks 2. interact on different scales. Multiple actors and connections among them characterize the urban food system, determining a living organism in which there are flows of matter, energy, and knowledge that actors exchange, define the urban metabolism. Cities are resource-intensive ecosystems; therefore, rethinking them in terms of flows, and not only spaces [4], becomes essential to understand how to design them to make an alternative approach grow. Urban areas are clearly dynamic systems composed of stock, flow, and feedback loops [49], in which the equilibrium between parts is more important than the sum of the single elements [17], in which any actor of the system cannot exist alone but each of them exists only because of the place they occupy within the system [50]. The new economic paradigm of the CE places citizen at the center of the system and proposes a completely different way of living and conceiving the urban community. Through a responsible involvement of public administration, which is entrusted with the task of educating people and creating interest, the circular model aims primarily to ensure that urban metabolism does not produce waste, but economic and social values in balance with natural ecosystems. Here, food policies acquire meaning and value as those policies that expand the potential of urban systems: through the participation of all urban food actors and the interconnections that characterize them, with the circularity lens, food policies can develop a cooperative model tending towards zero waste. Many organizations are trying to shape this transition to sustainability through the development of systemic policies [14] guided by the word "integration" among all the actors of the same urban system. A new paradigm is followed, which sees total cooperation of practices and intents between agriculture and environment, public health, and transport, trade, and education [2,3,14,22,47]: a widespread "great food transformation", multisectoral and multilevel, global and local, with the ultimate aim of guaranteeing healthy, fair, and sustainable food to all citizens of the world, impacting as little as possible on land resources by closing the system circle economic [47].
- 3. Food as the measure of change: Food can be the pivot for a domino effect of changes if intended, as the natural outcome of an alliance between parts of a system [16]. The metrics of the model called The Wedding Cake, developed by Rockström and Sukhdev of the Stockholm Resilience Center [51], show that food is the only actor in relation to all 17 Sustainable Development Goals, objectives that in September 2015, 193 member countries of the UN pledged to reach by 2030 [8].

Sustainability **2019**, 11, 6078 7 of 17

This is a model in which the basis of the "cake" is the dimension of the biosphere, which contains and supports the social and economic structure. This is because the intrinsic nature of food is to influence health, the environment, society, and all sectors related to them. The food chain is a bundle, an intricate network of actors, powers, and sectors, connected to each other by those products that we find on the plate every day. This set of interconnected networks inevitably causes problems that cannot be solved in any way other than a systematic approach [14]. The cities of the future will therefore have to put food at the core of their political agenda and "use food as a key to stimulate innovation in other sectors" [13] (p. 45). Interpreting food as an essential and fundamental right of the citizen will be the only way to give back the right value to food, not only as a product, but as the keystone of a more complex urban architecture.

4. A new governance is needed: The term governance is always complicated to define, it is a concept closely linked to the processes of policy formulation and to those who hold power [52]. Usually, the term refers to a form of indirect and flexible government, which involves both private and public actors, looking for collaborative results [20]. It is therefore clear that to change mentality and the current paradigm, a new governance system is needed. The first objective of the circular mindset is to avoid the constant breaking down of complexity that surrounds us in linear logics of thought [53], in a set of independent sub-problems: a problem solving approach that loses the transdisciplinarity [54] of the scientific and intellectual approach that aims at the full understanding of the complexity of the present world. This linear way of thinking made environmental and social degradation an obvious error of the system [30]. Therefore, the first step consists of acquiring a community awareness that unites the human race in recognizing the entire Earth as "homeland" [55] and in this sense, in implementing policies of collaboration for the common well-being. According to Haysom, "urban food governance innovation" is the last essential piece of a series of interconnected transitions that the world has lived and is living in its relationship with food [56]. In the CE and in food policies, governance means a political–social management system that includes multiple levels of power: local, national, and international governments, citizens and NGOs, academia, and private businesses [14]. Everyone takes part, everyone contributes, everyone benefits: a "governance for transition" [14] that facilitates and guarantees the integration and circularity necessary for the paradigm shift. This new governance system includes not only public bodies but also the whole supply chain, "where the hierarchy is no longer a value but exclusively a relationship and a function, where each node of the network has equal importance precisely because it is part of a whole" [16] (p. 59). Only a participatory, collaborative, inclusive, diversified governance of this kind would facilitate the development of an economy that functions in the long term as regenerative [2].

3.3. Theory Applied: The Case of RePoPP Project in the City of Turin

Some cities, pioneers of innovative urban food policies or CE strategies, have long been working on a "new food equation", intending cities as leaders of a strategic vision of the food system, that take advantage of the interactions of food with other sectors and where political public institutions play a proactive role in solving problems [57]. The report of the Ellen Macarthur Foundation of 2019, Cities and Circular Economy for Food, describes how cities can have an impact on the food system by applying the principles of the CE, in three macro-categories: food production through regenerative methods within urban and peri-urban areas; distribution and design of healthy products contained in sustainable packaging; reuse or recycling of food outputs, waste, and by-products that must become inputs for new systems [2]. For each of these categories, there are currently cities that are developing the best practices.

Dakar and Daegu, for instance, are proposing solutions to food poverty, climate change, food waste, and social exclusion, which involve urban and peri-urban agriculture, in particular, micro-gardening and the cultivation of rice fields [58,59]. The municipality of Porto Alegre has instead given economic and infrastructural support to producers of organic seed oil and derivatives, guaranteeing empowerment of

Sustainability **2019**, 11, 6078 8 of 17

local producers, creating new jobs, and preserving the biodiversity of the area [60]. Ljubljana, Moscow, and Vienna, on the other hand, present policies related to food distribution and access: a public marketing strategy for rural products in the area [61]; the creation of an infrastructure that guarantees access to fresh and local food [62]; a regulation for sustainable procurement in public facilities [63], respectively. Finally, Riga and Milan have projects both aiming at better waste management and the re-use/redistribution of food waste and surpluses: in Riga, directly in the landfill [64] and in Milan, at neighborhood level [65].

This brief overview of best practices exemplifies the vast panorama of urban food policies that apply the principles of the CE for food to develop integrated, contextualized, and effective policies. Precisely from the analysis of these practices, Turin took the inspiration to develop RePoPP—Progetto valorizzazione organico Porta Palazzo (project for the organic development of Porta Palazzo). This initiative—promoted by the Municipality of Turin, Novamont, the NGO Eco dalle Città, Amiat-Iren Group, with the scientific coordination of the University of Gastronomic Sciences (Project Manager for UNISG: professor Franco Fassio)—is an example of research applied for the design of urban circular policies against food waste (Figure 1).



Figure 1. The RePoPP Project (Source: University of Gastronomic Sciences, 2018).

This project was born from the analysis of the food system of the Metropolitan City of Turin performed by the Atlas of Food, a transdisciplinary research and open platform which, through a systemic approach to urban research, helps to understand the complexity of food and its connections with urban and peri-urban areas (Appendix A). The Atlas, developed from the collaboration between the University of Turin, Turin Polytechnic, and the University of Gastronomic Sciences in collaboration with Camera del Commercio di Torino, was born with the desire to provide a research database to support public policies as much as private businesses initiatives [66]. Therefore, RePoPP started in 2016 during the European Week for Waste Reduction (EWWW) and was developed thanks to the NGO Eco dalle Città, which involves the Waste Sentinels and the Ecomori (volunteers requesting asylum), in the recovery of food surpluses at the market stalls of the Porta Palazzo market (recover). The redistribution of food recovered occurs through the use of fruit and vegetable boxes filled with a mix of food aimed at satisfying, both from the quantitative and qualitative/nutritional point of view, the needs of a standard family for two days (humane health). From November 2016, the surplus food is recovered daily, and 150,649 kg of food has been collected to date, thanks to the work of 43 volunteer asylum seekers and two awaiting residence permits (react), coming from Pakistan, Ghana, Ivory Coast, Mali, Gambia, Nigeria, and the Republic of Guinea. Furthermore, in 2019, two work contracts and five internships were activated with the prospect of further involving other non-volunteer workers.

Sustainability **2019**, 11, 6078 9 of 17

Besides storing the surpluses in a market counter and a refrigerated cell, given free of charge by the Municipality of Turin for the implementation of the project (reuse), the Ecomori also play the role of sensitizing the staff of the market to a correct recycling (responsibility). Waste is, in fact, another area where RePoPP is achieving excellent results. The Porta Palazzo market generated about 4000 tons of waste per year in 2016, for an annual cost for cleaning spaces of 1,800,000 euros. The general waste represented 47.5% of the total waste, 14.7% of which was organic waste. The project therefore wanted to impact the organic part of the waste, delivering to the vendors 165 perches and 206 packs of biodegradable and compostable bags made of Mater-Bi, for the collection of organic waste produced during the sale (recycle and rot). From the beginning of the project to March 2019, around 15,000 bags were distributed every month and the quality of recycling improved, showing a significant drop in the organic fraction in the general waste and demonstrating the success of the project.

The Mater-Bi bags have been widely accepted by traders, who are currently refurnished weekly with 25 packs. The perch, on the other hand, has had some resistance: if at the beginning of the project 30% of the traders had adopted it, a year later only 14.5% continued to use it, essentially due to the lack of space among the stalls (re-design). The quality of the waste has, however, improved: the first data found a decrease in the amount of organic materials inside the general waste that was incinerated, and a decrease in the quantity of recycling waste among recovery waste. In 2016, the market had produced 4267 tons of waste, while in 2017 it produced 8.9% less (a reduction of around 380 tons). The greatest achievement in the area of waste management was the reduction in general waste: from 2289 tons in 2016 to 1579 tons in 2017, a drop of 31% (reduce). Given the nature of the project, the production of organic waste grew significantly, by 95%, going from 416 tons in 2016 to 811 tons in 2017, while regarding what is called "cassettame", that is, the other material sent for recycling (repair), the latter recorded an increase of 4.1% (equal to just over 64 tons). This year, in Porta Palazzo, the collection continued, gaining momentum, and collected a total of 30,234 kg between January 1st and June 30th. Starting from March 2019, the total number of Mater-Bi bags distributed among the vendors has decreased in order to adapt the quantity of bags to the specific needs of each merchant and avoid waste or shortages. Comparing the data from the first half of 2018 and 2019, we can see how summing up the Porta Palazzo Market to the Mercato del Libero Scambio and the Balon (all markets near the trial), the total waste produced decreased by 11.3% thanks to a 9.5% drop in general waste production. The Balon in particular, only in the first half of 2019, recycled over 80% of the collected waste, of which 1.6% was still edible.

Finally, associated with RePoPP, a communication campaign (Figure 2) was developed by UNISG aimed at increasing awareness and education regarding recycling and providing civic and environmental information to asylum seekers, creating entertainment activities on food waste and pushing social integration. The campaign took over the market square with provocative and ironic slogans, playing with the Italian language, that have come straight to people's hearts, speaking directly to consumers, traders, and volunteers (Figure 3) [67].



Figure 2. Volunteer asylum seekers (source: University of Gastronomic Sciences, 2018).

Sustainability **2019**, *11*, 6078



Figure 3. Communication campaign (source: University of Gastronomic Sciences, 2018).

RePoPP, besides collecting food surplus and increasing recycling and access to food, also worked on integration and social innovation. In 2018 the project won the special mention of the Milan Pact Award for the "food waste" category [68], based solely on the circular nature of the project. Furthermore, it was awarded with a Cresco Award in 2018, supported by the Sodalitas Foundation, in collaboration with ANCI (national organization of Italian municipalities), as one of the most effective urban Italian projects in the sustainable development of the territories. Finally, it received a special mention at the Oscars of Health, Rete Città Sane OMS, because of the relevance of its activities for the citizenship.

Today, the project has also been extended to other markets in the city thanks to Food Pride, a network of associations engaged in fighting food waste. The "food priders" collect unsold fruit and vegetables, expiring food, and also bread among the markets and shops of Turin by bicycle. This year, thanks to this project, in the Via Porpora Market, 1275 kg of food have already been collected, with a recovery of twice a week, and 3004 kg in the Borgo Vittoria Market, with a recovery of three times a week. More than 200 people benefit from the weekly redistribution of these products, in particular 160 beneficiaries from Porta Palazzo, 15 from Borgo Vittoria, and 32 from Via Porpora. Moreover, from February 2019, groups of asylum seekers and European volunteers of the Eufemia NGO, have used a cargo bike to recover and redistribute about 1000 kg of bread per month to the homeless dormitory in via Ghedini and to the Cecchi Point Multicultural Hub. Starting from March 2019, other associations joined the Food Pride project and today they manage the redistribution in markets that RePopp did not involve before: Mercato Corso Taranto, where two Italian volunteers from Rete Ong weekly collect, on average, 85 kg of food per month and redistribute it to 35 people; in the Corso Brunelleschi Market and in the Corso Racconigi Market, managed by Italian and European volunteers from the Eufemia association, the weekly collections generate about 930–980 kg per month, from which about 30–40 families benefit. To date, this initiative is expanding thanks to the involvement of other associations and other markets: a network of "Circular Markets" is being created, of which the University of Gastronomic Sciences is a promoter and spokesperson.

4. Discussion

RePoPP, a project born from Turin's local food policies and developed by adopting a circular approach to food, is a clear example of a new area of research and development, which could be internationally defined as circular economy for food policy. RePoPP is in line with the four

Sustainability **2019**, 11, 6078 11 of 17

converging perspectives described above, meaning that for each a direct application on the project has been identified. Crossing the design strategies adopted for the realization of RePoPP with the four converging perspectives, four fundamental application strategies emerge as possible common ground between circular economy for food and food policies (Table 2):

- Foundation A: Use of a systemic approach and CE to problems and solutions (sustainable strategies);
- Foundation B: transdisciplinary and integrated project design for the 9Rs (responsibility, react, reduce, reuse, re-design, repair, recover, recycle, and rot);
- Foundation C: Use of food as a pivot of cross-sectoral change (17 Sustainable Development Goals);
- Foundation D: Use of a new form of collaborative and integrated governance (urban food policies)

Converging Prespectives	+	RePoPP	=	Shared Foundations	Circular Economy for Food Policy
The current food system is harmful and unsustainable	+	Systemic analysis of actors and relations through the Atlas of Food (holistic relief of the local food system)	=	A	Use of a systemic approach and CE to problems and solutions (sustainable strategies)
A paradigm shift is needed	+	Reduction of general waste, increase in surpluses value, access to food for the needy, social integration, new jobs (reduce, recover, humane health)	=	В	Transdisciplinary and integrated project design for the 9R (systemic design and gastronomic sciences)
Food as the measure for change	+	Food and its by-products are the focus of the activity (CE for food)	=	С	Use of food as a pivot of cross-sectoral change (17 Sustainable Development Goals)
A new governance is needed	+	Collaboration among public, private, third sector (responsibility)	=	D	Use of a new form of collaborative and integrated governance (urban food policies)

Table 2. Circular economy for new local policies: summary table.

As Table 2 shows, the project was indeed born thanks to the identification of a series of problems related to the Turin urban food system, put into system also thanks to the research carried out by the Atlas of Food (foundation A). The systemic approach was used in the design and implementation of an innovative, original, transdisciplinary project aimed at changing citizens' habits, namely, proposing a new paradigm in the waste recycling and food surplus redistribution system, guaranteeing innovation and social integration (foundation B). As a starting point of this new paradigm, the project used food as a stimulus for cross-sectoral improvement (foundation C). Starting from the collection of the unsold food, the project had positive impacts on waste, society, and education. The success of the project is due to the creation and use of a new governance structure that welcomes actors of various kinds and backgrounds united by common and shared goals (foundation D).

This case study demonstrates that besides the use of CE to source sustainable food, to design healthy food products, and to reuse food waste/surplus [2], CE can be the origin of a holistic and systemic change. Indeed, RePoPP not only "designs out the food waste" [2], but also changes the design of food markets, the relationships between food actors, and the social inclusion dynamics: "The potential cascade effect of food practices in their cultural value and in their factual connections, their system pervasiveness, can become that flywheel by which, if aligned to the pivot of circular economy, the rotary

Sustainability **2019**, 11, 6078 12 of 17

movement can be brought to expand towards a new awareness of the interconnectivity of all things, of the fact that the circularity born of thinking in systems is not a new bond or constraint, but rather the natural result of an existing alliance between all parts" [16] (p. 74).

Working on urban projects of this type on a global scale, cities could create benefits of \$2.7 billion a year in 2050, reduce greenhouse gas emissions by an equivalent of 4.3 million tons of CO₂, and save 15 million hectares of agricultural land from degradation [2]. Politics and policies need circularity and vice versa. The first requires a shared action tool and indicators, the second, regulations to achieve a global impact. Together, they can implement the paradigm shift that both seek long-term, contextualized and resilient to all the challenges that have not been considered yet. On the other hand, the systemic view includes cooperation between common thoughts. The CE, which became part of European priorities in December 2015, has already begun to stimulate a regulatory change necessary for a political and cultural evolution [47]. The food policies are still far from uniform and systematic, essentially because they are extremely variable in nature. The term itself, food policy, is used to identify policies but also policy implementation tools, depending on the context in which it is used [13]. Their multisectoral nature, historically treated in an extremely sectorial way, has made them difficult to understand and to organize [20]. Perhaps with the help of a growing tool such as the CE, which currently already has a theoretical-regulatory framework, it will be easier to reach a common vision for global food policies. The CE should not only serve to redefine the concept of waste [16], but can help formulate projects and policies in all areas that food touches. Circularity is a mindset, a way of designing reality, a system that should be the basis of every urban policy, because undoubtedly, we are all part of the same system, hence, we need a circular economy for food policies.

5. Conclusions

This paper tried to set the basis for a new transdisciplinary scholarship, defined the circular economy for food policy (CEFFP), showing the convergences and applications that the use of CE can have, and should have, in the design of food system policies. The results of the RePoPP case study showed a positive answer to the question of whether the use of CE strategies helps bringing a socio-economic paradigm change in food policies. The project performed an interesting growth in a few years and produced positive results not only in the collection of food waste and redistribution of food surplus, but also as a social inclusion incentive and in the creation of a new systemic governance. The extension of the project to new markets showed interest from the city and the population, along with the possibility to easily replicate and adapt the best practice.

This article is trying to open a new theoretical path by proving a clear area of study which still has variable boundaries that should be defined in further research. By underling the linkages of these two connected scholarships, concatenated exploratory methodology [9] helped enlighten that a circular economy for food policy could be a win-win strategy: for CE to have a new platform of work that share same ideals and worldview, and for FP to have a set of structured indicators and strategies to create policies for a more sustainable future. As the beginning of a new fusion of two disciplines, CE and FP, this paper encountered many limitations and obstacles, firstly the lack of studies strictly related to the interconnections of these two areas of study. Further research should, therefore, focus not only on the design of new projects, such as RePoPP, but also on monitoring the current best practices. Indeed, the monitoring of circular economy for food activities is continuing at the University of Gastronomic Sciences, where over 200 case histories on the application of CE to food policies are now being classified. The main objective of this paper was to stimulate cities and academics to work with CE worldview and indicators, applying system design thinking and circularity to all food policies of the future.

Author Contributions: The whole article has been conceptualized, elaborated, and written with the collaboration of the two authors, except for the data regarding RePoPP and the Atlas of Food, which was harvested by F.F. only as scientific coordinator of the two projects.

Funding: The Research RePoPP was funded by Novamont.

13 of 17 Sustainability 2019, 11, 6078

Conflicts of Interest: The authors declare no conflict of interest and that the funder and that all the other actors involved in the project agreed in publishing these data.

Appendix A

By overlapping the analysis of the recovery system and redistribution of food surpluses for social purposes with the production of food waste from different forms of distribution (large organized distribution, neighbourhood stores, markets, farmers' market, and GAS (solidarity purchasing groups), the Atlas of Food pointed out a potential leeway of intervention for new ways of value creation and optimisation. Once the critical hotspot and source of leakages in city district markets were identified, the attention has been focused on the market of Porta Palazzo, the largest outdoor European market.

Example from ATLANTE DEL CIBO DI TORINO METROPOLITANA "Rapporto 0"

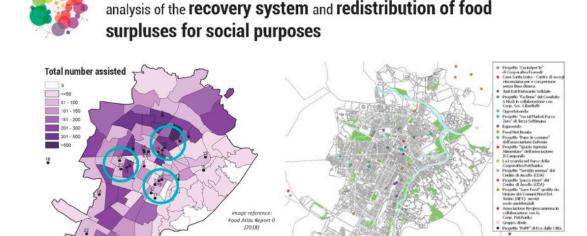


Figure A1. Analysis of the recovery system (Source: Atlante del Cibo di Torino Città Metropolitana, Report 0, 2017).



Example from ATLANTE DEL CIBO DI TORINO METROPOLITANA "Rapporto 0" the forms of distribution: Large Organised Distribution, neighborhood stores, markets, farmers' market and Solidarity Purchasing Groups



Benefit tables and income assistance

Distribution of the markets in Turin

Large Organised Distribution

- 55 medium and 57 large shopping centers
- 29 hypermarkets (+ 38% since 2001), 366 (+ 127% since 2001) supermarkets, 224 minimarkets (+ 148% since 2001)

Spatial distribution of places for redistribution of surpluses

Neighborhood grocery stores

8,881 stores in the Metropolitan City

363 with 17,091 food counters in the Metropolitan City Only in Turin 42 daily markets, 38 banks of producers 366 food desks at Porta Palazzo

- 70 in the Metropolitan City
- 15 in Turin and first belt

121 in the Metropolitan City, of which 73 in Turin, 21 in the first belt, 12 in the second belt

Figure A2. Different forms of distribution (Source: Atlante del Cibo di Torino Città Metropolitana, Report 0, 2017).

Sustainability **2019**, 11, 6078 14 of 17

The core of the Atlas is the evolution of the methodology for the analysis of urban food systems based on the realization of a multimedia, interactive, participated Atlas of Food, centered on the metropolitan city of Turin. The Atlas of food collects and organizes information and data about the food system at the metropolitan scale (the former province of Turin). The online platform (www.atlantedelcibo.it) presents the collected and newly produced, in the form of maps, and visual and textual materials, searchable and partially editable by the web community and by the actors of the food system. Data are participatory and regularly updated, basing the methodologies of civic participatory mapping of First Life, the civic map-based social network used for the participatory mapping activities of the Atlas of Food. Scales of the analysis and of the representation of the food system vary according to the treated issues, coherently with the transcalarity of food flows and networks. This flexible spatial approach helps in understanding the complexity of the food system and the connections between its multiple parts in and around the urban milieu (according to the systemic approach).

The general goal of the project is to develop and implement an interdisciplinary methodology of food system analysis and assessment, at the metropolitan scale, through traditional charts and maps, participatory mapping, and a strict relationship with social networks, for field action. The Atlas of Food of Turin has the following specific aims:

- to provide an open access tool, collecting and representing data, information, and ideas about the food system at the city-region scale;
- to support the public-private network which is working at the establishment of a food commission, through analysis of the food system, development of scenario and suggestions for the food strategies, design solutions aiming at the enhancement of sustainability, equity, participation and resilience of the food system;
- to increase the awareness of the actors of the food web about food, fostering the visibility and sharing of the issues linked to the different phases of the food chain;
- to provide a platform where the stronger and weaker actors of the food chain can virtually
 meet, reciprocally know, share ideas, creating an opinion making critical mass able to address
 food policies;
- to monitor the food system regularly with a participatory approach, reporting changes, trends, opportunities and threats.

The Atlas of Food can support the development of a resilient urban (food) system, because it stimulates the creation of a consistent database and repository of information about it. The research group carries out this work in strict collaboration with public authorities and agencies, other research bodies, private businesses, NGOs, and other community groups. This variety of public and private actors helps to guarantee the reliability, transparency, and regular update of the information presented by the website. The participatory approach concerns not only the data collection, but also the elaboration of development and policy scenarios, towards the planning of an efficient, resilient, fair, and sustainable metropolitan food system, where food and its connections have a role of social, economic and cultural capital.

The first report on the state of the Metropolitan Turin Food System, produced within the framework of the Atlas of Food, was presented in May 2017. It was divided into three main sections: (a) a review of already existing maps and representations about the food system (a map of maps), which were critically reviewed and organized, in order to produce a catalogue of the different existing representations; (b) a collection of static maps, specifically produced for the atlas, representing data about the food system coming both from official archives (e.g., census) and from users and actors of the food system. The static maps will be open to updates and corrections, following the suggestions of users; (c) a platform for user-generated, dynamic, interactive maps, based on crowd mapping and the integration with social networks. It provides a first cross-cutting and integrated reading of the main features of the metropolitan food system.

Sustainability **2019**, *11*, 6078

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Sustainability **2019**, 11, 6078 17 of 17

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Journal of Rural Studies

journal homepage: www.elsevier.com/locate/jrurstud





Food policy integration in small cities: The case of intermunicipal governance in Lucca, Italy

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ARTICLE INFO

Keywords:
Food policy
Governance
Policy integration
Intermunicipal
Plain of food

ABSTRACT

Food and food security are not areas where municipalities have roles prescribed by law; nonetheless, they are responsible for a range of overlapping services and functions related to food. Competences for policymaking are divided across many different departments, local authorities, and agencies whose functions involve multiple actors, and both scholars and policymakers have called for a more integrated approach to food policies and for cities to play a prominent role in addressing food system challenges through new, place-based, and carefully crafted governance systems. In this study, we examined a unique case study and process that led to the establishment and further development of the first intermunicipal food policy (IFP) in Italy, called Piana del Cibo (literally "Plain of Food"), a governance arrangement through which five municipalities within the province of Lucca (in the Tuscany region, central Italy) reach out beyond their administrative and functional boundaries. Despite the food policy agenda in Lucca being currently underway, this research contributes to a deeper understanding of the possible pathways of policy integration and of the implications of such processes in small cities, highlighting potential enablers and obstacles to integration. The findings indicate that the governance structure currently tested is an institutional unicum in the Italian food policy landscape and is shaped as joint management of food policy functions (gestione associata) combined with an elaborate structure of participatory governance. The presented case study illustrates how a process of (food) policy integration should be understood as processes entailing different and mutually interacting dimensions. It also showcases a set of factors that can reveal potential enablers and obstacles in such processes.

1. Introduction

Food and food security are not areas where municipalities have roles prescribed by law; nonetheless, they are responsible for a range of overlapping services and functions related to food. These include public food procurement, urban planning, waste management, health and social services, and the regulation of retailing and markets. However, the responsibilities of policymaking in these sectors are divided across many different departments, local authorities, and agencies, the functions of which involve multiple actors (Coulson and Sonnino, 2019). Both scholars and policymakers have called for a more integrated approach to food policies and for cities to assume a prominent role in addressing food system challenges through new, place-based, and carefully crafted governance systems (Sonnino, 2019; Sonnino et al., 2019; Halliday and Barling, 2018; Candel and Pereira, 2017; Barling et al., 2002). The idea

that cities are best positioned to facilitate the transition toward more sustainable food systems has been emphasised by international cities networks: the Milan Urban Food Policy Pact (MUFPP), which is currently signed by 211 cities¹; the City Food Network; and the C40 Food Systems Network, just to name a few, and by the rise in the number of urban food policies (UFPs) across the globe. Defined as "the tools of governance that help connect stakeholders and issues related to food, defining spheres of action, objectives, and procedures necessary to define, implement, and measure policy" (Calori and Magarini, 2015), UFPs are providing tangible examples of synergies between diverse stakeholders and traditionally disjointed policy domains (Wiskerke, 2009). The model of the Food Policy Council (FPC) is increasingly being used at the subnational level to transcend the boundaries of traditional policymaking and establish new governance systems able to address the cross-cutting nature of food (Halliday and Barling, 2018). FPCs aim at

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¹ On June 25th, 2021.

coordinating formerly disconnected actors and actions under a coherent umbrella of policies and goals by working "across sectors, engaging with government policy and programs, grassroots/non-profit projects, local business and food workers" (Harper et al., 2009: 16). Therefore, integration is at the core of the new food governance systems between sectors, scales, and relevant actors. The body literature examining the relationship between FPCs and governments is growing (Moragues-Faus, 2021; Gupta et al., 2018; Bassarab et al., 2018; MacRae and Donahue, 2013; Scherb et al., 2012; Hodgson, 2011; Fox, 2010; Schiff, 2007; Borron, 2003; Hamilton, 2002). Many studies focused on the shape of this relationship in the implementation of food strategies at the subnational level (Giambartolomei et al., 2021; Sibbing and Candel, 2021; Cretella, 2019; Blay-Palmer, 2009).

Sibbing and Candel (2021) examined the process of the institutionalisation of the integrated food policy in the particular case of the Dutch municipality of Ede. They emphasised how a food strategy, dedicated financial resources, and organisational innovations are crucial in this process, but can also become inhibiting factors. However, considering the different contexts in which local policymakers operate, in terms of powers and responsibilities, political priorities, governance systems, and culture (Sonnino, 2017), policy options available to cities across the world change accordingly (Candel, 2020).

The aim of this study was to contribute to a deeper understanding of the processes of policy integration around food and the implications of such processes for local governments in small cities, especially concerning opportunities for and obstacles to integration. To this purpose, we examined the unique case of the first Intermunicipal Food Policy (IFP) in Italy, called *Piana del Cibo* (literally "Plain of Food", from the Plain of Lucca), a governance arrangement through which five municipalities within the province of Lucca (in the Tuscany region, central Italy) reach out beyond their administrative and functional boundaries to share decision-making powers on food. Despite the food policy agenda being underway, the questions addressed in this study are the following: (1) what would an integrated food policy governance look like in a subnational context and (2) what enabling factors and obstacles to integration are identifiable in a case of intermunicipal cooperation between small cities?

The remainder of this paper is structured as follows: The next section outlines the theoretical framework underpinning the analysis, which is a processual approach to policy integration. Section 3 presents the methods used for data collection and analysis, and Section 4 describes preliminary research findings, broken down into the four dimensions identified as relevant to the integration process. Section 5 provides a discussion on the findings and presents a set of enabling and hindering factors. After outlining the implications for the integration process, the paper ends with identifying future avenues of investigation.

2. Conceptual framework: food policy integration

Different terminologies and approaches to address policy integration have been suggested by scholars and practitioners in different fields (Galli et al., 2020; Tosun and Lang, 2017; Candel and Biesbroek, 2016; Jordan and Lenschow, 2010, Rayner and Howlett, 2009). Characterised by the "cooperation of actors from different policy domains or policy sectors" (Tosun and Lang, 2017, 554), integration is pursued particularly when cross-cutting issues affecting multiple policy domains (Jochim and May 2010) are targeted, such as food security, climate change, migration, and similar "wicked problems" (Termeer et al., 2015). A consensus exists among scholars that policy "silo" approaches have manifold shortcomings and might lead to policy failures (Sibbing et al., 2021; Tosun and Lang, 2017), but it is not yet clear if replacing sectorial policies with integrated strategies leads to an optimal policy mix (Rayner and Howlett, 2009) or results in better policy outcomes (Candel, 2017). In addition, the question of the optimal level of integration is recognised as a challenge (Candel and Pereira, 2017), and recent attempts were devoted to assessing the desirability and feasibility of

pushing toward policy integration (Candel, 2021). The approach developed by Candel and Biesbroek (2016) was drawn from earlier theoretical debates and aims to provide a starting point for advancing policy integration studies. They criticised the dominant view of policy integration as an ideal, with a static outcome to be achieved, and proposed a processual approach to policy integration, understood as a multifaceted process having an inherent dynamic nature and multiple dimensions. These dimensions encompass the policy frame, and the involvement of different subsystems, goals, and instruments, with the former two being more related to institutional aspects and the latter two predominantly focused on the policy level (Candel, 2018). Candel and Biersbroek's original framework identifies two ideal types of the degree of (dis)integration in relation to each of the four dimensions, exemplified by Candel (2021). The first dimension is the policy frame, i.e., the presence of an overarching framing embedded within a polity fostering integrative action (Candel, 2021; Candel and Biesbroek, 2016). "How a particular problem is perceived within a given governance system" (Candel and Biersbroek, 2016: 218) affects policy formation and institutionalisation (Bèland, 2009). In Candel and Biesbroek's processual understanding of the policy frame dimension, the degree of integration ranges from a narrow definition of the problem, which is considered to fall within the remit of a specific subsystem (lowest), to the recognition of the cross-cutting nature of the problem and the shared understanding of the need to adopt a holistic governance approach (highest).

The second dimension distinguished is subsystem involvement: "the range of actors and institutions involved in the governance of a particular cross-cutting policy problem" (Candel and Biersbroek, 2016: 218). Distinguishing between subsystems might reveal difficulties in that they do not possess clearly defined boundaries, being constructed for analytical purposes. In addition, individuals or groups within a subsystem sometimes engage to assign prominence to a certain cross-cutting issue, eventually leading to the general recognition of the problem within the whole subsystem. An example is related to food poverty: an issue pertaining to different domains (social policies and health), which different groups of actors have been addressing from their own perspective (and made relevant in their own subsystems), e.g., charities distributing surplus food to people in need, social services officials participating in welfare programs, NGOs advocating for basic income schemes, food industries through surplus food recovery, and environmental task forces using waste prevention guidelines. How a policy problem is framed, however, affects the number and type of subsystems and domains that will eventually address it through specific initiatives and policies (Béland, 2009).

For the purpose of this study, following Candel and Biesbroek (2016), we distinguished policy domains from subsystems and considered policy domains as "substantive fields of policymaking within a broader governance system", such as agriculture, health, or economic development (Section 4.3). Policy domains can therefore include more than one subsystem. In our specific case study, we recognise policy domains as those represented by political decisionmakers² and public officials, whereas we use the term subsystem to identify all other groups or actors, such as food system stakeholders, civil society organisations, and NGOs, the activity of which is related to one or more food issues. This specific categorisation allowed us to differentiate between the public policy level, and actors therein, and the participatory level, encompassing the engagement of the broader community (Section 4.3).

Candel and Biersbroek suggested two indicators for the subsystems' dimension: the first pertains to which subsystems are (or are not)

² For the purpose of this study, we considered the executive body of the municipality, i.e., the Giunta Comunale (City Board), which comprises Deputy Mayors, who are appointed by the Mayor (including from members of the council), who delegates some of their power to Deputy Mayors. The City Board implements decisions taken by the Consiglio Comunale (City Council), elected by direct universal suffrage.

involved in the governance of the cross-cutting issue, which the actors explicitly consider a matter of their concern, to address through policy initiatives. The second is the density of interactions between subsystems, allowing for a distinction between dominant subsystems and subsystems only indirectly concerned by the cross-cutting issue. The degree of integration would then move on a scale between one dominant subsystem governing the problem with no interactions with other subsystems (lowest) to the involvement of, and interactions between, all potentially relevant subsystems (highest).

The dimension of policy goals pertains to the range of sectoral policies in which a cross-cutting problem is explicitly addressed and the coherence between these goals. Goals can be broad and generic or very specific (Candel, 2020). A further distinction can be identified between main and sub-goals, where the former represent key concerns addressed as policy priorities. Coherence (or lack thereof) relates to whether sectoral subsystems jointly contribute (or not) to achieving a common objective. On a scale, low integration would mean that concerns about a problem are only addressed by the goals of one or a few subsystems, with no or low coherence. Higher degrees of integration manifest when a problem is addressed as a concern in all relevant subsystems, possibly with an overarching strategy.

The fourth dimension concerns the policy instruments, i.e., the means implemented to achieve the goals, and their level of consistency. A distinction can be made between substantive and procedural instruments: the former allocates governing resources of nodality (information), authority (legal powers), treasure (financial resources), and organisation (organisational capacities) available to governments (Hood, 1983, cited in: Candel, 2020). Procedural instruments include those instruments manipulating the policy process to ensure coordination. Consistency refers to the capacity of the different policy instruments to be mutually supportive in the pursuit of different goals. A low level of integration is then exemplified by one or a few sectoral instruments deployed and no procedural instruments to facilitate coordination, whereas high integration levels encompass a balanced instrument mix deployed by all relevant subsystems, procedural instruments including boundary-spanning structures to coordinate, and high consistency.

In this study, we adopted the dimensions identified by Candel and Biesbroek (2016) and Candel (2021) as organising concepts for the analysis. The processual idea involving non-hierarchical and non-linear pathways toward integration fits particularly well with the notion of food policy governance, as significant differences in the implementation of food strategies can be expected, the success of which is subject to many external and internal factors, and long-term outcomes are often involved. So far, no methods of operationalising and evaluating coherence and consistency have been agreed upon by public policy scholars (Candel, 2018, 2020); therefore, we did not consider coherence or consistency in our analysis.

3. Methods

We conducted a single exploratory case study, drawing on an extended period of research, between May 2018, the date of the MUFPP signature by the Mayors of Lucca and Capannori, and April 2020, when we decided to obtain some preliminary research findings. Despite this limitation, the nature of the study assumes that the development of the IFP is a long-term and reflexive process, and the study has been continuing since.

We have been actively contributing to the process addressed by the study through two main streams of activity: first, two of us were partners in the ROBUST H2020 project, aimed at enhancing rural-urban relationships in 11 European regions selected as place-based case studies. The latter included the Province of Lucca, whereby a Living Lab was

created (Voytenko et al., 2016), and run for 2 years as an interactive space for collaboration and knowledge co-creation and exchange between researchers and practitioners. Although having a different scope compared to this study, namely a rural-urban focus on potential governance instruments for enhancing peri-urban land, the Lucca Living Lab has provided several opportunities for participation in meetings and workshops involving IFP representatives (Table 1). Second, in our capacity as members of the Laboratorio Sismondi, we were able to participate in informal meetings in close contact with the leaders of the initiative and to make direct observations and field notes on the actors' interactions. We adopted a qualitative approach to data collection, including in-depth, semi-structured interviews (n = 6) and participant observation. In-depth interviews (Table 1) were conducted in Italian and then transcribed verbatim. Key informants were selected using an expert sample.

During fieldwork, we attended all major public events (Table 1) related to the IFP and participated in internal meetings between public officials in charge of food policy tasks and members of the (meanwhile constituted) FPC. During all the attended meetings and events, notes were taken and then used to gain first-hand insights into the process. All

Table 1List of interviews carried out and major events attended for data collection. Source: authors' own elaboration.

Interview	Time	Topics addressed
Staff 1	2.12 h,	CIRCULARIFOOD and IFP process; IFP
	live	Plan and joint management
Researcher 1	54	IFP Plan and joint management
	min,	
	live	
Deputy Mayor	1.01 h,	Political perspectives
	live	
Researcher 2	1.21 h	Context and actors
Staff 3	1.20 h	Context and actors
Staff 4	1.34 h	Background, context and actors
Event	Date	
CIRCULARIFOOD territorial	Oct	Guiding principles and priorities for the
workshops 1-5	2018	food policy, starting from the MUFPP
CIRCULARIFOOD thematic	Nov	Lifestyles, local food production, access
workshops 1-5	2018	to food and food waste, school and food education, urban agriculture and related actions to be included in the IFP Plan
CIRCULARIFOOD Final event	Jan 2019	Launch of the IFP Plan
"Il buono, il giusto e il cattivo" –	Nov	Local/urban food policies meeting and
Reflecting on food policies	2019	connection with ANCI (National Association of Italian Municipalities)
ROBUST workshop I	Sept	Rural-urban synergies and cross-
	2019	sectoral interactions in the Plain of Lucca
Launch of the FPC	Jan	Elections of the members and Chair of
	2020	the FPC and <i>Agorà</i> – 1st meeting of thematic tables
ROBUST workshop II	Jun	Governance arrangements for
-	2020	enhancing access to land and valuing local food
FPC 1st (online) meeting	Apr	COVID-19 situation and progress on the
	2020	work of the 5 Thematic Tables

³ See ROBUST website at https://rural-urban.eu/.

⁴ Laboratorio Sismondi is an association for cultural studies on agri-food and rural development policies. Members include practitioners and researchers from different private and public international institutions. Among their competences, the design of participatory processes has been applied to the second stage of the IFP planning in the Plain of Lucca (https://www.laboratorisismondi.it/). Since the onset of the initiative, senior members of the Laboratorio have also been contributing as external advisors to the IFP Steering committee (Section 4.1).

data were triangulated with official documents, including the Intermunicipal Food Policy Strategy and Plan (IFP Strategy, 2019), the Intermunicipal Food Policy Bylaw (IFP Bylaw, 2020), and official notes circulated after meetings. Content analysis of the gathered data was then conducted, starting from the first round of open coding followed by categorisation according to the dimensions identified in the conceptual framework.

4. Findings

4.1. About the IFP of the Plain of Lucca

The area identified as the Plain of Lucca is located in Tuscany, central Italy, in the middle between the coast on one side and hills and mountain ranges on the others. The capital city, Lucca, exerts economic and political influence in this city-region (Arcuri et al., 2021), which encompasses both rural and urban areas and maintains a well-defined historical, cultural, and landscape identity. Five out of seven municipalities comprising the city-region are involved in the food policy initiative: Capannori, Lucca, Porcari, Altopascio and Villa Basilica. These are heterogeneous municipalities in terms of dimension, geographical features, and demographics (Table 2), but also, as one of the interviewees commented, in terms of governance traditions and administrative culture (Interview IFP Staff 1).

The Intermunicipal Food Policy of the Plain of Lucca is configured as an ongoing process of coordination and cooperation on food policies, formalised as *gestione associata* (joint management (JM)) between the municipalities involved(Comune di Capannori, 2019). In addition, the IFP adopts a participatory governance model, which includes the Agorà (i.e., the open assembly, where participation and consultation occur), the Food Council (which has both participatory and decision-making aims), and the Assembly of Mayors (the political decision-making body). Playing a role of day-to-day coordination and support, the Food Policy Office entails two public officials and is formally included in the Mayoral Cabinet at the Municipality of Capannori (IFP Bylaw, 2020) (for a detailed account, see Section 4.4).

The food policy process (Fig. 1) officially started in May 2018 with the signature of the Milan Urban Food Policy Pact by the Mayors of Capannori and Lucca, the former also Chair of the Province. The role of proactive leader of the food policy initiative lies with the Municipality of Capannori, which initiated the process by setting up a *cabina di regia* (literally "control room"), an informal steering committee including public officials, academics and external experts, NGO representatives, and members of the civil society working on food-related matters. The steering committee has been supporting the process throughout, creating momentum at the onset of the food policy initiative, leveraging both civil society's engagement and political support to move the food policy agenda forward (Interview Researcher 1).

The IFP was formally established in January 2019 after a six-month preparatory process supported by a project named CIRCULARIFOOD. As

 $\begin{tabular}{ll} \textbf{Table 2} \\ \textbf{Main features of the municipalities involved in the IFP. Source: authors' own elaboration.} \end{tabular}$

Municipality	Area (km²)	Inhabitants (2011)
Altopascio	28,58	15 731
Capannori	155,96	46 774
Lucca	185,79	90 107
Porcari	18,05	8911
Villa Basilica	36,57	1540

 $^{^{5}}$ The provinces are second-tier institutions between municipalities and regions, corresponding to NUTS 3 level in EU statistics.

shown in Fig. 1, the participatory project CIRCULARIFOOD⁶ ran from June to December 2018, with the explicit aim of eliciting input from civil society and food system stakeholders for the definition of shared priorities and objectives to improve the local food system. The project was financed by the Tuscany Regional Authority for Participation and involved overall more than 300 citizens, representatives from NGOs and the third sector, farmers, public officials, and businesses from across the five municipalities. Public consultations conducted during the CIRCULARIFOOD project were also explicitly meant to create a broad territorial understanding of the local food system in the area (Interview IFP Staff 1).

The IFP Strategy and Plan, an 11-page document released in January 2019 and marking the formal start of the IFP, is the substantial outcome of CIRCULARIFOOD.

In between the launch of the IFP Strategy and the following step, i.e., the phase of ratification by all the five City Councils of the *Convenzione per la gestione associata* (Convention for the Joint Management) local government elections were held in Capannori (May 2019). Considering the high-profile mayoral support of the food policy initiative and the proactive role of the municipality, it was a decisive moment when the election result confirmed the former mayor for another five years (also as Chair of the Province) (interview IFP Staff 1).

Below, we interpret the four dimensions identified in the conceptual framework (Section 2).

4.2. Policy frame

The IFP initiative did not originate from a single, specific concern, but from a holistic view of the (local) food system by the leaders of the initiative (Interview Researcher 1). The latter can be identified among members of the steering committee including also, at a later stage, the political representatives who sustained the initiative. Their understanding of food as a lever to simultaneously address multiple policy domains is echoed in the IFP Strategy, representing the main symbolic legacy of CIRCULARIFOOD. The IFP Strategy is aimed at providing a set of ideas and values as starting points for future decision making on food, particularly valuable in that they have been collectively defined and agreed upon, and a set of objectives (illustrated in detail in Section 4.4). The focus on integration was then made explicit through statements concerning "the development of integrated and coordinated food policies" to "build a sustainable local food system" (authors' own translation from IFP Intermunicipal Food Policy Strategy and Plan, 2019).

Food systems discourses, from food sovereignty to sustainability, were not new to the area of the Plain of Lucca. When the IFP Strategy was launched, it was readily adopted as an umbrella framework by many well-established initiatives and projects on food issues, both grassroots and institutional, which had been running for many years (Interview IFP Research 1).

Although the cross-cuttingness of food issues was thus largely acknowledged in the discourses of a certain number of actors and institutions (Section 4.3), in addition to being formally embedded in the IFP Strategy, what most interviewees identified as a complex step was integrating this notion in the continued interactions between the engagement of citizens, food system stakeholders, and civil society at large on one hand, and municipal decision-making on food on the other (Interview IFP Staff 1, Research 1, Research 2, Staff 4). Taking into account the different stages of the process, we therefore identified two main complementary framings in relation to this concern: the food policy is framed as a matter of responsibility and responsiveness, and of substantive participation and engagement (Fig. 2).

 $^{^6}$ For more information on the project, visit the website (in Italian): htt ps://open.toscana.it/web/circularifood.

 $^{^{\,7}\,}$ In the remainder of the paper, we refer to the IFP Strategy and Plan simply as the IFP Strategy.

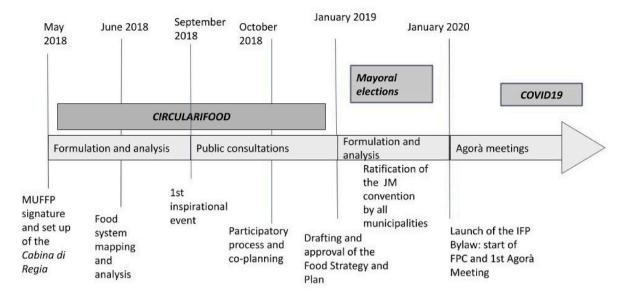


Fig. 1. Timeline with phases and milestones of the IFP until April 2020. Source: authors' own elaboration.

PARTICIPATORY FOOD GOVERNANCE

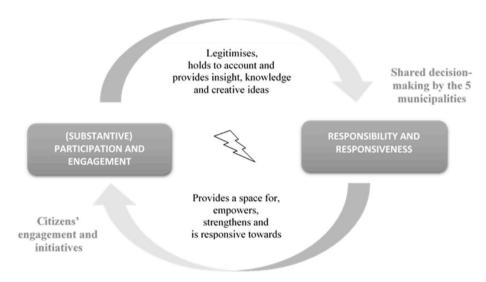


Fig. 2. Complementarity and tensions between the two framings under the main policy frame of participatory food governance. Source: authors' own elaboration.

The responsibility and responsiveness framing is related to the necessity of local authorities taking on a leading role in crucial food-related issues affecting the municipal sphere (e.g., school meals, local food production and consumption, food education, access to food, and urban agriculture) and, particularly, to do so in a way that meets the expectations and needs raised at the participatory stage. This framing emerged in the interviews from reflections concerning how to make the most of previous experiences and wealth of grassroots initiatives, how to build and co-create a space for (formalised practices of) collective participation and shared deliberation, how to ensure the uptake from the five mayors and city boards, and ultimately "how to create participation dialogue with the bureaucracy that regulates administrative procedures" (Interview IFP Staff 1).

The substantive participation and engagement framing is complementary and is related to concerns regarding maintaining the engagement of citizens and other food system actors, hearing their voices, and setting a shared food agenda. This resonated in some of the interviewees' reflections (Interview IFP Staff 1 and Staff 3) about how to

involve citizens in a systematic and structured process of co-creation, how to keep participation alive and meaningful, how to make sure all interests are represented, and how to avoid inflated expectations.

The two framings, the "two major challenges", as more than one interviewee stated, are mutually reinforcing: a lack of engagement by citizens means lacking legitimisation for decision making on food-related policy domains. At the same time, political prioritisation is needed: municipal institutions ought to take on responsibility toward, and acknowledge and provide prompt response to, the issues raised by the participatory body. This finding is consistent with that of Van de Griend et al. (2019), who highlighted the tension between municipal leadership on food policymaking and a more open and reactive attitude toward participation. Commenting on tensions likely to arise between and within the two framings, one interviewee commented that:

designing a suitable model of participatory food governance is a real bet [...] Despite the regional [of Tuscany] context offers many opportunities for participation, through the Regional Authority for Participation which supported the IFP, participatory processes remain difficult to accommodate within a bureaucratic system such as public administration (Interview IFP Staff 1).

Talking about this matter, another interviewee commented:

if you don't transform a principle or an idea into administrative procedures, if you don't translate ideas into measurable objectives and competences, you won't reach the final goal. The difficulty in these processes is that the machine [the public administration] works along, either horizontal or vertical, but still linear processes (Interview Researcher 1).

4.3. Subsystems involvement

The anticipated distinction between policy domains and subsystems (Section 2) is particularly relevant in relation to the identification of (networks of) actors and institutions involved in the food policy process.

Since the onset of the CIRCULARIFOO project, mayors and/or deputy mayors from the five city boards have adhered to the food policy initiative by voluntarily attending the main events and open consultations. Specifically, these political representatives from the five city boards included: one mayor (of the smallest municipality) and four deputy mayors with delegated power in terms of education and civic economy (1), social policies (2) and participatory processes (2). Their policy domain of reference, in no case directly related to the food system, indicates the sector in which each municipality identifies both opportunities and needs for undertaking coordinated action on food (Interview IFP Staff 3). For instance, school and education is a policy domain where food-related themes have been addressed for many years in the city of Capannori, particularly about school meals, their educational value, and the relationship with the (local) food system (Interview IFP Staff 1).

The subsystems involved in the design and initial stages of the new governance resulted from previous policies and ideologies (Jenkins--Smith et al., 1991). Food issues have been occupying civil society space in the Plain of Lucca since many years. For instance, well-established networks are involved in diverse initiatives of short food supply chains (especially farmers' markets and solidarity-based purchasing groups⁹); actions against food waste have been undertaken to pursue not only recovery and redistribution but also prevention objectives; the local Slow Food Convivium has been active in promoting initiatives centred on food sovereignty, urban agriculture, and heritage foods; civil society organisations (CSOs) and charities working with vulnerable groups have been implementing innovative measures to tackle food poverty; and research projects by food and agriculture scholars have been conducted in this area 10. Such wide-reaching networks have found common ground under the food policy umbrella and, during the preparatory phase of CIRCULARIFOOD, a dense net of interactions already in place emerged from the participatory food system mapping.

Considering the different stages of the process, we identified various subsystems involved in the IFP initiative, i.e., reflecting, although to a different extent, a certain level of awareness of the cross-cuttingness of food system issues. We grouped them according to macro-categories, roughly overlapping the IFP Strategy's key priorities:

- Local food and agriculture includes heterogeneous actors, from the various stages of the food supply chain to urban agriculture and food movements, but all united by an ambition to build a sustainable food system as a key leverage to a sustainable future. These belong mostly to NGOs and the civil society sphere and specific segments of the private sector (specific local shops, coops of farmers, solidarity purchasing groups, and farmers' markets).
- Social care and community food provision is a subsystem is mostly composed of CSOs targeting vulnerable groups, which they address through nutrition- and food-related support and, in most cases, rely on volunteers. This is the case, for instance, of networks built around projects for charitable food provision, surplus food redistribution, and urban gardens for disadvantaged groups. Social enterprises employing vulnerable individuals and social farms are also included.
- Schools and food education: Schools have traditionally been a prominent playing field for many initiatives encompassing sustainability, food waste campaigns, food literacy skills, nutrition, and the food environment. In addition to strong mayoral support of the opportunity of having students of all ages engaged in these themes, which is certainly the case in Capannori and Lucca, this subsystem entails a large civil society component (teachers and all school staff, and students and their families) and private businesses (two large companies from the catering industry). Parents' involvement also occurs through the *Commissione mensa*. ¹¹ In addition, this subsystem covers gastronomic traditions and knowledge by way of the presence of a famous cookery school and food festival networks.
- Eco-sustainability: Environmental NGOs and especially the *Rifiuti Zero* (Zero Waste) research centre form the core of this subsystem.
 Rifiuti Zero, in particular, has developed a zero waste approach targeting municipal waste management, making Capannori a leader in waste management and recycling in Italy.¹²
- Healthcare and wellbeing: Local public health¹³ units deliver public health services, guidance on healthy habits and wellbeing, and, in particular, regulation and control on food safety and hygiene. This subsystem also includes organisations operating in the field of nutrition, food disorders, sport, and wellbeing.

4.4. Policy goals and instruments

Here, we jointly report on the third and fourth dimensions of our conceptual framework (i.e., policy goals and instruments). The IFP Strategy contains six main goals, with related sub-goals, in five main action areas echoing the themes identified as key priorities in the participatory phase:

- i. Enhancing knowledge of the local food system of production and consumption;
- ii. Encouraging best practices of food provision by creating a network of actors and reducing food waste;
- Improving the wellbeing through knowledge and communication on sustainable and healthy lifestyles;
- iv. Facilitating access to local food for all;
- v. Reinforcing sustainable agricultural practices.

A sixth, cross-cutting objective concerns the necessity to "work on common rules", to better address other goals (Interview IFP Staff 1).

⁸ Deputy mayors can hold delegated power in multiple policy domains.

⁹ *Gruppi di Acquisto Solidale* (GAS, literally "Solidarity-based Purchase Groups") are groups of consumers who purchase collectively through a direct relationship with producers, according to shared ethical principles (Brunori et al., 2011).

¹⁰ See, for instance, H2020 SALSA project (http://www.salsa.uevora.pt/) and ROBUST H2020 project (https://rural-urban.eu/), to name a few.

Such broad and generic goals confirm the rather broad scope of the

 $^{^{11}}$ The Canteen Commission is an advisory tool aimed at monitoring the quality of food served and the catering service.

http://www.rifiutizerocapannori.it/rifiutizero/mappa-numeri-successi-criticita-dei-comuni-italiani-rifiuti-zero-a-cura-del-comitato-di-garanzia-nazionale-e-di-zero-waste-italy/.

¹³ Local public health unit is the authors' translation for azienda sanitaria locale (ASL).

Strategy (depicted in Section 4.1) and serve more as long-term objectives pointing toward a direction for change than delineating punctual interventions to implement (Interview IFP Research 1). Nonetheless, the IFP Strategy moves further to include implementation plans, detailed as a set of possible actions and stakeholders, to engage in view to achieve each of the objectives. As no targets are set, no resources are allocated, and no time frame is indicated for any of the action plans, their meaning is to be looked for in the agenda-setting capacity by the stakeholders and groups involved until then.

As policy instruments are concerned, the IFP Strategy indicates the necessity of a participatory governance system as the primary tool to achieve stated goals. This fits well with the idea of boundary-spanning governance structure discussed by Candel and Biesbroek as the "structure or overarching authority that oversees, steers and coordinates the problem as a whole" (Candel and Biersbroek, 2016:223). The interviewees unanimously acknowledged that implicit goals are related to the very idea of integration and governance innovation. For instance, one interviewee belonging to the political sphere commented:

[I]t is obvious that different things must be accommodated: different interests, different municipalities, different offices within each municipality ... another characteristic of public administrations is that nobody talks with those working next door. Instead, here an office has been created to talk [...], which might seem obvious but, believe me, it is a kind of Copernican revolution! (Interview Deputy Mayor).

The governance arrangement foreseen in the Strategy came one year later (in 2020), epitomised in two main instruments: (1) the *convenzione per la gestione associata* (Joint Management Convention (JM)) and (2) the system of governance delineated in the IFP Intermunicipal Food Policy Bylaw (2020).

The JM is one of the four forms of intermunicipal cooperation strongly supported by the national legislator since 1990 to address municipal fragmentation and increase the efficiency of local public services provision (Bolgherini et al., 2018). In particular, smaller municipalities (<5000 residents) must share basic functions, although the coercive approach has been subject to criticism and is currently being reconsidered (Bolgherini et al., 2018). As such, the JM does not represent a novelty per se. In Tuscany, for instance, intermunicipal cooperation is encouraged through financial incentives, and JM conventions have been an increasingly common tool used by municipalities to share functions especially related to Real Estate Registry management; protezione civile (civil protection); local police; and social, educational, and healthcare services (Brazzini and Zutti, 2016). What makes the IFP of the Plain of Lucca an institutional unicum is that, at the time of this study, it represented the first case of JM applied to food policy functions in Italy. As the latter is not among the basic functions identified by law, but are instead strategic functions, adopting a convention for the JM, as one interviewee explained:

[the Joint management] implies strong and shared political will, as there are several steps to be made. It requires a financial endowment, which must therefore be included in the [municipal] budget, whatever the amount, but there must be a budget allocation, and then the matter must be submitted to the municipal councils for approval (Interview Researcher 1).

Among the procedural instruments available under current legislation, ¹⁴ which were reviewed by the steering committee, the decision to establish a JM convention had the explicit intent to make the food policy governance more resilient to political volatility and coherent with administrative language and procedures. "Commenting on the future implication of the new institutional set-up, one of the interviewees

stated[i]n case one day one of the municipalities says 'I don't want to be into this anymore', it's fine, you have to go before your City council and state the reasons why you signed [the convention for] the joint management, say, last year [...] and now you have decided to quit. It's a mini Brexit!" (Interview Researcher 1).

Noticeably, at the time of the JM ratification, the municipalities had no experience with JM conventions on other policy functions. However, being based on procedures and routines embedded into administrative culture, the JM is expected to facilitate the coordination, co-design, and implementation of policies around food by the municipalities involved (Interview IFP Staff 1). The instrument is therefore targeted particularly at the city board level, as it implies that the municipalities involved must coordinate their food policy efforts and devolve "a share of sovereignty to the IFP" (Interview Deputy Mayor).

The JM model is combined with a rather elaborate participatory governance structure, conceived for striking a balance between civil society's engagement and decision making on food. The functioning of the participatory governance structure and relationships among underlying entities (Fig. 3) are regulated by the IFP Bylaw passed in January 2020.

The Agorà is an open entity, designed to encourage participation by civil society and other food system stakeholders. The name Agorà was preferred among others to recall the public arena in ancient Greece, conceived as a space for political, cultural, and commercial exchange. The Agorà here comprises five thematic tables, identified according to the key themes included in the IFP Strategy (and partly overlapping with the subsystems identified earlier), namely food habits and lifestyle, local food production, access to food and food waste, school and education, and urban agriculture. From the steering committee's idea, this body is meant as an open space for "stimulating, reflecting and identifying strategies to submit to the food policy council, which in turn makes proposals to the Assembly of Mayors, which will eventually arrive to the City boards and be developed as specific food policies" (Interview Researcher 2).

The Agorà has to be flexible enough to facilitate a bottom-up process, include a diverse range of groups and interests, and ensure representation across a large geographical area, but at the same time it must be defined enough to adapt to current modes of operation without "being assigned to certain death as typically happens with the $consulte^{15}$ " (Interview Deputy Mayor).

On the other end of the governance spectrum is the Assembly of Mayors, the political body of the structure, comprising mayors or deputy mayors and representing the both symbolic and substantial commitment made by the five city boards.

In between, "operating as a sort of transmission belt" (Interview IFP Staff 1) is the Food Policy Council. This is formed by eight representatives, appointed by the municipalities on the basis of their experience or expertise on food issues, and five representatives selected as coordinators within each Thematic Table. The FPC was designed with a view to provide a further and more focused participatory stage, to account for territorial and experts' specific contribution and give legitimation to the whole participatory process. It is meant, as one interviewee put it, as

a synthesis between the fluidity of Agorà's participation process and fixed [municipal] administration procedures [...]. We would like it to achieve a leading role in decision-making, not to replace or compete against local governments, indeed there are no city councillors for food policies but there is a Council for food! (interview IFP Staff 1).

A crucial component of the new governance structure is the Food

 $^{^{14}}$ The *Testo Unico degli Enti Locali (TUEL)* is the law No. 267/2000 on administrative procedures, functions, and tools of local authorities in Italy.

^{15 &}quot;Consulte" is a common type of advisory/participation committee, used more to deliberate on top-down decisions than to make new policy proposals.

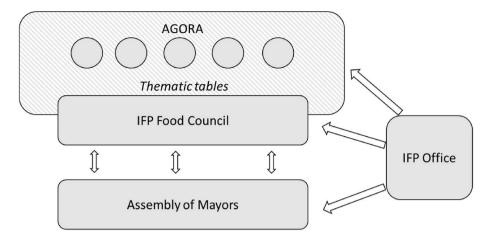


Fig. 3. The governance system of the IFP of the Plain of Lucca. Source: authors' own elaboration.

Policy Office, initiated before the other bodies were established and comprising members of the former steering committee. As a coordination and support entity, it provides the municipalities and new constituted entities with the technical capacity needed to carry out food-policy-related tasks. Human and material resources at the Food Policy Office represent the endowment of the Municipality of Capannori to the first food policy budget, the remainder of which amounts to EUR 20 000 (for the period 2019–2023). The two officials appointed to running the Office, however, are not exclusively assigned to food policy functions, which they perform alongside the ordinary administrative duties within the Mayoral Cabinet.

5. Discussion and conclusion

The case study presented in this paper illustrates an example of how a process of (food) policy integration should be understood as *processes*, entailing different and mutually interacting dimensions. These neither necessarily proceed at the same speed nor occur at the same level. The case of the IFP of the Plain of Lucca showcases a set of factors that can reveal potential enablers and obstacles in such processes. These factors are related to elements of the governance described in the case study and to what we identified as three target levels of integration:

- Between the departments/sectors within each municipal government;
- 2) Among the five City boards; and
- 3) Between citizens' and other food system stakeholders' engagement and municipal decision making.

For integration analysis, it is important to highlight that the framework does not explicitly address intermediate levels of integration but only identifies ideal types on a spectrum of low to high degrees of integration. We think, instead, that because integration can be interpreted as an ensemble of processes, intermediate levels are a fundamental part of the analysis. Hence, Table 3 summarises key findings by highlighting the manifestations of higher (+) and lower (-) degrees of integration, also including ambivalent elements, according to our interpretation of the spectrum proposed by Candel and Biesbroek (2016) and Candel (2021). Furthermore, Table 3 also highlights which level of integration, among the three identified above, is affected by these elements in the case of the Plain of Food:

In addition, we identified three key factors that are specifically interesting to discuss as they potentially affect (the spectrum of) integration by triggering processes across all the dimensions (policy frame, subsystem's involvement, policy goals, and policy instruments) and levels of integration. In the specific case of the IFP of Lucca, these are as follows:

Table 3 Manifestations of higher (+), lower (-), and ambivalent (\pm) degrees of integration and relevant levels for the IFP of the Plain of Lucca: summary of key findings divided along four dimensions of integration. Source: authors' own elaboration.

Dimension	Degree of integration	Level of integration
Policy frame	+ General acknowledgment of the cross-cutting nature of food system's issues and of the necessity to adopt a holistic governance approach +/- Complementary framings of responsibility and citizen engagement mutually reinforcing and/or weakening	Between the departments sectors within each municipal government Between citizens' and other food system stakeholders' engagemen and municipal decision making
Subsystem's involvement	+ More than one subsystem involved in the IFP process + Awareness of the cross- cuttingness of food issues is established for the actors and institutions belonging to different subsystems - Involvement of different subsystems has yet to translate into formal takeover of policy responsibility and adoption of policy goals to tackle the cross- cutting food issue	Between the departments sectors within each municipal government Between citizens' and other food system stakeholders' engagemen and municipal decision making
Policy goals	+ Shared goals embedded in an overarching strategy - Policy goals too broad and generic to go beyond agenda- setting purposes	(2) Among the five City boards
Policy instruments	+ Establishment of an ad hoc boundary-spanning governance structure with no inherent powers, but advisory functions + Adoption of procedural instruments for (food) policy coordination at intermunicipal level (gestione associata) +/- Financial resources allocated to the IFP (but limited) - Main instruments deployed are organisation-based and procedural types	 (2) Among the five City boards (3) Between citizens' and other food system stakeholders' engagemen and municipal decision making

1. Implicit bonds in the JM convention for food policy functions

We showed that this component of the IFP governance bestows food policy functions to the city boards of the five municipalities involved

and has been explicitly adopted because, under current legislation, it is the most binding form of intermunicipal coordination. This choice reveals the remarkable political backing of the food policy initiative and a strong commitment to go beyond short-term projects. As such, this governance configuration is also promising with respect to reducing the vulnerability to electoral change (Halliday and Barling, 2018) and the ensuing risk of policy reversal, corroborating the idea of De Schutter et al. (2020), who identified the need for new policy frameworks to be designed to coordinate actions beyond the short-termism of electoral cycles. In the specific case of the IFP, JM adoption has been instrumental to ensuring equal representation to all the cities involved, regardless of their political and economic weight, as well as equal responsibilities for food policies. Moreover, the establishment of one food policy council in each city, which was one of the options under consideration, was avoided, therefore creating more favourable conditions for broader integration among the five city boards. The case also showed that the combination of JM with a budget, whatever limited, could act as an incentive to the uptake of the food policy agenda by the city boards, or at least discourage its dismissal. With an overall budget of EUR 20 000 allocated to the IFP Strategy implementation for the 2019-2023 period, the current food policy governance would require, in case one municipality falls back, that the withdrawal decision be justified before, and approved by, the City Council. These results are consistent with those of Sibbing and Candel (2021), who found the allocation of financial resources is a key element in the process of food policy institutionalisation in Ede (The Netherlands).

However, despite having its institutional home (Halliday and Barling, 2018) in the JM convention, the inherently strategic nature of the food policy exposes the latter to the constant need for recognition, public legitimisation, and organisational support in order to progress and succeed. Hence, the JM creates a good degree of integration between city boards regarding subsystem's involvement and policy instruments (see Table 3) but also a lower level of integration when considering the missing formal takeover of policy responsibility and adoption of policy goals.

2. The virtuous (vicious) cycle of participatory food governance

We described (in Section 4.4) the mechanisms behind the elaborate governance of the IFP, regulated by the IFP Bylaw, and uncovered (in Section 4.1) the complementary framings underpinning such structure, as a complex and mutually reinforcing relationship between substantive citizens' engagement and municipal responsiveness. This highlights both the strengths and drawbacks of this governance structure that are linked to the delicate balance between the different components, and to their functioning currently being tested. 16

Two participatory levels, the Agorà and FPC, complement one another by fulfilling different roles in the IFP, with their tight relationship being embodied in their common Chairperson. The Agorà, in both plenary form and thematic tables, addresses the need to both legitimise and capitalise on existing projects and initiatives, both grassroots and institutional, as well as the need to create new networks between food system stakeholders, to create new ideas and knowledge. Networking, facilitating inclusiveness, and voicing different groups are major capacities of food policy councils (in the broadest sense) according to Schiff (2008). The specific role played by the FPC in the IFP is crucial, as it aims to take food issues from the open assembly (Agora) to the political assembly (Assembly of Mayors), to inform policy development from below. The FPC only has an advisory function, which means that mayors are under no obligation to follow the advice or meet the demands of the FPC. However, the more citizens and food system

stakeholders that participate in the open consultation, the more likely it is that advice will be considered when weighing decisions on food, particularly when addressing controversial issues. Conversely, the lack of ownership of the food policy agenda by the mayors and deputy mayors could potentially feed a vicious cycle, generating participatory frustration, which would, in turn, translate into a lack of legitimation for decision making and policies alike. The participatory food governance topic is in constant balance between high and low level of integration because of the complementary framings of responsibility and citizen engagement mutually reinforcing and/or weakening (see Table 3).

3. The Food Policy Office: Institutionalised Policy Entrepreneurs

We observed the major challenges that the IFP initiators had to confront in the implementation phase were (are) related to maintaining political momentum and citizens' engagement, and securing adequate resources to ensure the continuity of the initiative. Since the beginning of the process, an indispensable role was played by the informal steering committee, where we observed several food champions or policy entrepreneurs at work (Moragues-Faus and Morgan, 2015), which are key actors "investing their own resources, such as their time, expertise and reputation to perform important functions in the policy process" (Giambartolomei et al., 2021). Such functions, as this study showed, include framing problems and solutions, building networks and trust, gaining political support, and aligning available resources and goals. One major enabler of integration in the processes observed in the Plain of Lucca has been the institutionalisation of integrative capacity and leadership (Candel, 2021) and assigning the two posts in the Food Policy Office to former members of the Steering Committee. They fulfilled a hybrid role, performing the political and administrative functions needed to provide coordination and support to the whole governance structure (IFP Bylaw, 2020). In this respect, one important finding of this study is related to the operational capacity necessary, at the whole governance system level, to translate policy goals into a set of measurable and administratively sound procedures. As well in this case, the nuances between high and low integration degrees of integration are fundamental to understand the case study. There is a general acknowledgment of the cross-cutting nature of food system's issues and of the necessity to adopt a holistic governance approach, but policy goals are too broad and generic to go beyond agenda-setting purposes and the main instruments deployed are organisation-based and procedural types.

To conclude, the scope of this study is limited in that we examined the specific processes of policy integration at play in one single case study. Moreover, the timing of the research allowed us to draw only preliminary results, which should therefore be read with caution. Despite these limitations and the exploratory nature of the study, this is the first study addressing the unique case of institutionalised intermunicipal cooperation on food policy in Italy. In addition, it offers some valuable insights into the different dimensions and levels affecting and affected by the multiple processes of policy integration, with particular reference to small cities.

In terms of future investigations, it would be helpful to expand this research with respect to the further implementation of the IFP Strategy, to understand to what extent paper commitments are translated into effective changes in governance and, ultimately, in the food system. The operationalisation of goals and deployment of instruments beyond the organisation-based and financial instruments observed in this study would provide useful insights into the direction and intensity of the integration process. Furthermore, the role of researchers in this and other subnational food policy cases deserves much attention. The IFP has so far enjoyed a certain level of fame within national and European food policy networks and beyond due to the ability of its representatives

¹⁶ At the times of writing (July 2021), the IFP Bylaw, which was to be applied on an experimental basis for one year, has been confirmed for another year due to former COVID restrictions.

to bring their experience to a wider, national and international audience, ¹⁷ and not least because of a number of researchers who have identified, in this case, elements of innovation and replication opportunities (cf. The specific contribution by Arcuri et al., 2020, Halliday et al., 2019 and Spadaro, 2019).

Lastly, the governance of the IFP illustrated in this paper has only recently been designed and implemented and has been tested since January 2020. Clearly, the difficulties connected with the COVID-19 pandemic (just one month after the Bylaw was ratified) and related mobility restrictions have inevitably affected all the actors and institutions involved, resulting in a slowdown in the activities and adding unforeseen challenges to the whole experiment.

Author statement

Sabrina Arcuri: Conception and design of study; Methodology, Analysis and Interpretation of data; Writing – original draft, review and editing. Bianca Minotti: Data collection; Analysis and Interpretation of data; Writing – original draft, review and editing. Francesca Galli: Data collection; Writing - review & editing.

Funding

This research has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727988. The information and views set out in this publication are those of the authors and do not necessarily reflect the official opinion of the European Union.

Declaration of competing interest

The authors declare no conflict of interest.

Acknowledgments

The authors thank all of the interviewees for participating in this study and the two anonymous reviewers for their helpful comments and suggestions on earlier drafts.

Abbreviations and acronyms

UFPs Urban Food Policies

MUFPP Milan Urban Food Policy Pact

FPCs Food Policy Councils
IFP Intermunicipal Food Policy

IFP Bylaw Intermunicipal Food Policy Bylaw

IFP Plan Intermunicipal Food Policy Plan

JM Joint Management

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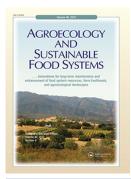
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¹⁷ The city of Capannori, in particular, has received a special mention for the theme Governance in the Milan Pact Award (Cf. Milan Pact Award, Edition 2019). The case of the *Piana del Cibo'* is included in the list of food policy observed by the Italian Network on Local Food Policies (cf. https://www.politichelocalicibo.it/mappe/), and its representatives participate in the network guided by the Milan Food Policy (https://foodpolicymilano.org/italia/).

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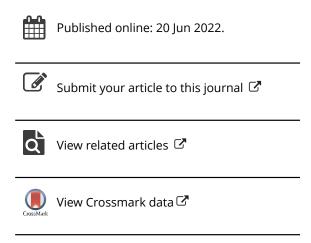
ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/wjsa21

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To cite this article: Bianca Minotti, Valentino Affinita, Andrea Calori & Francesca Federici (2022): The integration of food policies in a local administration system: the case of the Milan food policy, Agroecology and Sustainable Food Systems, DOI: 10.1080/21683565.2022.2091718

To link to this article: https://doi.org/10.1080/21683565.2022.2091718







The integration of food policies in a local administration system: the case of the Milan food policy

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ABSTRACT

The city of Milan has developed a local food policy since 2014 which today is considered one of the most important food policies in Italy and a best practice at the international level. The aim of this research is to analyze the process that led to the implementation of the Milan food policy as a contribution to the agroecological transition of urban systems. The methods used to analyze this policy process (2014–2021), through the policy cycle framework, are a content analysis of key documents, interviews with key stakeholders and the analysis of lived experiences. The research highlights key information on the agenda setting, the policy formulation, the policy adoption, and the policy implementation, trying to break down the process, understand drivers, strengths, and challenges. The study highlights that institutionalization of the food policy has been the key to its success. Main results show that the engagement of international stakeholders and private funders have been important drivers of the agenda setting and formulation of the policy, while the presence of institutionalized policy entrepreneurs, as a permanent staff dedicated to food policies, was pivotal in the adoption of the policy and implementation of projects. The research also shows that the institutionalization, however, caused a lack of participative and cooperative policy development spaces, both with other departments of the Municipality and external local stakeholders, which resulted in their involvement for project design and consultation only.

KEYWORDS

Food policy; local administration; governance; integration; food council;

Introduction

Food policies have the characteristic of being multilevel, multi-sector and cross-cutting to many disciplines, involving several broad policy areas and including actions at all levels, both governmental and non-governmental: national laws, regional laws, actions of NGOs, citizens food councils and much more. Today, in an increasingly urbanized context, local food systems are unable to sustainably meet a city's growing demand for food, which has a huge impact on rural areas and agricultural supply chains (Marsden 2013; Sonnino 2009). Therefore, the issue of urban food consumption is very central:

institutions are faced with the challenge of planning and implementing food policies capable of guaranteeing access to healthy food, supporting rural development and local supply chains, and encouraging sustainable agriculture (IPES-Food 2017). The urban agroecological transition, under which food policies are included, is an important topic at the global level, intended to be a key for unlocking farming and environmental challenges, but also political and social issues with a strong political tool: the agroecological framework (Isaac et al. 2018). There are many case studies of "agroecology territories," namely spaces in which actions and policies related to food system improvement, biodiversity, and environmental conservation along with sustainable agricultural practices are engaged (Wezel et al. 2016). Examples can be found in international literature (see for instance, Isaac et al. 2018; Simon-Rojo 2019; Lopez-Garcia et al., 2021; Kroll 2021 and many more).

The movement for urban food policies in Italy began in 2009, with the Food Plan of the province of Pisa, a process started by the interaction between the University of Pisa, the Laboratory of Rural Studies Sismondi¹ and the Province of Pisa. This path led to the adoption, in 2010, by the Provincial Council of Pisa, of a Political Act of Direction for the Food Plan and, at the same time, the drafting of a Food Charter, which outlined shared visions and objectives, and the Food Strategy (Brunori, Di Iacovo, and Innocenti 2014; Forno and Maurano 2016). In the same years, in Milan, a new political awareness of the theme was growing, also in view of the World Exposition Milan 2015 (EXPO 2015). In fact, in July 2014, Giuliano Pisapia, former mayor of the city of Milan, signed a memorandum of understanding with the Cariplo Foundation² aimed at the development of the food policy of Milan (Comune di Milano 2014). This was a work program that had as its main objective the production of a policy document for the City of Milan and, in parallel, the launch of a dialogue to define and sign an international pact on urban food policies. These two paths led to the implementation of the Milan Food Policy (FP) on the one hand, and the birth of the Milan Urban Food Policy Pact³ (MUFPP) on the other. The MUFPP is an international protocol signed on October 15, 2015, by 138 cities around the world aiming to create cooperation on food policies (MUFPP 2015). This document was produced by the City of Milan in collaboration with 47 cities as a legacy of EXPO 2015, on the theme "Feeding the Planet, Energy for Life." The final aim of this project was to allow an inter-citizen collaboration to help define a framework for action for local food policy guidelines, specific for each city but which would follow at the same time an international direction. Hence, the main goals⁴ of the MUFPP framework were created in line with the "ecology of the entire food system" (Francis et al. 2003; Mason et al. 2020) vision: they indeed aimed at addressing, on one side, the Sustainable Development Goals (SDGs) and related food system challenges, and on the other side, the political



dimension and stakeholder bottom-up involvement that agroecology brings within its lens (Wezel et al. 2016; Ray Anderson et al., 2019; López-García and González de Molina 2021).

In Italy, in the absence of a national strategy dedicated to food systems and agroecology, initiatives related to food policies have developed according to different paths, focusing on local initiatives and often without municipal or wider-scale coordination (Marino and Mazzocchi 2019). Two factors contributed to the development of an Italian movement of urban food policy. First, there is the example of Milan and in particular of the MUFPP. In fact, for some of these cities, "the MUFPP is the very first step in the implementation process of urban food policies (UFPs), and a political, methodological, and legal framework" (Calori et al. 2017), for others it was the international push needed to continue their good work. The second factor is the progressive centrality of food in urban development models mixed with a greater awareness of the negative externalities of the agri-food system (Marino and Mazzocchi 2019; Wiskerke 2009) such as the impact on the environment, on poverty and social insecurity, on economic dynamics and much more.

Hence, in Italy, food policies were born with a strong urban dimension that today is transforming into a local one - with territorial borders that can go outside the city's boundaries - in accordance with the local food system concept (Hinrichs 2003). "Local, then, is much more (or perhaps much less) than it seems. Specific social or environmental relations do not always map predictably and consistently onto the spatial relation. Indeed, fractures between the spatial, the environmental and the social feed into the sometimes-contradictory politics of food system localization" (Hinrichs 2003, 36). The shift from urban to local opens the discussion to agroecological transition and the study of the Milanese food policy case can help contribute to the entry of the city dimension into agroecology, and vice versa.

Milan is a particularly interesting case study since it has been the first major Italian city to adopt an urban food policy, besides being an important partner for international projects and an example for other Italian cities that seek to create similar local policies. The city of Milan covers an area of 181.67 km² with a population of 1 397 715 inhabitants (ISTAT 2021). After the Second World War, Milan experienced a period of strong population growth that led to the change in the shape of the city. An example is the agricultural area, which has fallen from 49.2% of the total municipal area in 1955 to 19% today (Està 2018a). Milan is nowadays the second largest Italian town by population and one of the country's economic poles. This article focuses on the institutionalization of food policies through the case study of Milan with the aim of underlining strengths and challenges. "Institutionalisation is a crucial step for bringing a food strategy beyond paper realities, as it entails the creation of an

infrastructure and the conditions to address food issues in the long term" (Sibbing and Candel 2021, 2). In particular, organizational innovation has indeed been highlighted as one of the important factors for institutionalization processes (Sibbing and Candel 2021). Hence, governance is at the core of urban food policies (Calori and Magarini 2015) since it enables the implementation of all actions related to sustainable nutrition and diets, social and economic equity, food production, availability of food and distribution, food waste, and more. The term governance is currently used to highlight the quantity and quality of actors involved in public decision and policy implementation as well as their relationship with more formal governmental actors (Graham, Amos, and Plumptre 2003). In fact, governance in agroecological transition seeks facilitating collaboration between public bodies and departments, improving stakeholder participation, integrating local initiatives into programs and policies, developing urban food policies and action plans, multi-sectoral information systems for policy development, disaster risk reduction strategy, etc. Hence, local food policies often develop governance structures that produce coordination between municipal departments and collaboration with external stakeholders such as civil society, local business and more, as shown for instance in a study by Arcuri, Minotti, and Galli (2022). This article will deepen the topic of governance of the Milan FP, retracing the policy process that led to it and understanding successes and challenges in relation to the agroecological transition that local food policies seek. After describing the methodology and methods applied, the article will present the main findings following the policy cycle structure and, finally, address key points of discussion and conclusions.

Materials and methods

This study applied, as an analytical framework, the policy cycle of Bridgman and Davis (2000), which helped systematize the policy process and break down the complexity of the Milan Food Policy to identify its key elements. The data have been gathered through interviews, key documents, and analysis of lived experiences related to the Milan food policy. Indeed, this research has worked on the knowledge of one of the main partners of the Milan Food Policy Office, namely EStà, which is an independent research center that facilitated the entire process. The lived experience approach "does not test hypotheses, and prior assumptions are avoided [since it] aims to capture and explore the meanings that participants assign to their experiences" (Reid, Flowers, and Larkin 2005). It has already been applied to food policies research as a "community-engaged research" approach for its characteristic to "add unique insights for the analysis of the processes, limitations and dynamics" (Giambartolomei, Forno, and Sage 2021). Indeed, this approach helped gather



Table 1. Lived experiences analyzed by this study (source: authors).

Lived experience	Date
Està (two of the authors) as technical and research team of the Milan food policy process	2014–2020
Curricular internship in the food policy office by one author	November 2016- March 2017
Internship at EStà by two authors	June 2020 – March 2021

the internal perspective of EStà, of which two of the authors are part, and the external impressions of the other two authors collected throughout internships in different moments of the food policy process. Table 1 shows the different lived experiences that helped the data gathering, analysis and writing of this article.

After six years of working side by side, EStà no longer works with the Municipality of Milan on food policy and decided to analyze the process in which they have been involved thanks to the help of outside resources. Indeed, because of the experience of EStà, the two authors external to the association attended a six-month internship (from June 2020 - March 2021) at the research center of EStà, in Milan (Italy), with the aim to analyze and evaluate the Milanese case. Moreover, one of the authors had the opportunity to do a curricular internship in the food policy office from November 2016 until March 2017, which helped improve the understanding of how the office worked, what were the priorities, and the state of art of the food policy during that period.

Along with lived experiences, the study has been developed with two concurrent methods: content analysis of pivotal documents and semistructured interviews of key stakeholders. The nature of semi-structured interviews guaranteed a coherent variety of questions according to the interviewees' roles and interest (Fylan 2005) - see Table 2. The interviews were transcribed verbatim and a thematic analysis was applied to their content. Coding was used in the thematic analysis to highlight the different stages of the policy cycle along with key elements and themes. This method helped the authors better understand the key topic of discussion and break down the policy process of the food policy. Table 2 shows the interviews with key stakeholders that were completed, selecting the interviewees according to their relevance in the formulation and the implementation of the food policy, following the purposeful sampling method (Patton 2002). Indeed, the authors had the opportunity to interview researchers and former municipality staff directly involved in the process, current food policy office's staff and members of the financing organization, along with some of the main civil society stakeholders involved from the beginning of the formation of the food policy. Most of the interviews were conducted online, due to COVID19 emergency.



Table 2. List of interviews carried out (source: authors).

Interview	Date	Topic addressed
Food policy Researcher 1	14.10.2020	FP background and early stages; agenda setting
Food policy Researcher 2	21.10.2020	FP background and early stages; agenda setting
Former Milan Food Policy Officer 1	16.11.2020	FP background and early stages; agenda setting; relationship with international organization; relationship with financier; early priorities; relationship FP with local administration
Former Milan Food Policy Officer 2	24.11.2020	FP background and early stages; agenda setting; relationship with international organization; relationship with financier; early priorities; relationship FP with local administration
Civil society 1	26.11.2020	past and current relationship between FP office and civil society; lack of food council
Civil society 2	30.11.2020	past and current relationship between FP office and civil society; lack of food council
Former Milan City manager	27.11.2020	FP background and early stages; agenda setting; relationship with international organization; relationship with financier; early priorities; relationship FP and local administration; relationship FP and research
Current Milan Food Policy Officer	17.12.2020	FP communication strategies; current FP governance; current priorities and themes;
Civil society 3	23.12.2020	past and current relationship between FP office and civil society; lack of food council
Current Milan Food Policy Officer	22.01.2021	FP background and early stages; agenda setting; relationship with international organization; relationship with financier; early priorities; relationship FP and local administration; relationship FP and research; current FP governance; current priorities and themes; past and current relationship between FP office and civil society; lack of food council
Financer organization	19.01.2021	past and current relationship between financer organization and FP office; role of financier; future perspectives

Results

This study recreates the very complex timeline of the Milan Food Policy process (Figure 1), which was influenced by many aspects and actors. Five phases of the process emerged from the analysis: formulation and analysis, consultations, decision, governance stabilization, and planning and implementation. These phases relate to the stages of the policy cycle as explained by Figure 1 and will be detailed in the following paragraphs.

To better understand the results of the study, Table 3 briefly summarizes the role of the most important stakeholders that influenced the Milan FP process and the phases in which they had influence. The following paragraphs of the results will break down the timeline of Figure 1 and better explain the role of actors of Table 3.

Agenda setting and policy formulation: analysis, consultation, and decision (2014-2015)

During the years that preceded EXPO 2015, Milan was mainly working on preparing the city for the international meeting. Since most of the resources were focused on infrastructural work, the city lacked thematic leadership as it was not presenting any local project regarding the topic of food (Former Milan Food Policy Officer 1 and Former Milan City Manager). The importance of

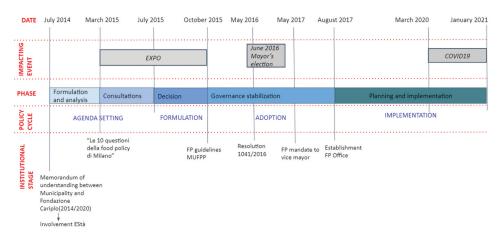


Figure 1. Timeline of the food policy process (source: authors).

a Food Policy for Milan was first announced by the former Mayor Pisapia in February 2014, during a C40⁶ conference, held in Johannesburg, as the project of the City of Milan for EXPO 2015 (Food policy researcher 1). In the conference Pisapia proposed "a local action plan entirely dedicated to the theme of food, a real food policy to be more sustainable and competitive" (Former Food Policy Officer 1), inspired by the process carried out by the City of London and former Mayor Ken Livingstone. Therefore, the administration decided to launch a conference of mayors, to be held during the EXPO period to gather all mayors and cities that had interests in food policies so they could share ideas and "to create an ideal, moral, symbolic, ethical connection" (Former Milan City Manager).

During that time, the Milanese administration held by Pisapia was considered a breakthrough for the City, since during his mandate he helped promote many topics and policies that had not been implemented before, with a very different way of administrating the city (Current Milan Food Policy Officer 2 and Financer Organization). Thanks to the involvement of the Cariplo Foundation and Està, a five-year memorandum of understanding (MoU) was signed with the intention of carrying out a project within an institutional framework (Food policy researcher 1). The MoU defined the objectives of the emerging food policy, the different roles of the institution and organizations involved, and marked the birth of MUFPP, to be presented at EXPO 2015. The document also determined the steps to follow which were: 1) analyze the Milanese food system, 2) elaborate the objectives of the Food Policy through public consultation, 3) adopt the Food Policy by city institutions, and 4) develop pilot projects.

The analysis of the food system and the public consultation were conducted by Està and culminated with the document "The 10 Issues of the Milan Food Policy" which highlighted important facts about food in the city of Milan. The 10 Issues were submitted to the City Council, with the goal of providing

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Table

Actor	Explicit role	Implicit role	Phases
Research Centers	research and support to the policy	propose the topic of food policy to the Municipality of Milan and Cariplo Foundation	formulation and analysis consultations
		facilitating the involvement of civil society	decision
	monitor actions		planning and implementation
Cariplo Foundation	financier	give financial independence to the FP	formulation and analysis
	support to project management	give respectability to the FP because of their authority	consultation
	support to political actors		decision governance stabilization
			planning and
International actors	partners in projects	give resonance to FP at an international level	implementation formulation and analysis
	financier	give resonance to FP inside the municipality	governance stabilization
			planning and
			implementation
Political actors	propose the topic of food policy to the municipality	give accountability to FP inside and outside the municipality	formulation and analysis
	help integration in the municipality		decision
	give the systematic and holistic view		planning and
			implementation
Office in the	project management	integration of FP in the municipality	governance stabilization
administration	educational role toward other municipalities		planning and
			implementation
Civil society	partners in projects	fertile background in the field of food	formulation and analysis
			consultation
			planning and
			implementation

additional insights to the following public consultation. The City Council identified the issues that were particularly relevant, and the methods considered useful to facilitate the impacts of a future Food Policy. The 10 Issues document and the preliminary indications of the Council constituted the knowledge base on which to set the consultation phase (Food policy researcher 2). The objectives of the consultation phase were (Food Policy researcher 2):

- to inform the community about the dynamics of the city related to food
- to give visibility to the FP project
- to identify the priorities on which to orient the FP
- to establish a dialogue between several actors and ask them to actively contribute to the construction of the FP
- to generate and direct a set of actions that established the co-responsibility of social, economic, and institutional actors, through a perspective of dynamic and participatory government of society.

The engagement of stakeholders for the consultation phase began with an initial mapping and multi-level segmentation of strategic stakeholders, then expanded to the Councils of the Zone, economic actors – companies and startups - and other actors of the third sector. Then the consultation was also extended to the entire citizenry, with meetings in the municipality zones and with an online consultation. Therefore, five focus groups with universities, start-ups, associations, companies, etc. were conducted along with nine town assemblies in the nine zones of Milan, and one town meeting with e-participation to vote on the 10 issues on food in Milan. These 10 issues were summarized into 5 priorities of the food policy (Està 2018b) of Milan which till today represent the lines of work of the food policy office:

- (1) Ensure healthy food for all
- (2) Promote the sustainability of the food system
- (3) Educate about food
- (4) Fight against food waste
- (5) Support and promote scientific research in the agri-food field

Particularly important for agenda setting and formulation phases was EStà, involved as the research team helping the municipality in acknowledging the topic and gathering information needed to create a food policy. It also supported the identification of actors with whom to build a participatory path for defining the priorities of the nascent food policy, including civil society, in the policy making (Food policy researcher 1). Indeed, besides the institutional EXPO 2015, a collective of national and international NGOs, namely Expo dei Popoli⁸ (People's EXPO), was proposing alternative events

advocating for a diverse vision of food, environment, and climate change (Civil society 1,3). Expo dei Popoli had an important role in building an integrated and shared path proposing a parallel – but more radical – initiative to EXPO 2015 in collaboration with the Municipality, with the long-lasting experience on the topic of the local and international organized civil society (CSOs). "The will was to trigger a positive dialogue with those components of the city that were critical of EXPO by showing them another side of the coin, another side which was possible to cultivate and turn into a piece of urban politics" (Former Milan City Manager). In fact, Expo dei Popoli wanted to go beyond the "pro or cons" EXPO 2015 debate. The NGO Mani Tese, promoter of Expo dei Popoli, involved many stakeholders at the national level (40 formal NGOS) and worked for 4 years with the goal of the Peoples' Forum, which was realized in June 2015 with more than 150 delegates from international farmers' movements and CSOs. The People's Forum produced the "Milan Charter of Civil Society and Peasant Movements" with the aim of supporting the proposals of CSOs on the issues of food and sustainability. Expo dei Popoli demonstrated that in Milan the interest and commitment to the theme of food and sustainability goes back long before EXPO 2015. However, the international meeting was the necessary push that led to the institutional reception of the topic.

Results show that the cooperation with international stakeholders strongly helped the growth of this policy. In particular, thanks to EXPO and Expo dei Popoli, international attention was on Milan, which helped very much in bringing in the collaboration with organizations such as FAO¹⁰ and C40 which remain today important partners for the city of Milan. The city was already part of C40 and in cooperation with FAO, but EXPO helped in gathering connections that came to the Conference of Mayors and initiated the MUFPP (Former Milan Food Policy Officer 1). The organization of the MUFPP, which was assigned to the Department of International Relations of the Municipality, gave accountability to the creation of the local policy, along with funding (Former Milan Food Policy Officer 1). Indeed, a European Project, Food Smart Cities for Development¹¹ (FSCD) developed by the Municipality of Milan in collaboration with NGOs that had a pivotal role in Expo dei Popoli, was awarded and helped finance the MUFPP and the local food policy (Former Milan Food Policy Officer 2).

Policy adoption: governance stabilization (2016-2017)

On May 25th, 2016, a new Resolution n°1041 (Comune di Milano 2016) was signed, just before the end of the Pisapia mandate, as a sign of political continuity with the next mayor (Food Policy researcher 1): "Substantially it is an all-encompassing resolution that brings together all the elements that, at



that moment, the municipality considered as part of the local food policy and the MUFFP" (Food Policy researcher 1). From a technical point of view, "it is an odd document because it is primarily a resolution of institutional politics, not a technical orientation" (Former Milan Food Policy Officer 1). However, this resolution marks the beginning of the food policy that we know today.

The formulation of the five priorities previously mentioned (Està 2018b) was the systematization of actions, ideas, and initiatives already present in the city of Milan: "so many pieces of a mosaic that in the whole largely already existed on their own but that needed a common direction, an umbrella, to be ennobled in some way" (Former Milan City Manager). Along with the five priorities, the implementation of three governance instruments was included in the resolution: the first one had the aim of promoting participation and communication with civil society, namely a Food Council; the second, a Coordination Table of the Directorates-General of the Municipality, with the aim of improving communication among the councillors and the office; and the last one, a monitoring system to analyze, evaluate and monitor actions and their impacts. Moreover, a very important point was that this resolution formally expanded the food policy from the city level to the metropolitan level.

Through this resolution, the Food Policy established governance in the administration system, composed of a permanent structure, namely the control room and an office, and "ad hoc" relationships with the rest of the administration and the civil society:

- The Control Room: lead the structure from a political and technical point of view. Here the Vice Mayor and Cariplo Foundation sit.
- Food Policy Office: team of food policy experts that work daily on local implementation of food policies. It is led by a coordinator which creates a liaison with the control room and the international actors.
- Deputy Mayors' Table (instead of the Directorate-General written in the resolution): nonpermanent table that eases the cooperation with the administration departments on specific projects and policies.
- Community of Practices (instead of the Food Council written in the resolution): social thematic groups of civil society stakeholders that help the office in the implementation of projects and policies.

This integrated governance didn't innovate the organization chart of the City of Milan but supported the entry and the development of the topic of food into the city's strategy and policies. However, the functioning of this governance didn't happen until August 2017.



In fact, between October 2016 and August 2017, there is a phase that the authors describe as governance stabilization because of its main characteristics:

- lack of implementation of the political mandate that resulted in a lack of coordination on food policy issues. The FSCD project provided an embryonic food policy office which worked on projects related to the Milanese food system. However, the staff's work was mainly dedicated to the European project rather than the implementation of the FP priorities.
- June 2016 mayor's elections created a delay due to changes in staff and organization of most of the departments.
- End of the FSCD project which removed funds and staff from the local food policy.

Because of all these reasons, it was not until August 2017 that the resolution 2016/1041 (Comune di Milano 2016) started to be implemented. Hence, the Milan food policy started to be managed by a dedicated and permanent office (FP Office) held in the Mayor's Cabinet, in which today a staff work full time on food policy issues. All the professionals employed in the office are experts in food systems and none of them has a background in public administration (Current Milan Food Policy Officer 1). The role of the coordinator is considered as a liaison between the strategic programming and the technical work. This coordination helps to work in collaboration with the rest of the administration trying to integrate food policy into the local administration (Former Milan City Manager), cooperating with different departments. The cooperation has been maintained by informal communication between the FP office and the deputy mayors and through the Coordination Table of Deputy Mayors, which replaced the Coordination Table of the Directorates-General of the Municipality cited in the Resolution 1041 (Comune di Milano 2016). The Coordination Table of deputy mayors is not permanent, but it is called ad hoc for projects that interest a specific deputy mayor: "it is not a permanent table because our interdisciplinarity and transversality mean that there are projects of different types, so sometimes it means collaborating with the councillor for education, sometimes with the councillor for urban planning, sometimes with social policies" (Current Milan Food Policy Officer 1).

The food policy mandate has been assigned to the vice mayor (since May 2017), which represents a horizontal position in the administration, creating important links with all departments. The vice mayor works in collaboration with the Cariplo Foundation in what can be called "the control room" of the whole process, giving Cariplo a strategic and important role (Current Milan Food Policy Officer 1). The coordinator here has an important role as well in communicating with the control room, which can be understood as a hybrid political structure, cooperating with the other councillors and reporting to the office.



The cooperation with the civil society is managed through Communities of Practices (CoPs), namely a gathering of organizations cooperating on a specific topic. This type of cooperation has produced some tangible results. For instance, the CoP related to food waste has allowed the production of stable networks with all actors active in Milan on prevention, collection, and redistribution of surplus for people in need. These meetings led to the birth of a food waste hub system (more in following paragraphs). On the other hand, the CoP on educational gardens in Milanese schools has allowed the creation of networks between the municipality, subjects active on gardens, schools, and supporters to finance gardens in schools. The need to systematize the procedures to implement a teaching garden emerged from the CoP, hence Guidelines on Educational Gardens has been produced. Many are the topics for which a CoP is mobilized, for instance in 2021, with an online format, four CoPs gathered around the topics of short supply chains, healthy diets, food poverty, and circular economy and food waste.

However, the interviews underlined that the complexity of the public administration has been a strong barrier to the governance of food policies: "the idea that you have an effective coordination of policies within a heavy administrative mechanism, such as the municipal public administration, is a very beautiful idea but impractical in the reality" and also "it is always hard to do cross-connecting things in complex organisms" (Former Milan City Manager). In fact, interviews with civil society highlighted that a space for participative policy making, such as a food policy council, is missing. Although the use of Community of Practices has been highlighted to be an efficient and practical governance, that "helps things to get done" (Current Milan Food Policy Officer 1), the lack of a food council has brought some interviewees to perceive the FP process itself as a very top-down vertical process, although it aimed at systematizing bottom-up activities already active in the territory (Civil society 2). The lack of a council has also been perceived as a "detachment from the territory" because the involvement of civil society is solely related to consultation and co-design of projects rather than policy making (Civil society 2). Hence, CoPs have been considered by some interviewees "as a step back" (Civil society 3) compared to food council, since they create "very ad hoc, bilateral, poorly structured, and not very representative interlocutions" (Civil society 2).

In particular, two main barriers to the creation of a food council were recognized by the interviewees. First, the integration of a new structure into the current governance. The food council proposed in the resolution 2016/ 1041 (Comune di Milano 2016) was a new governance instrument that "would represent a new conception of roles, power relations and dynamics, goals, outcomes, and often a process of institutional innovation, which was not part of the Milanese priorities" (Food policy researcher 1). Many interviews underlined that: indeed, the priority of the FP has been to become a legitimate body,

recognized and recognizable inside the municipality, before including external stakeholders. When the FP office started to actively work (August 2017), the priority was to produce actions and concrete outcomes in order to legitimize their role.

A second reason is the lack of strong external advocacy from organized civil society. Interviews with civil society stakeholders shed light on the aspect of poor advocacy from organized civil society to be part of the FP process. After Expo dei Popoli, the organizations of the territory stopped working as a united movement and instead advocated for their own space in the food policy of Milan, which didn't facilitate their inclusion in the policy making. "I don't know any Municipality that includes civil society in their actions without a great work of advocacy before" (Civil society 3). In particular, interviewees highlighted that there has always been a problem related to advocacy bodies in the Milanese institutional context: "there has always been great difficulty in conceiving advocacy as a policy objective. Some a little more enlightened conceived it as such, but the demand has never been very strong" (Civil society 2).

Policy implementation: planning and implementation (2017 – today)

Since the beginning of the food policy, Milan was able to create several projects mainly concerning food waste and redistribution and food education in schools. It is important to note that most of these projects were implemented after the Resolution 2016/1041 (Comune di Milano 2016), when the FP office was created (August 2017).

Some of the most important projects implemented have been:

• The creation of local hubs against food waste:

In 2016, the Municipality of Milan, Assolombarda₁₂ and Politecnico di Milano shared the "Zero Sprechi" MoU with the aim of reducing food waste and innovating the methods of recovery of food to be allocated to the needy, with a model based on local neighborhood networks. The actions started in 2018/2019 with the launch of a first pilot project in City Zone 9 and are now replicated in other neighborhoods of the city. In the city there are 5 Hubs in which various actors participate. During the COVID-19 pandemic, the municipality launched the Food Aid Device for which the food policy office created 10 temporary Hubs dedicated to the preparation of food aid thanks to the collaboration of several nonprofit organizations, businesses, and departments of the municipality. In 15 weeks of operation, the Food Aid Device supported over 20,700 people and over 6,300 households in need, moving a total of over 616 tons of food each week and making nearly 50,000 food aid deliveries. In 2021, these hubs won the Earthshot prize in the category of "Build a waste-free world."13



• The reduction of the tax on food waste for those who donate food

The Milan City Council has approved amendments to the Waste Tax regulations, introducing concessions for businesses that donate surplus food. Commercial, industrial, and professional activities that produce and distribute foodstuffs can obtain reductions up to 50% on the variable part of the waste tax. The reduction is granted in proportion to the amount of food donated. Potential donors can be stores, bars, supermarkets, laboratories, restaurants, market stalls, for a total of over 10 thousand activities in the city.

The Innovation incubator Food Policy Hot Pot

This project aims to stimulate forms of social, technological, and organizational innovation able to respond to the priorities of the Milan Food Policy by enabling collaborative processes between research projects, start-ups, and companies. Food Policy Hot Pot₁₄ extends throughout the food chain, supporting social innovation, the use of technology and the search for new organizational tools. Interested parties can propose their own innovative solutions within the following areas: improving the quality of food products, the production and processing process, the distribution process of food products, and waste collection/management.

Projects with school food catering

Milano Ristorazione, the City's company that manages food catering, serves 85,000 meals a day (more than 17 million a year) to schools, kindergartens, care centers, as well as home delivered meals for the elderly and dependent persons. Since 2015, a commitment has been made to reduce red meat on menus in favor of vegetable proteins, particularly legumes and grains, and move toward a more sustainable diet. In all schools there are two seasonal menus, one winter and one summer, whose supply is also oriented toward products from short supply chains. The World Resources Institute has certified that the Milan canteens, through these actions, have generated a significant reduction in CO2 levels equal to 20% of CO2 equivalent. In addition, Milano Ristorazione works to reduce waste - in 2019 it donated over 47,000 kg of bread and over 69,000 kg of fruit to 9 associations – as well as working on food education programs.

Educational activities:

Another interesting activity has been developed aiming at educating local administrations of the Lombardy Region on how to create and implement a food policy: "The Winter School on Food Policy for Lombard cities." This project makes explicit the role of Milan as leading the administration in the field of food policies: "the idea of the vice mayor has always been to involve other cities and facilitate initiatives that have been carried out with other Italian cities along with the Winter School, which has allowed us to concentrate all our work over the years and improve our skills" (Current Milan Food Policy Officer 2). The Winter School was held in 2020 through seven modules about: food policies, food waste, circular economy, sustainable diets and access to food, short supply chains, monitoring the food system and evaluating policies through design thinking. Twenty-five officials from the largest municipalities in Lombardy participated in this first edition. The Winter School is part of a bigger project called Milan Food Policy Toolkit which was born from the experience of the City of Milan and Fondazione Cariplo, in collaboration with Cariplo Factory, to make available in a single library the most relevant resources of the Milan Food Policy for its transfer to other Italian contexts. The website has materials based on lessons learned from the experience of the Office, available for free.

Among all topics related to food system sustainability and agroecology transition, the focus on food waste -which permeates most of the projects listed- was essentially caused by the fact that it is a cross-topic already understood by the administration (Former Milan Food Policy Officer 1) and for which the administration really had the skills to work on (Current Milan Food Policy Officer 2). Even Mayor Pisapia during his speech in Johannesburg "spoke about food waste because it was in his sensitivity. He didn't know the food policy as a general discourse, but food waste had a relevant centrality" (Current Milan Food Policy Officer 2).

Moreover, in the resolution 1041 (Comune di Milano 2016), the Milan Food Policy was intended to be for the metropolitan level, however, all projects have been implemented at the city level. Hence, "the enlargement to the metropolitan area was not a priority while the consolidation of the food policy within the municipality was. Extending it to the metropolitan territory meant a more structured, and potentially very long, political dialogue with many subjects. They were just not internally ready for it" (Civil society 2; Current Milan Food Policy Officer 2).

These projects show the great ability of the Milan Food Policy to include under an integrated policy, activities and ideas that were always divided into thematic silos (Former Milan City Manager). "Today, after 40/50 years of discussing environmental policies, we still find it hard to ensure that the actions of administrations or governments are managed in a coordinated way, let alone a new theme, which has in fact acquired the dignity of public policy only in recent years!" (Former Milan Food Policy Officer 1). The will to implement policies that could help the entire city and leave a legacy has been a strong driver for the work of the FP Office: "while it is important for the institution to innovate, it is more important that it has an impact on the whole



city. I can do a beautiful thing that affects a micro-neighbourhood, or I can do something much more basic that, however, has an impact on the whole city and I believe that the institution goes into the second aspect" (Current Milan Food Policy Officer 2).

Policy evaluation

Within the 1041/2016 resolution (Comune di Milano 2016), the task of monitoring the actions and programs is entrusted to the FP Office of the Mayor's Cabinet and by the General Management of the Municipality of Milan through the Coordination Table. In addition, the possibility was envisaged of entrusting the Food Council with a part of monitoring and evaluation activities. For these reasons, the last chapter of the 2018 document "The Food System in Milan – Five priorities for a sustainable development" puts forward a proposal for a "first step towards the construction" of the monitoring system for the Milan Food Policy mentioned in the 1041/2016 resolution (Comune di Milano 2016).

To date, there is no public document that, starting from the indicators of the Milan Urban Food Policy Pact (MUFPP) Monitoring Framework, can be considered to be a policy evaluation document. Considering the results achieved by the actions implemented as part of the Milan Food Policy, the monitoring of data relating to the activities necessary for the functioning of the offices was certainly carried out. This internal monitoring could be functional to an overall and public evaluation. In fact, the foundations for building an effective policy evaluation already exist: an institutionalized reference structure, the availability of data relating to the actions and a clear legislative reference framework. Given the importance of the Milan Food Policy in the international scientific context, making the results public and placing them in a frame of reference is necessary.

Discussion and conclusion

Some important points of discussion can be drawn from this analysis of the Milan FP process, which improves the knowledge on urban food policy in Italy and on agroecological transitions of urban systems in general. The study showed that the Milan FP process has been influenced by important institutional stages, internal milestones within the municipality, and external events, discussed throughout the article. All have had a major impact not only on how the process moved forward but also on who got involved in it.

First, it is important to note that the Milan FP has had pivotal phases that characterized its process:



- analysis and public consultation (considered within the agenda setting and policy formulation stages of the policy cycle): helped to set the agenda and formulate the FP policy strategy into five priorities. Here international actors, research activities and private funding have been essential, along with the contribution of the territory and the previous experience of civil society on the topic of food.
- governance stabilization (refers to policy adoption stage): necessary to understand how to adopt the FP strategy and institutionalize the governance structure. In this phase the institutionalization of the Milan FP reached its peak with the design of a resolution, an official mandate for food policies and organizational changes in the governance structure. In particular, the development of a dedicated office resulted to be pivotal in the process of institutionalization of the policy.
- planning and implementation (related to the policy implementation stage of the policy cycle): phase in which projects have been implemented through the governance structure established. Here particularly important has been the capacity of the dedicated office to understand both the needs of the territory and the administration to develop coherent projects that would increase the accountability of the food policy inside the institution. This phase was strongly influenced by the previous phases but also by the COVID19 emergency, as seen in the results section.

The analysis showed that the main drivers of this policy process were the push of EXPO 2015 and Expo dei Popoli which created political interest in the topic of food and brought international pressure to start a food policy project for the city of Milan. Private funding from a recognized and knowledgeable organization, such as Fondazione Cariplo, was also pivotal in the development of the project because it gave independence to the process while locking it inside the municipality thanks to the authority of the Cariplo Foundation. Moreover, Cariplo created the connection between EStà and the municipality of Milan, bringing to the political table experts in the field that were already involved in the territory and other food related projects. Very important has also been the presence of knowledgeable civil society that through Expo dei Popoli communicated and collaborated with the Municipality to bring the topic of food to the public and institutional table through MUFPP and European projects.

The research also showed that the success of the FP of Milan has been to focus on integrating into the administration, and to become a recognized and accountable policy area, which has been recognized by other study as an important factor for successful food policies (Arcuri, Minotti, and Galli 2022; Sibbing and Candel 2021). Institutionalization of food policy was highlighted during interviews as the main priority through the whole process. Hence, the phase of governance stabilization was fundamental for recognizing

what the needs of the FP policy were and of the administration and implement the governance structure. Drivers of a successful institutionalization were the presence of a coordinator and permanent staff solely dedicated to the topic of food policies and a good understanding of the administration's will and needs shaping the direction of the policies and projects implemented. In fact, regarding project implementation, for instance, the topic of food waste and food surplus redistribution was highly developed as it was already perceived as a priority in the urban agenda of the city. The staff of the FP office has, therefore, the role of "institutionalised policy entrepreneurs" (Arcuri, Minotti, and Galli 2022) because of the ability of "investing their own resources, such as their time, expertise and reputation to perform important functions in the policy process" (Giambartolomei, Forno, and Sage 2021). Hence the institutionalization of integrative capacity and leadership was highlighted as an important part of the food policy processes (Arcuri, Minotti, and Galli 2022; Candel 2021). In particular, the design of a food strategy, the presence of budget and organizational changes are determinants of the institutionalization of food policies (Sibbing and Candel 2021).

However, the institutionalization of the FP also brought some challenges and constraints to the policy development. First of all, binding the Milan FP to the Municipality level somehow detached the policy from the Metropolitan level, which was included in the plan for the FP. The detachment from a broader level of government is problematic when talking about agroecological transition, since it has been demonstrated that the food system goes beyond urban boarders (Blay-Palmer et al. 2018; Hinrichs 2003).

Also, some criticism appeared in the interviews, related to the collaboration with the departments of the administration and the involvement of external stakeholders such as civil society. The study showed that structured communication and coordination seems to be outside of the administrative mind-set. Indeed, the Coordination Table of Deputy Mayors is focused on project design and implementation rather than for common policy development. However, other studies such as Arcuri, Minotti, and Galli (2022) show the importance of creating a binding governance structure when talking about recognition, legitimization, and organizational support, necessary for a FP to succeed. In fact, Sibbing and Candel (2021) show that, although the process of institutionalization takes place, "a food policy can remain relatively vulnerable to possible deinstitutionalization in the (near) future."

Moreover, despite the initial central role of civil society (particularly thanks to Expo dei Popoli and to public consultation), external stakeholders are included only for consultation and project implementation through CoPs but are not included into the policy making development. Indeed, no platform, such as a food policy council, for an integrated involvement in the policy development process of nonprofit stakeholders, has been implemented. However, participatory forms of governance have been highlighted as an important key in agroecological transition (Ray Anderson et al., 2019). Hence, community-led governance is intended to be one of the main enabling factors essential for pushing the paradigm change toward a sustainable food system (Ray Anderson et al., 2019; López-García and González de Molina 2021). The "Agroecology-based Local Agri-food Systems" - intended as "assemblages of alternative food networks, new and emerging types of institutional, political measures, and appropriate bottom-up institutional governance, together with the symbolic revival of place-based cultural and historical identities" (p. 12, 2021)- theorized by López-García and González de Molina (2021) allow to change the perspectives on the food system bringing transdisciplinarity to a multi-actor and multilevel table.

In conclusion, the integration inside the administration of Milan FP seems to have a dual nature: on one side it is very successful as shown by the projects implemented and the recognition gained at national and international levels; on the other side, it may hamper the agroecological transition. The governance structure established does not include a co-design of policies since it only involves departments of the municipality and external stakeholders for consultation and project implementation. Following international literature on urban agroecology, we argue that the lack of a strong civil society engagement could cause a slowdown in the transition to sustainable food systems. As shown by other studies (Wezel et al. 2016, Ray Anderson et al, 2019; López-García and González de Molina 2021) bottom-up involvement is pivotal to reach the agroecological transition of urban systems, and integration of different departments into the policy making process can have a strong impact in successfully producing systemic and place-based policies (Arcuri, Minotti, and Galli 2022).

Future research should deepen the food policy process analysis through the lens of governance, investigating the link with institutions as one of the fundamental issues in this field. In this perspective, policy evaluation analysis should be stressed in future investigation for both academics and policymakers.

Notes

- 1. Research center based in Pisa: https://www.laboratorisismondi.it/
- 2. Banking foundation that carries out philanthropic activities throughout Lombardy: https://www.fondazionecariplo.it/it/index.html
- 3. More on: https://www.milanurbanfoodpolicypact.org/the-milan-pact/
- 4. The MUFPP has 37 recommended actions clustered into 6 categories, which are: governance, sustainable diets and nutrition, social and economic equity, food production, food supply and distribution, and food waste. Each action has several indicators that can be used by cities to monitor the implementation of the Pact.
- 5. Independent research center based in Milan: https://assesta.it/
- 6. Cities Climate Leadership Group: https://www.c40.org/
- 7. Can be viewed at: https://foodpolicymilano.org/wp-content/uploads/2015/04/10-Questioni-Food-Policy-Milano.pdf



- 8. More information at: https://www.manitese.it/campagne/expo-dei-popoli#:~:text= L'Expo%20dei%20Popoli%20ha,per%20lo%20Sviluppo%20Post%2D2015
- 9. Important Italian NGO that works on food, climate, human rights and more: https:// www.manitese.it/
- 10. Food and Agriculture Organization of the United Nations
- 11. More on: https://foodpolicymilano.org/food-smart-cities-for-development/?utm_con tent=buffere97e6&utm_medium=social&utm_source=twitter.com&utm_campaign= buffer
- 12. The association of companies operating in some provinces of Lombardy including Milan: https://www.assolombarda.it/
- 13. More on: https://earthshotprize.org/london-2021/the-earthshot-prize-winners-finalists /waste-free/
- 14. More on: https://foodpolicymilano.org/hot-pot/
- 15. More on: https://www.milanoristorazione.it/
- 16. Innovation hub of Cariplo Foundation: https://www.cariplofactory.it/

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The research for this paper was financially supported by the Internal Grant Agency of the Faculty of Economics and Management, Czech University of Life Science Prague, as part of the project "New models of sustainable food consumption within the context of agricultural transitions" (2019B0007).

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Food Policy Processes in the City of Rome: A Perspective on Policy Integration and Governance Innovation

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OPEN ACCESS

Edited by:

Sara Moreno Pires, University of Aveiro, Portugal

Reviewed by:

Pablo Torres-Lima, Metropolitan Autonomous University, Mexico Barbora Duží, Institute of Geonics (ASCR), Czechia

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Specialty section:

This article was submitted to Social Movements, Institutions and Governance, a section of the journal Frontiers in Sustainable Food Systems

> Received: 30 September 2021 Accepted: 15 December 2021 Published: 07 February 2022

Citation:

Minotti B, Cimini A, D'Amico G, Marino D, Mazzocchi G and Tarra S (2022) Food Policy Processes in the City of Rome: A Perspective on Policy Integration and Governance Innovation. Front. Sustain. Food Syst. 5:786799.

doi: 10.3389/fsufs.2021.786799

In the food policy arena, the topic of governance and how to create a governance system that would deal with cross-cutting issues, including new ways of perceiving the public sphere, the policymaking, and the involvement of the population, has become an important field of study. The research presented in this article focuses on the case study of Rome, comparing different paths that various groups of actors have taken toward the definition of urban food policy processes: the Agrifood Plan, Food Policy for Rome, and Community Gardens Movement. The aim of the research is to understand the state of the art about different paths toward food strategies and policies that are currently active in the Roman territory while investigating the relationship between policy integration and governance innovation structures. Indeed, this paper dives into the governance structure of the three food policy processes, the actors and sectors involved, and the goals and instruments selected to achieve a more sustainable food system for the city. In this context, their characteristics are analyzed according to an innovative conceptual framework, which, by crossing two recognized theoretical systems, on policy integration and governance innovation frameworks, allows to identify the capacity of policy integration and governance innovation. The analysis shows that every process performs a different form of governance, implemented according to the actor and backgrounds that compose the process itself. The study demonstrates that governance innovation and policy integration are strongly linked and that the conception and application of policy integration changes according to the governance vision that a process has.

Keywords: food policy, policy integration, Italy, food system, food governance

1

INTRODUCTION

Coronavirus disease 2019 (COVID-19) pandemic has brought to light important challenges concerning food systems, but it has also made visible the multiple ways in which the food system sustains urban life. The importance of the urban food policies across the world has recently been recognized in international arenas such as the United Nations New Urban Agenda

or the Sustainable Development Goals (UN Habitat, 2015). In addition, the increasing emergence of institutional or grassroots processes aiming at fixing the issues of food systems demonstrate that cities are affirming the power of food not only to sustain the lives of an increasingly urban population but also to deliver economic prosperity, address social and health inequalities, and foster environmental sustainability (Moragues-Faus et al., 2013). Urban Food Policies (UFP) have been defined as "a process consisting of how a city envisions change in its food system, and how it strives toward this change" (ibidem). Therefore, inherent in the concept of Urban Food Strategy is the transition of the food system model toward one that is more sustainable, equitable, and socially, environmentally, and economically balanced. This transition involves a large number of institutional and private actors, representatives of civil society, movements, and organizations of various kinds.

The ability to govern this diversity and direct it toward shared and innovative trajectories has, in many cases, been entrusted to the Food Policy Councils (FPC). These are arenas for consultation and/or deliberation in which democratic confrontation between the actors of the transition takes place or should take place. In addition, the FPC, being the result of the diversity of approaches adopted in the UFP, vary in organizational form, methodology of interaction between the participants, and ability to represent the multitude of stakeholders involved. As stated by Moragues-Faus and Morgan (2015, p. 1159), the "spaces for deliberation" and the design of models of inclusive stakeholder engagement are elements common to several existing experiences, despite the fact that there is not a single pattern (Gianbartolomei et al., 2021). The initiatives implemented in the cities vary in terms of the resources activated, the actors involved, the issues addressed, the level of democratization of the processes, and, essentially, in the governance models. The aspect that emerges, however, is a certain solidity of the panorama around the theme of food policies, an area in which cities—in the various governance configurations—are increasingly assuming the role of policy innovators. In this context, an important role for rescaling food governance vertically across scales is played by regional, national, and international networks. The Milan Urban Food Policy Pact, a protocol developed in 2015 committing to develop sustainable food systems and now signed by more than 200 mayors across the globe, is a clear example of these expanding city-to-city alliances. Other initiatives designed for circulating knowledge and experiences and accelerating the transformation of urban foodscapes are thematic working groups within existing networks such as C40 or Euro-cities and new platforms focused on food-related challenges such as the UK Sustainable Food Cities network (recently rebranded as Sustainable Food Places) (Moragues-Faus and Battersby, 2021a) or the Italian Network on Local Food Policies (Dansero et al., 2019).

The variety of approaches to urban food policies has recently been investigated by various researches, which attempt to map the most effective policy models for the urban food policy

establishment (Doernberg et al., 2019; López Cifuentes et al., 2021; Moragues-Faus and Battersby, 2021b; Vara-Sánchez et al., 2021). To address the interconnected challenges of food systems effectively, scientists and policymakers have stressed the need for integrated food policy (Lang et al., 2009; MacRae, 2011; IPES-Food, 2017; Moragues-Faus et al., 2017; Candel and Daugbjerg, 2019). However, one of the aspects that still remains partially unexplored in the research on Urban Food Policy is the ability to integrate the different sectors that, directly or indirectly, have an impact on food systems or could benefit from food policies. In other terms, the capacity to horizontally integrate, include, and coordinate actors from farm to fork and all sectors from health to economics and the environment has still not been explored sufficiently. This aspect is particularly relevant for the future of food governance in cities, as the goal of the UFP is the development of a "roadmap" helping the city to integrate a full spectrum of issues related to urban food systems within a single policy framework that includes all the phases from food production to waste management (Mansfield and Mendes, 2013).

Another aspect that often emerges from the debate on UFP is the innovative scope of the initiatives. These initiatives generally comprise "networks of activists and organizations, generating novel bottom-up solutions for sustainable development; solutions that respond to the local situation and the interests and values of the communities involved" (Seyfang and Smith, 2007, p. 585). As Moragues-Faus and Morgan (2015, p. 1561) highlight, such networks are often created by "food champions" or "policy entrepreneurs," key enabling agents of a new form of food planning and policymaking. The outcomes of these initiatives are different, and they move in a continuum that goes from the antagonism of alternative movements toward the institutional and political order to the institutionalization in Urban Food Policy managed by local administrations. While some authors have found that institutional innovations can play a key role in considerably institutionalizing food governance ideas within a relatively short time span, other research (Sibbing and Candel, 2021) finds that the institutionalization of food action into a policy is not a smooth process. Indeed, the formation of a food movement and the development of a more institutionalized food policy encompass different stages (movement formation, coalition building, strategy formalization, and implementation pathways), all bringing about tensions and challenges (Manganelli, 2020).

At the Italian level, several studies on local food policies have been published in the past years (Marino et al., 2020), analyzing the experience of some cities in promoting new models of governance such as the Food Policy Councils (Calori, 2015), in assessing the potential of shorter food supply chains and alternative food networks (Marino, 2016), and in managing food waste (Fattibene, 2018; Fassio and Minotti, 2019). However, a research combining horizontal policy integration and governance innovation for UFP analysis in a single framework has not yet been proposed. For these reasons, the objective of the paper was to analyze the multifaceted panorama of the different paths that have been activated in Rome in recent years and months

around a city food policy. The choice to analyze the case of Rome was motivated by the fact that many food-related initiatives across the city have emerged over the last decade that seek to re-engage citizens and reignite the debate on sustainable, healthy, and local food. Such initiatives include multifunctional urban and peri-urban agriculture projects, solidarity buying groups, and farmers' markets (Mazzocchi and Marino, 2020). The research was carried out through the construction of an analytical framework useful for investigating the integration of policies and governance innovation. The interviews were administered to the representatives of the three main routes currently active in the city of Rome, which correspond to three different pressure groups and three different territorial scales. The paper therefore has a double objective: from a theoretical point of view, it offers an original and replicable analytical framework for analyzing the innovation and governance of other food policies; from the point of view of the research results, it offers significant insights to understand the multitude of itineraries taking place in the city of Rome.

CONTEXT OF STUDY

To fully understand the development of urban food—and agriculture-policies, it is necessary to start from the fact that, in Italy, it is not possible to separate the issues of the city from those of the countryside¹. In particular, for the purposes of this study, it is important to highlight the relationships that are established in this dynamic between the various actors—agricultural producers, breeders, citizensconsumers, builders, landowners, and civil society-and how these affect the formation of urban policies, including those regarding food. Wanting to choose a point from which to start, one cannot fail to consider as central the work of Emilio Sereni and his History of the Italian Agricultural Landscape (1961). In Sereni's work, the Landscape is in fact a method for reading the dynamics of the economic relations between the city—and in particular its political and financial capacity and the countryside as a space for production, income, and power. The landscape therefore allows us to read the dynamics conflictual and/or cooperation—between the different economic and political actors in a reciprocal and continuous exchange between city and countryside².

The city of Rome is an excellent case study of how the relationships between city and countryside can be interpreted in terms of urban policies and how those relationships are a fundamental element of urban food policies. The metropolitan area of Rome has a population of about 4.34 million inhabitants for an extension of $5,352~\rm km^2$. At the municipal level, the total agricultural area of Rome is $\sim 58,000~\rm ha$, or 45.1% of

the territory, an extension that makes Rome the second largest agricultural municipality in Europe. In the Roman countryside, a large number of quality agri-food products are produced and processed: in the province of Rome, there are 15 PDO—Protected Denomination of Origin—(8) and PGI—Protected Geographical Indication—(7) products, among which stand out products from livestock chains such as Abbacchio Romano, Pecorino Romano, and Ricotta Romana. In fact, historically, sheep and goat farms have represented a fundamental economy for the Agro Romano, substantially determining the landscape, uses, and traditions of the Roman countryside.

Despite this potential, the agricultural land, especially after the Second World War, was seen-albeit with some deserving exceptions—as a surface destined for building expansion, even for speculative purposes. According to the latest Report on Land Consumption in Rome, about 24% of the territory of Roma Capitale is consumed soil, of which most of it is waterproofed (91%, 28,256 ha), with significant implications for ecosystem services (Roma Capitale, ISPRA, 2021), and in recent years, the increase has been equal to 12% against a population increase of 1.1%. The constant fading of the historical centrality of agricultural activities in the complex Roman agri-environmental mosaic has produced a series of negative impacts in economic (agricultural production) and environmental terms (loss of ecosystem services) (Cavallo et al., 2015). This trend has produced a series of negative impacts in economic (agricultural production) and environmental terms (loss of ecosystem services). Above all, social negative impacts caused a cultural divide between citizens and their countryside, seen only as an area of backwardness and a reservoir of building surfaces. The expansion of the settlement areas took place—despite the presence of planning tools—without an organic vision that caused a great increase in the historically compact city. Furthermore, large farms of over 100 hectares, despite being only 2% of the total number of Roman farms, occupy over 40% of the UAA" (Cavallo et al., 2016). At the same time, large areas, considered no longer profitable, are abandoned (in particular arable land, pastures, but also the vine). Figure 1 shows the land use transitions from 1960 to 2018.

However, this urban model has produced the permanence of many residual agricultural areas within the urban fabric. This phenomenon originates both in the context previously mentioned and in the "resistance" of small farmers who, starting from the historical occupations of the land in the 1970s, have developed multi-functional and innovative paths both in the deepening and broadening sense (organic farming, direct sales channels, social agriculture, etc.). The Roman countryside is therefore populated with very different economic actors: multifunctional companies with strong relationships with citizens; large companies in which the logic of annuity often prevails; specialized companies organized in traditional supply chains such as that of fresh milk; shepherds; builders, etc. To these are added other types of urban actors that have an eye to the countryside and food: movements of young farmers who demand the management of public lands; GAS; initiatives of solidarity

¹This statement is reflected in economic and social history through many Italian scholars', economists', and intellectuals' thoughts: Sereni, Rossi Doria, Gramsci, Pasolini, and others, such as Mumford, with his "Cultura della Città" (1938).

²Also at the international level in the debate on food policy, the relationship between food and city and between city and countryside is a central element: for example, in the New Urban Agenda, defined within the Habitat III Conference of the United Nations, or in the "City Region Food System" of FAO.

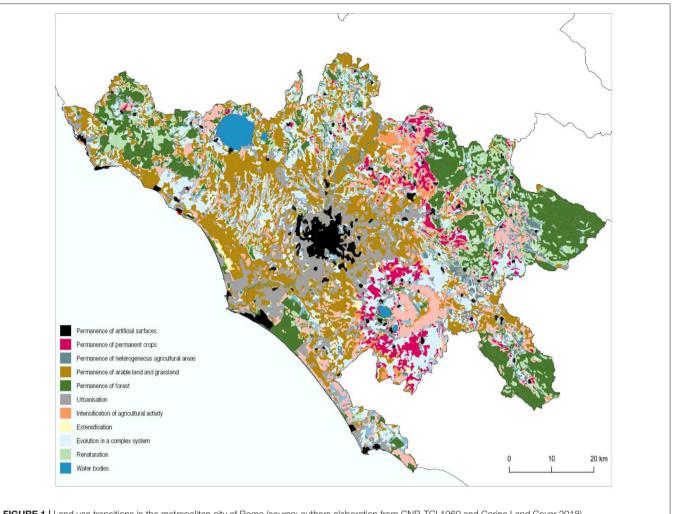


FIGURE 1 | Land use transitions in the metropolitan city of Rome (source: authors elaboration from CNR-TCI 1960 and Corine Land Cover 2018).

economy; urban gardener who cultivate the land often occupying and self-managing urban greenspaces of different sizes inside the built city; nets for the recovery and redistribution of food surplus, etc. (Mazzocchi and Marino, 2020). In addition to urban and peri-urban agriculture, the urban garden movement has had an extraordinary diffusion, with a positive impact above all on a social and environmental level: Zappata Romana, for instance, has been mapping the experiences of community gardens and gardens in Rome, which today are about 218 between shared gardens green spaces.

Each type of actor has developed its own dialogue with policymakers, through direct or indirect pressure, determining with varied paths—a response from the institutions. The pressure factors and the responses, as can be seen from Table 1, wereaccording to a social and environmental assessment—of not only a positive but also a negative nature.

The dialogue between politics and territorial actors has resulted in a series of more structural and organic policies, which, in recent times, have been intensifying, as a sign of greater attention from the institutions. Figure 2 traces the main stages of these policies, showing three important processes, which have

TABLE 1 | Negative and positive factors of the direct and indirect pressure of Roman local actors on politics during the years (source: authors).

	Politics	Local actors
Positive factors	Public land tender School public procurement	Occupation of public agricultural land
	Regulation on farmers market	Development of social agriculture projects Development of multifunctional agriculture and alternative food networks
Negative factors	Unplanned building expansion and land use The abandonment of the local markets The reallocation of spaces for farmer's market	Widespread presence of an "annuity" agriculture The extensive nature of many productions Concentration of land

been selected as the focus of this research's analysis: Community Garden Movement, Food Policy for Rome (FPR), and Agrifood Plan, which will be described in the following sections. As

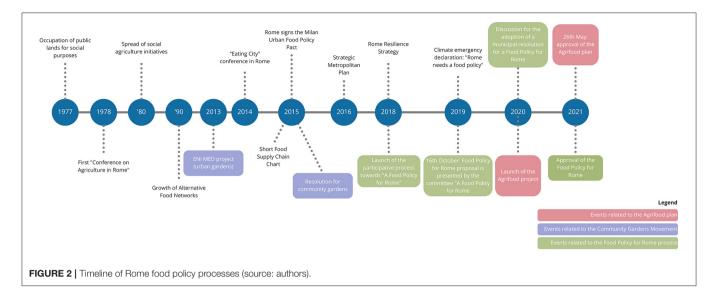


Figure 2 shows, they have all been developing in the city of Rome in the past years and represent three different processes all involving the topic of food and food policies.

The study analyzed these three processes from a governance and policy integration point of view, as the following sections will thoroughly explain.

METHODOLOGY

This study bases its theoretical and analytical framework on two main concepts: policy integration and governance innovation. In regard to cross-cutting and systemic issues, such as food policy, this article starts by the assumption that "sectoral policy in itself is insufficient for addressing crosscutting problems and that these problems instead need to be taken on board by other relevant sectors to address externalities and, possibly, create synergies" (Lafferty and Hovden, 2003 in Sibbing et al., 2021).

For this reason, policy integration is a necessary tool to deal with food-related issues, as they require an integrated approach, especially when talking about governance (Lang et al., 2009; MacRae, 2011; Candel and Biesbroek, 2016). In particular, when looking at policy integration, many are the lens of study and analysis. This study used the Candel and Biesbroek (2016) approach for which integration's goal "is to incorporate, and, arguably, to prioritize, concerns about issue x (e.g., environment) in non-x policy domains (such as economics, health or spatial planning), with the purpose of enhancing policy outcomes in domain x" (Candel and Biesbroek, 2016 in Sibbing et al., 2021). This approach intends integration as a process and not only as a policy outcome, which revolves around four dimensions: frame, subsystems and their involvement, goals, and instruments (Candel and Biesbroek, 2016):

1) Frame is how a problem is intended and understood within a system. Here, the focus is if the cross-sectoral nature of the problem is recognized as such by the given system.

TABLE 2 | Analytical framework (source: authors).

Dimensions of integration	Type of governance innovations			
	Community	Agrifood	Food policy for	
	gardens		Rome	
	movement			

Frame: how are the issues perceived in a given context?

Context

Needs and

problems

Population

Goals: to which strategy does the goals respond?

Strategy

Key concepts

Processual instruments: to what extant the instruments used can be considered innovation and improvement?

Innovation

Improvement

Subsystems: what role does the actors have in the governance process?

Governance

through actors

Role of

policymakers

Role of public

managers

Role of population

- 2) Subsystems are the range of actors and institutions involved in the governance of a particular cross-cutting policy problem. In particular, the framework focuses on which subsystems are involved and takes the political initiative to address the problem and what is the density of interactions between subsystems.
- 3) The goals of the policy can be explicit, meaning the adoption of a specific objective within the strategies and policies of a

governance system, or implicit. How the goals of the various domains and their respective subsystems relate to each other is one important area of analysis.

4) Instruments are the tools with which to achieve a goal. They can be substantial, namely, the allocation of government resources that directly affects the supply of goods and services, or they can be procedural; in this case, they modify the political process to ensure coordination.

For all these dimensions, the Candel and Biesbroek framework provides definitions of low and high degrees of policy integration with intermediate levels that in this article will be called medium low and medium high.

When talking about policy integration, one interesting perspective is to look at governance innovation as well. This would mean to highlight if policy integration processes included innovation or not. Innovation is a complex and complicated issue, especially if applied to public policies and their governance system. Hartley analyzes this concept in her study (2005) defining governance innovation as a wide variety of novelties in action, such as new political arrangements in local government, changes in the organizational form and arrangements for planning and delivery of services, and public participation in planning and to the provision of services (Hartley, 2005). Hartley's work focuses on the idea that three main governance innovation paradigms exist, which differ for the way innovation and improvement are intended, and for the role that policymakers, public managers, and the population have. Here, governance innovation is not only a change in ideas but also a change in practices that increases the quality, efficiency, or suitability of public services (Hartley, 2005).

Starting from these two theoretical frameworks, this study designed an analytical framework that cross the two concepts briefly described. **Table 2** shows the framework used to analyze the case studies of this research.

This framework is rooted in the assumption that policy integration, in the food policy arena, is strongly interconnected to a governance innovation. Hence, policy integration here is analyzed through the lens of governance innovation in order to better understand the context and frame in which it is designed and implemented and the goals that drive the process along with the instruments that guarantee the innovation or improvement toward a specific goal. Finally, the framework also investigates the role of the actors involved and the way the governance of the process is related to those actors.

For each case study selected, the framework helped in the design of the interviews, meaning the selection of interviewees and questions, and in the analysis of the results. The Discussion and Conclusion section, then, the two original frameworks—Hartley, 2005; Candel and Biesbroek, 2016—have been used to resonate upon the results.

The three case studies have been selected according to previous knowledge of the topic and for their important contribution to the urban food policy topic in the city of Rome. In particular, the authors selected three case studies that are currently ongoing on the Roman territory, which all have different natures, goals, and perspectives.

For each case study, three key informants have been selected for in-depth interviews on the topic of policy integration and governance innovation, for a total of nine interviews. For each process analyzed, different types of interviewees were selected, all with the same characteristics of being fundamental actors in one of the case studies. In particular, regarding Agrifood, the interviewees were selected among the institutional actors (two interviewees) and technicians (one interviewee) that worked in the process design and implementation, while for the Community Gardens Movement, the authors selected one perspective from the institution and two from the social movements. Finally, for the Food Policy for Rome project, three of the civil society founders of the movement were interviewed.

TABLE 3 | List of interviews and issues covered (source: authors).

Interview	Role	Time	Issues covered
Interview 1	City councilor	44.30 min	Agrifood: topics of interest, strategy, governance structure, participation process
Interview 2	City councilor	39.15 min	Agrifood: topics of interest, strategy, governance structure, participation process
Interview 3	Chamber of Trade	58.18 min	Agrifood: topics of interest and future perspective; involvement with private sector
Interview 4	City officer	41.38 min	Community Gardens Movement: history, political involvement, international support
Interview 5	Civil Society	33.39 min	Community Gardens Movement: history, community engagement and political involvement
Interview 6	City Officer	54.01	Community Gardens Movement: institution perspective
Interview 7	Civil Society	40.41	Food Policy for Rome: bottom up movement, goals, story and role
Interview 8	City Officer	25.39	Food policy for Rome: bottom up movement, scope, story and role
Interview 9	Civil Society	29.17	Food policy for Rome: institutional approach to the bottom up movement

Due to COVID-19 restrictions, the interviews have been conducted online during the month of June 2021. All interviewees responded to the same set of questions, customized to the specific case study or project they were called to represent. The theoretical framework previously described (**Table 3**) helped to design questions besides structuring the analysis.

RESULTS

Agrifood Plan

In 2020, the Rome Municipality Agriculture, Production Activities, Trade and Urban Planning department, in collaboration with the Chamber of Trade, started the promotion of the Agri Food Plan (Agrifood or the Plan) as an industrial plan of the city's agri-food sector aimed at affirming a competitive identity to attract investments in urban and rural areas. The main objectives of the plan are the creation of a food policy for the city based on the enhancement of Rome and its province's agri-food chain and on the promotion of typical local products. The plan creation and drafting involved researchers, trade associations, Roman food system stakeholders, companies, and entrepreneurs, in a participatory process carried out through working tables and town meetings. The Agrifood Strategic Plan for the City of Rome was approved by the City Council May 26, 2021, as part of the 2030 economic and urban development strategy. Along with this food- and agricultural-related Plan, two other strategies accompany the 2030 vision for the city: one regarding tourism, the other on smart business. The main objectives of Agrifood refers to giving value to Roman agrifood supply chain, promoting Roman typical products, and identifying a food policy for the city (Agrifood Strategic Guidelines, 2021). The whole idea behind this strategic vision has been built for the need to empower the potential that the city of Rome has on food-related topics and give to the Italian capital an international role in the urban awake that has been characterizing cities all over the world (Interview 1 and 2).

The Plan has been designed by the Economic Development, Tourism, and Work Department in collaboration with the City Planning Department, and followed a three-step process:

- Closed participative table meetings with selected experts, universities, and institutions
- 2) Town meeting with a wider range of stakeholders
- 3) Design and writing of the Plan by the two departments involved and a food supply chain expert.

This process has been followed by an *ad hoc* office on urban economic innovation, politically led by the two departments and administratively managed by a department director expert on innovation and social networks (Interview 1). Besides this office, the Plan has created an advisory board and a business board to help design the strategy (Interview 3).

As **Table 4** shows, four are the main topics around which Agrifood rotates. First, the market is a pivotal space in which consumption patterns as much as commercial challenges can be understood and changed. Second is the definition and promotion of what the Plan calls "la distintività," meaning the signature, the characteristic of Roman food from a production

 TABLE 4 | Summary of Agrifood process through framework (source: authors).

TABLE 4 Summ	nary of Agrifood process through framework (source: authors).
Dimensions of integration	Agrifood
Frame: how are	the issues perceived in a given context?
Context	City strategic planning; territorial potential; international pressure
Needs and problems	Need of administrative instruments; fragmented municipality initiatives related to agrifood system
Population	Involvement of stakeholder from the business and innovation food system arena
Goals: to which	strategy does the goals respond?
Strategy	Sustainability as innovation; strategic city planning as resilient strategy for continuity inside the administration
Key concepts	Trade and food services; business innovation and development; sustainability as business innovation (circular economy, low environmental impact)
Processual insti	ruments: to what extent the instruments used can
be considered in	nnovation and improvement?
Innovation	A tool for strategic planning; create coordination among other municipal initiatives
Improvement	Improvement through project implementation
Subsystems: wh	nat role does the actors have in the governance
process?	
Governance through actors	Vertical governance, typical of administrative machine
Role of	Leader

and consumption point of view (Interview 3). Third is the support sustainable agriculture supply chain defining green areas to preserve from urbanization and improving logistics. Fourth, encourage new technologies and innovation in the food products field. Hence, seven strategic guidelines compose the Plan with proposed actions on the previously mentioned themes addressed (Agrifood Strategic Guidelines, 2021, p. 6):

Role of population Consultation with selected stakeholder; citizens as service

"Agriculture and Roman farmland

Technicians

policymakers

Role of public

managers

- Agricultural and food identity: the roman signature productions
- The Roman markets and short supply chains
- The future of the Roman food service
- Innovation, sustainability, and research for the future of the Roman agrifood system
- Logistics and flow management and the food safety in Rome
- Rome capital city of agrifood: communication and territorial marketing."

The interviewees stressed the need to have a plan, a vision, and a program inside the municipality that would address agrifood-related issues, which has been missing, especially from an economic development point of view, along with the great need to combine and create connections between the fragmented city projects (Interviews 1–3). The focus concentrates also on

simplifying bureaucracy for citizens and those who work in the supply chain, creating administrative instruments that could facilitate their access to governmental services (Interview 2).

The role of the institution is very prominent in Agrifood: this is confirmed not only by the interviews but also from the strategic guidelines in which actions, instruments, targets, and stakeholders are selected. Among stakeholders mentioned, the city of Rome is the most present. The interviews suggested that, along with the specific thematic and project-related objectives that the city of Rome, as an institution, will have to fulfill, the main and most important outcome of the entire 2030 strategy is to create an instrument for city planning that could be resilient to political changes (Interview 1). In order to achieve this objective, the Plan implemented a governance system that would strengthen the administration role and potential by using instruments and processes, such as the town meeting, the expert consultation, or the joint of two departments, already very wellknown from the administration machine but often not used (Interview 2).

The Plan is intended to be "an open, renewable scheme that seeks constant dialogue with citizens and with the social and economic actors of the city" (Agrifood Strategic Guidelines, 2021, p. 25) however, the involvement of stakeholders is very much directed to some specific categories, namely, business, research, or institutions, and less to others such as citizens, nongovernment organizations (NGOs), and associations. Indeed, the stakeholders that have been involved in the designing process and that have been selected as "enabling stakeholders" of the different guidelines are prominently institutions or businesses related, as the actions of the Plan mainly focus on their areas of work. Hence, policymakers and public managers in this project are at the core of the future implementation of the Plan, as they "drive the whole cart" (Interview 1)-translated Italian expression to say when someone leads something. The involvement of external stakeholders is seen as fundamental in shaping the future of Rome and in maintaining continuity for the actions that would be implemented after the political mandate (Interview 2). However, it seems that the business and innovation lens under which the agrifood system has been analyzed exclude from the equation some part of the food system stakeholders.

Community Gardens Movement

The community gardens movement in Rome has a very ancient history, which has its roots in the close relationship between city and countryside. In fact, the first evidence of urban gardens in Rome is from the Fascist era, when war gardens were born, many of which were in Roman territory. The first regulation on war gardens dates to 1942: during the war, some citizens, to escape from hunger, took possession of green areas inside the city. The appropriations of state-owned land continued over the years not only as a form of survival but also to maintain numerous ancient customs related to agriculture. The phenomenon stopped during the economic boom, characterized by a general well-being and a change in the food supply system, which became more articulated and industrial. Urban gardens started to come alive again in the

early 2000's, not only for supply purposes but also as inclusion and meeting places.

In 2012, Mayor Alemanno placed agricultural land competences under environmental protection and enhanced the urban gardens growth because, since the 1970s, in the city of Rome, the population often appropriated public land. In addition, to put an end to this phenomenon of unregulated activities, civil society started to be involved in projects linked to urban gardens, in collaboration with European projects such as ENI CBC MED³. The aim was to promote urban regeneration and international relations in the capital and at the same time to involve citizens in local governance, starting a participatory process of managing urban gardens.

In 2015, the city administration in charge at the time decided to regulate the community gardens experience with a resolution, still in force. Given the different urban garden formulations in Rome and in order to give proper representation to the growing phenomenon, in recent years, citizens and associations are trying to raise awareness among the administrators about the need to renovate the current regulation. Thanks to Mayor Marino, in 2015, the process for the regulation of the Community Gardens Movement began, and three areas were assigned to associations/citizens in Casal Brunori, Villa Glori, and the Aniene park, which offer important social activities: maintenance of green areas, quality food, and places for socializing. The city of Rome has been awarded for these good practices of urban resilience in 2018 and for being able to create a favorable relationship between associations and institutions. In the period of the COVID-19 pandemic, the phenomenon of Community Gardens Movements has seen an important positive development.

However, the regulation of Community Gardens Movements, while presenting lines of networked governance, struggles with a very complex relationship with institutions (Interview 4 and 5). From an institutional point of view, the analysis highlights the limits of urban garden regulation regarding the real application in the Roman institutional and associative reality. Indeed, the guidelines given by this resolution are not well-received by the bottom-up movements, as they have "unrealistic requirements" such as the need for citizens to identify rural areas already provided with water, information not shared by the public administration (Interview 5 and 6). Hence, on the one hand, the institution aims to carry out a process of civic education in order to avoid the unregulated activities that have always historically characterized this movement; on the other hand, citizens and bottom-up projects are not able to find a space in the instruments provided by the institutions.

Therefore, the main strengths of the Community Gardens Movement, namely, participation and democracy, cannot be realized (Interview 4). From a governance point of view, the Community Gardens Movement is very fragmented, not only among gardens that are spread all over the city but also because of the complex relationship with politics. Interviews to the administration (interview 6) highlighted the complexity

 $^{^3{\}rm ENI}$ CBC Med is a EU project on cross-border cooperation in the Mediterranean. Info: http://www.enpicbcmed.eu/en.

of creating a coherent work and building strong relationships with the bottom-up projects because of the political changes concurred in the past years. To facilitate the participative process is very important for politics to have an effective role of mediation with the public administration on the one side and the civil society and third sector on the other side. The results about Community Gardens Movement are summarized in **Table 5**.

Food Policy for Rome

In 2018, Lands Onlus, an association engaged in research activities focused on food, agriculture, and ecosystem services, and Terra!, a local environmental NGO, paved the way for the bottom-up process of a food policy for Rome. The starting point was a dialogue about raising awareness among local administrations about the need for a food policy able to face the food system's main challenges. The subsequent discussions, joined by other researchers and organizations, identified the Roman food system's strengths, highlighting how, albeit existing, many initiatives related to food lacked connection to each other. These considerations led to the identification of a bigger number of stakeholders to be involved in the analysis and mapping of the roman food system. The group ended up consisting of more than 100 members—both organizations and individuals—including academics, civil society, sustainable development networks, urban gardeners, and farming cooperatives. The proposal was introduced to the municipality trade and environment departments in October 2019: for the first time, the municipality became formally involved in the project and in the discussion with the other relevant stakeholders. It explored the underlying reasons for the need of a Roman food policy, setting 10 priority areas:

- Access to primary resources (especially land, water and agrobiodiversity);
- 2) Sustainable agriculture and biodiversity (sustaining organic agriculture and agro-ecology);
- 3) Short supply chains and local markets;
- City-countryside relations (integration between different phases of the supply chain; special focus on the Green Public Procurement);
- 5) Food and territory (strengthening territorial labeling systems, testing a traceability system for the supply chain);
- 6) Waste and redistribution (sustain leftovers redistribution);
- 7) Promoting multifunctionality (involving the disadvantaged in the process; therapeutic agriculture; agritourism);
- 8) Raising awareness among citizens (food and environmental education);
- 9) Landscape protection (contrasting soil consumption);
- 10) Resilience planning (agroecosystems as central elements of infrastructures; quantification of agro-silvo-pastoral system's services);

The continuously growing working group called "Food Council of Rome" represents today an informal network of Roman food systems' actors. Guided by a steering committee, its main objective was to establish a privileged channel for communication with the municipality and its administrative offices and define a resolution for an integrated food policy. The lobbying activity

TABLE 5 | Summary of community gardens movement process through framework (source: authors).

Dimensions of integration	Community Gardens Movement
Frame: how are the issues	perceived in a given context?
Context	Rome is between the major European agricultural municipality; people want to use abandoned public land; municipality wanted to adopt an innovative social project
Needs and problems	Agricultural lands are not properly mapped; participatory process is a long and difficult path; there is a lack of decentralization
Population	Citizens are not aware of the possibilities for the Gardens to be used
Goals: to which strategy do	es the goals respond?
Strategy	To use public lands for social purposes and create communities, civic education, food quality
Key concepts	Public lands, communities, social services
Processual instruments: to be considered innovation as	what extent the instruments used can nd improvement?
Innovation	A tool for social integration, participatory process involving civil society
Improvement	Improvement through participatory process
Subsystems: what role does	s the actors have in the governance process?
Governance through actors	Horizontal process
Role of policymakers	Working together with the civil society
Role of public managers	Technicians
Role of population	Key actors to realize the project in itself

has been carried out approaching the interlocutors in different ways, such as sending formal letters to administrative offices and inviting local politicians to join meetings and round tables. The two main commitments set out in the resolution can be defined as follows: establishing a formal Food Policy Council composed of the pre-existing informal council members, municipal representatives, and other stakeholders belonging to the food system, and adopting a food plan. In April 2021, the resolution was finally adopted, and it is intended to remain in force regardless of the next municipal council's political orientation.

Since the presentation of the essay "A Food Policy for Rome" on October 16, 2019, the movement has grown in number of members and fame. For this reason, the group decided to organize itself into a promoting committee. The food policy for Rome committee has launched an advocacy process toward Lazio public institutions to promote sustainable food policy principles. Many meetings took place, and some letters were exchanged between the committee and some Roman departments. The coordination group of the committee started a dialogue with some public executives of the Roman department to write a resolution for the creation of an institutionalized Food Policy. The main role of the civil society (grouped in the promoting committee) was to goad public institutions to create a resolution for the building of a Food Policy. Long and complex bureaucratic process, worsened by the pandemic, finally brought

to a resolution signed by all the political forces (Interview 9). "This goal is just the starting point" (interview 7, 8) for the creation of a dedicated institutionalized food policy in Rome.

"A Food Policy should be a program of change and a tool for an agro ecological transition in all the food system; just a Food Policy could lead to this because it starts from a systemic vision of the food system" (Interview 7). This process lasted more than 1 year among mobilizations, disclosure, and internal discussions phases (Interview 8). The power of the project lies in shared requests and in the diversity of the committee's components, especially associations that could give voice to people who need to be represented. Food Policy governance is one of the most relevant problems underlined by the interviews: there are many parallel processes and big lobbies that make the institution of a Food Policy a long and complicated process. "Food Policy doesn't mean different disconnected actions but a planification with a systemic vision. So, there is the need to open a dialogue with big lobbies of the food system and search for an agreement" (Interview 7).

Another issue highlighted by the interviews is that political timings are often too long in comparison to those of the stakeholders, and it could be difficult to combine the respective instances (Interview 8). Public institutions represent a key subject because their role is to make decisions and meet the needs of citizens, besides facilitating citizens' involvement. The vision for the food policy built by FPR could facilitate this process because the integrated measures proposed are intended to deal with changes in the food system. In fact, the core of the FPR mission is to create a welfare policy that includes public–private agreements in many fields, such as agriculture, business, markets, education, urban planning, logistics, and distribution, in order to push public institutions to change vision from sectorial to systemic. "A good governance for an institutionalized food policy should connect different departments to work as one" (Interview 8).

Citizens and the third sector are also key subjects for the food policy institutionalization process. A participative food governance is considered to be essential through a city food council, intended as a way to guarantee a main role to citizens and to little farms, to ensure adequate answers in many fields of interest, to open dialogues with key stakeholders, and to do research and pilot projects (Interview 7). The results about Food Policy for Rome are summarized in **Table 6**.

The Three Cases Compared

Although the three processes presented are very different between each other, it is interesting to compare them from a policy integration point of view as **Table 7** shows. As Candel and Biesbroek (2016) show in their framework, policy integration has a dynamic nature that changes according to the policy frame selected, the actors involved, the goals outlined, and the instruments with which to achieve those goals. All of these dimensions of integration are strongly related to the governance structure of the process analyzed along with the "high" or "low" degrees of policy integration of a specific process (Candel and Biesbroek, 2016).

Therefore, considering the policy frame dimension, the results show that Agrifood and Community Gardens Movement have

TABLE 6 | Summary of food policy for Rome process through framework (source: authors).

Dimensions of integration	Food policy per Roman
Frame: how do the issues are p	erceived in a given context?
Context	Rome signed MUFPP, different processes to build a dedicated food policy
Needs and problems	Parallel processes; lack of coordination; lack of systemic vision
Population	Citizens little active
Goals: to which strategy does t	he goals respond?
Strategy	Build a sustainable, participated and inclusive food policy for Rome
Key concepts	1) Access to resources (land, water and agro-biodiversity); 2) Sustainable agriculture and biodiversity (support for organic farming and agro-ecology); 3) Short supply chains and local markets (including local markets); 4) Urban-rural relations (integration between supply chain phases; Green Public Procurement); 5) Food and territory (territorial labelling, traceability of the supply chain); 6) Waste and redistribution (support for recovery and redistribution of surpluses); 7) Promotion of multi-functionality; 8) Awareness of citizens (food and environmental education plan); 9) Landscape (curbing land consumption and other phenomena of land degradation); 10) Planning of resilience.
Processual instruments: to what be considered innovation and it	at extent the instruments used can mprovement?
Innovation	Bottom-up process manages to approve a municipal resolution about a food policy
Improvement	Create a dialogue with public institutions; support project
Subsystems: what role does the process?	e actors have in the governance
Governance through actors	Bottom-up process; horizontal governance

a medium high degree of policy integration, meaning that they have an "increasing awareness of the cross-cutting nature of the problem" (ib., p. 219), but they still do not have a holistic approach to the food system that, on the other hand, FPR has. This frame perception influences the subsystem involvement and density of interaction, which appear to have a medium high degree of policy integration in Agrifood Plan process, as there is the "awareness of the problem's cross-cutting nature spreads across subsystems, as a results of which two or more subsystems have formal responsibility for dealing with the problem" (ib., p.221) and the exchanges of information and coordination

Manager

Technicians

Active role, advocacy

Role of policymakers

Role of population

Role of public managers

TABLE 7 Degree of policy integration divided into four dimensions according to Candel and Biesbroek (2016) framework (source: authors).

	Frame	Subsystems	Goals	Instruments
Agrifood	Medium high	Medium high	Medium low	Medium low
Community gardens	Medium high	Medium low	Medium low	Medium low
FPR	High	High	Medium high	Medium high

are dealt with system level instruments. For the Community Gardens Movement, on the other side, the policy integration is medium low because "subsystems recognize the failure of the dominant subsystem to manage the problem and externalities" (ib., p. 221), but the exchange of information is infrequent, and the density of interaction is not coordinated. In addition, for this second dimension, FPR results to have the higher level of policy integration, as "all possibly relevant subsystems have developed ideas about the role in the governance of the problem" (ib., p. 221).

Regarding the manifestation of policy goals, which is the third Candel and Biesbroek (2016) policy integration dimension, Agrifood Plan and Community Gardens Movement perform a medium low level of integration, as the "concerns adopted in policy goals" come also from subsystems that are different from the dominant one, and the conception of policy coherence is somehow part of the awareness, but the range of policies in which the problem is embedded is not as much diversified as for FPR. As for the instruments, while Agrifood and Community Gardens processes some procedural instruments at system level are present and consistency is intended as inter-sectoral mitigation to negative effects (medium low level of integration), FPR provides a "possible further diversification of instruments addressing the problem across subsystems "and consistency is an explicit aim of the governance structure (p. 224).

Moreover, Hartley (2005) provides a historical perspective on governance innovation for which there are three forms of governance and public management—traditional public administration, "new" public management, and networked governance. These refer to competing paradigms that shaped the way administration worked during the years. These conceptions of governance may be related to a specific ideology or historical period; "however, they can also be seen as competing, in that they coexist as layered realities for politicians and managers, with particular circumstances or context calling forth behaviors and decisions related to one or the other conception of governance and service delivery" (ib., 2005, p. 29). Hence, when analyzing a governance process, it is possible to identify different layers of these paradigms that create important implications in the role of policymakers and other actors involved.

Using as lens of analysis Hartley's framework, the three governance processes' results were layered in different conceptions. In particular, Agrifood overlaps the traditional public administration paradigm with the new public management by mixing a strong hierarchical structure, State, and producer centered, focused on public goods delivery with the creation of a competitive environment for the city. Here,

efficiency of the system is achieved thanks to improvements in the managerial and organizational process not only of the administration but also of the food system. Yes, the focus has been posed to food supply chain management and planning, thus lacking a circular approach binding together the multiple facets of local food system.

Community gardens movement, on the other hand, proposes a multifaceted governance as a consequence of the history that characterizes this process. Hence, on the one side—the political and institutionalized one; this process respects a very strong traditional public administration conception of the governance structure with a partial orientation to competitive forms of understanding the world of urban gardens and who composes it; on the other side, the bottom-up part of the movement is more oriented to a networked governance conception that recognizes the need of a civic leadership where citizens are coproducers of the governance itself (Tornaghi and Certomà, 2019). Finally, the Food Policy for Rome process perfectly matches the networked governance paradigm, understanding the role of the public administration as leaders and interpreters of the civil society needs, with the aim to provide public value to all, diverse populations.

DISCUSSION AND CONCLUSION

Starting from the idea that urban food policies are place based and therefore each city would have different governance solutions, it is widespread that collaboration and coordination of policies and actions is impeded by an "inertia and silos mentality at the local, national and translocal level, whereby food system issues are typically divided across multiple departments, ministries or state agencies" (Sonnino and Coulson, 2021, p. 26). Therefore, the study of policy governance structures that would help achieve policy integration is particularly interesting. The results provided by this study show three different concurring processes happening in the city of Rome around the topic of food and food policies. What can be drawn from this analysis is that every process performs a different form of governance, implemented according to the actors and backgrounds that compose the process itself.

The different layers of governance, highlighted in Results, inevitably lead to three different conceptions of policy integration for the three case studies selected; as we argue, governance structures and policy integration are strongly related and influenced by each other. For instance, as Agrifood Plan relies on a traditional but competitive structure, led by the need to improve organizational and management efficiency, policy integration is intended as administration department cohesion and coherence. The systemic vision is less present, confirming that most municipalities tend to address food from vertical perspectives such as health, food production, or consumption (Sibbing et al., 2021). The interviews stressed the need to create administration instruments that would help the dialogue between public departments on common issues.

Food Policy for Rome intends policy integration as the need to create an overarching policy, which would link all actors of the

food system and all policies related to it, under the same values and goals. Here, integration is conceived not only as coherence and cohesion inside the administration, but mostly among the different parts of the food system and of the population that composes Rome. Finally, the Community Gardens Movement, because of the complex governance previously explained, seeks a dialogue between bottom-up practices and top-down administration systems. Here, integration is therefore intended as integrating the territory with policymaking.

Other cases show that collaborative food governance might be more inclusive and democratic but does not always bring good governance structure (Zerbian and de Luis Romero, 2021). The study on Madrid food strategy demonstrates that implementing instruments to fulfill policy integration "does not directly lead to coherent and uncomplicated network collaboration" (Zerbian and de Luis Romero, 2021, p. 14). The study also shows that the lack of an integrated mindset, which sees food from different perspectives, is necessary to achieve good food governance. In addition, the idea of connecting bottom-up movements with the municipal authority, confirms Sibbing and Candel (2021) study, which delineate the fundamental connection between the design of an integrated urban food strategy and the institutionalization of an ad hoc food governance with the case study on Ede. Sibbing and Candel's study shows that allocating resources, adopting officially the strategy, creating specific units, offices, and staff, are essential governance steps to "bring food policy beyond paper realities" (2020). Finally, all these processes have in common in the presence of policy entrepreneurs, which are intended to be important ingredients to achieve an integrated food governance (Gianbartolomei et al., 2021). Policy entrepreneurs are place leaders that promote an innovative perspective on food policymaking, stimulating, and creating the conditions for a more inclusive food system. It is important to recognize that, in 2021, the liveliness of the debate around the need for a UFP for Rome experienced a particular momentum. In fact, two other important projects intersect with those analyzed in this paper. We refer to the European-funded Horizon 2020 "Fostering the Urban food System Transformation through Innovative Living Labs Implementation" (FUSILLI) and the Metropolitan Strategic Plan. The first has the Municipality of Rome among the partners and intends to support the transformation of the urban food system through the implementation of innovative participatory laboratories. In particular, the goal is to help 12 pilot cities to build their own Urban Food Plan and Action Plan, through the activation of an Urban FOOD 2030 Living Lab. In the context of the city of Rome, FUSILLI will work to support and to the implementation of the Municipal Resolution on the Food Policy, approved in April 2021 (see **Figure 2**). The second is a project that involves the Metropolitan City and which intends to create a development strategy for the area. Among the forthcoming actions, there is an Atlas of Food, within which a series of priority actions will be indicated, which, once transformed into projects, will involve the 121 Municipalities in a participatory form.

The research presented does not consider these two important initiatives, since they are still in the early stages of implementation, and it would therefore be premature to make an analysis of policy integration and innovation. However, given their scope, one of the possible frontiers of research could be their analysis according to the proposed theoretical model, to provide an exhaustive picture of the complex of initiatives underway around the UFP in Rome and to formulate some policy implications for the development of an integrated and innovative food policy.

In conclusion, the study demonstrates that governance innovation and policy integration are strongly linked and that the conception and application of policy integration changes according to the governance vision that a process has. The two frameworks of analysis used in the study did not provide specific methodology on how to assign high or low level of policy integration (Candel and Biesbroek, 2016) or to identify the different layers of governance innovation to a process (Hartley, 2005); therefore, their application can only be intended as specific to the case studies selected. However, this research shows that the more networked a governance structure is, the more policy integration it will have. As governance systems are layered in their conception of public management, policy integration is a dynamic process that evolves and changes according to the parameters shown.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author Bianca Minotti, upon reasonable request.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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5. Discussion

5.1 On local food policies in Italy

This doctorate thesis performed a collection of articles on local food policies in Italy with the aim to deepen the topic of alternative food governance and the role of the administrative local government. By comparing the four case studies presented in this thesis, it is possible to draw some interesting points of discussion. As already explained in the methodology chapter, to better discuss the results, the author conducted six interviews not included among the interviews analyzed in the articles presented. Thanks to these interviews, the author was able to enrich the discussion and conclusion. The thesis had the aim to respond one main research question and three sub-questions which answers will be summarized in this chapter. The main research question will then be addressed in the conclusion chapter.

What could be the most suitable form of alternative urban food governance to reconnect rural-urban areas?

First important point of discussion to answer this research question, is that all case studies presented show that, when talking about food policies in Italy, the country has had an outburst of interest around the topic starting from the Milan Urban Food Pact (MUFPP) in 2015. In fact, all four areas of research - Milan, Turin, Lucca, and Rome - are signatories cities of the MUFPP. Other studies as well have confirmed the positive relationship between the signature of the MUFPP and the development of local policies in different context (Doernberg et al, 2019; MoraguesFaus and Sonnino, 2019; Sibbing et al., 2021; Vara-Sanchez et al, 2021; Martin and De La Fuente, 2022). This pact, which united cities all around the world on the topic of food and food policies, has been a great starting point to open space for a conversation about this topic at a local level.

The influence of this framework, along with the global awakening which sees major international actors such as the United Nations to put a focus of the global agenda on cities and international urban studies on food - such for example the work of Kevin Morgan (2009; 2010; 2013; 2015) and Roberta Sonnino (2009; 2016) and many others after them- resulted in a strong urban narrative to be at the center of the Italian food policy movement even in non-urban areas. This urban narrative sees cities as the pivotal actors of global food

issues and the starting point for a positive chain reaction towards a sustainable food system (Interview 1, 2, 3, 4, 5, 6).

From an administrative point of view, in Italy the city government does not have roles prescribed by law regarding food, but they are responsible for a range of overlapping services and functions related to it. The urban narrative crosses the need to reconnect cities with rural surroundings by implementing projects of "reconnection" based on food. The way local food policies attempt to reconnect rural and urban area, then, is by putting a cross-cutting issue such as food, that for its nature relates to rural areas, into the public agenda through urban agriculture, school canteens, food markets, food waste (Interview 1, 2, 3, 4, 5, 6). These have also been confirmed by the literature to be some of the most important areas of food policy implementation (MUFPP, 2015; Sibbing et al., 2021-2022). The innovation that these policies aim to bring is related to a change in perspective of those issues: most cities presented actions and policies related to food before local food policies were signed, however, these were managed with a sectorial mindset that divided sectors, actors, and rural and urban areas (Interview 2, Interview 6).

The sentence by one of the interviewees "we don't have food policies in Italy, only processes and projects that are working in that direction" (Interview 6) perfectly summarizes the setting in which Italian food policies are now. Many are the cities that are experiencing projects led by municipalities in this direction and many more are the social networks working on the ground on projects related to food, however "a connection seems to be missing" (Interview 4). **This connection missing relates to the transformation of projects into resilient and long-term policies**. Most of the current processes are led or enebled by European projects (Interview 1) as for example the case of Milan (the EU project Food Smart Cities for Development), Lucca (Horizon project Robust), Rome and Turin (Horizon project FUSILLI) or by individuals in municipalities particularly keen on the topic as all case studies showed (Interview 6). These types of figures have been understood in other studies as "policy entrepreneurs" namely "key enabling agents of a new form of food planning and policy making" (Giambartolomei et al., 2021). However, at a national level the sectoral view is still the prominent narrative (Interview 6) which inevitably is reflected on territories by a lack of

vertical integration among levels of government and a lack of horizontal integration among actors of the system (Interview 5).

The need for project management and contractual stability has been highlighted as one of the main issues that block the growth of food policy, especially the shift from project to policy (Interview 1, Interview 2). Most food policy processes "need to have organizational expertise to transform food strategies into administrative objectives and practices" (Interview 1). This expertise and in general cognitive resources inside the administration seems to be a strong challenge that food policies should solve (Interview 5, Interview 1). Also, regarding resources, is it interesting to notice that most interviewees didn't highlight financial resources as an issue (Interview 3, Interview 6) rather the lack of expertise and understanding from experts seems to be a more prominent issue (Interview 5, Interview 6) along with the ability to keep the political attention high (Interview 1, Interview 5). Hence, the reliance on European projects and on policy entrepreneurs, do not guarantee the long-term durability of these processes.

Also, there is the general idea that the competences of the cities are not enough to create a food policy, but they are a good starting point (Interview 3). While most of the interviews underlined that food is managed at urban level in regards of school canteens, food markets, territorial marketing, urban agriculture and food waste, there is the fundamental idea that more need to be done regarding integration and governance (Interview 1, 2, 3, 4, 5, 6). There is a strong consensus on the fact that "the administration doesn't know how to work horizontally" (Interview 2, Interview 1) and therefore, there is a need for a shift towards a systemic approach (Interview 1, 2, 3, 4, 5, 6). "Cities have competences in which they activate projects and policies, but they can do it even without a food strategy or a food policy as we intend it" (Interview 3): what food policy movement bring to the table is a new narrative and vision towards integration (Interview 3, Interview 6, Interview 4).

The narrative of integration is at the core of the movement analyzed, as much as in other contexts (Sibbing and Candel, 2020; Giambartolomei et al., 2021; Vara-Sanchez et al, 2021) and it has been underlined by many interviewees that it is rather rhetoric than an actual political plan (Interview 3, Interview 6, Interview 4). Also in other context, such as the

Netherlands analysed by Sibbing et al. (2021) it has been shown how challenging it is for a local municipality to implement the integration of food across local policies. This study confirms that integration in the food system is hard to be implemented, firstly because the systemic perception on food issues is still very far away from the Italian mindset (Interview 4). The idea that Italian food policies should focus on promotion of local food specialties rather than environmental or socio-economic challenges creates some issues in understanding the difference between "local food policies and policies on local foods" (Interview 4). Second, citizen participation is not part of most local authorities' culture, hence the assumption that the local context, along with the actors that compose it, should be a fundamental player in food policy making, make it hard to realize the integration between institutional and social actors (Interview 1, Interview 3, Interview 4), namely the implementation of collaborative governance and the reconnection of rural and urban areas.

Who are the main actors involved in an alternative urban food governance? What type of power do these actors have and how do they influence the political process?

One important part of urban food policies are the actors that compose the system, either inside or outside the municipality. The actors summarized in table 6 are typically part of a local food policy planning as confirmed by the case of Cork, Bergamo, Ede (Gianbartolomei et al., 2021; Sibbing et al., 2021) or in the literature regarding food policy councils (Harper et al., 2009; Bassarab et al., 2019; Gupta et al., 2018) however the roles highlighted are specific to the Italian context and in particular to the four cases presented in this thesis.

Table 6: summary of actors that compose a urban food policy in Italy and their role (source: author)

Actors	Role
Social networks (ngos, caritative associations, civil society)	Push ideas into the agenda; Implement local actions
International stakeholders	Push ideas into the agenda; Give accountability and legitimacy to local processes;

	Bring innovation and fundings through events of projects
Research	Bring systemic vision and inclination to complexity of the food system; European projects;
Sectorial actors (food producers, school, farmers, distributors etc.)	They are the main receptors of food policies; Mostly absent in food policy processes
Facilitators	Improve communication among actors; Help gather needs and challenges
Administration	Burden that needs to be changed; Legitimize local actions; Help keeping the food agenda relevant during political instability

Social networks have been highlighted to be one of the most important stakeholders in the food policy processes as they have the important role in advocating challenges and issues to the political part (Interview 1, Interview 2, Interview 3, Interview 4, Interview 6). This is perfectly reflected by the Lucca and Rome case studies. Each context has their specific social networks which respond to social needs by implementing local actions (Interview 2, Interview 3, Interview 4) although some national associations recur in many territories as important stakeholders of the food policy processes, such as Slow Food (Interview 6). Many interviews highlighted their role in "actually doing most of the work" (Interview 2), as they not only have been working on food topics for many years but are most of the time the implementation actors selected by the municipalities in food policy projects (Interview 2, Interview 3).

International stakeholders, such as FAO, United Nations, C40, Eurocities, European commission and more, with projects and event such as EXPO (for Milan) or Horizon 2020 (for Lucca), Food 2030 projects, are seen as essential stakeholders in bringing not only ideas and innovation but also fundings and accountability to local projects (Interview 1, Interview

4, Interview 5). Indeed, many interviewees cited European projects or international events as the fuse that brought food into the political agenda. In this sense, also the world of research and academia has been several times highlighted to be an innovation vector as most European projects have research partners (Interview 1, Interview 3). The main role of research is to have brought to the policy table the main integration and systemic narrative that characterize this movement (Interview 1, Interview 3, Interview 4, Interview 6). "Research is at the core of food policies as it has a natural inclination to complexity" (Interview 6). All current food policy projects in Italy are research-led from a narrative point of view (Interview 6) but work with the territory and local actors such as social networks and some sectoral stakeholders.

Sectoral actors (such as food producers, farmers, distributors etc) are seen as the most important receptors of the food policies (Interview 1, Interview 2, Interview 6) as they are the actors that compose the actual food system. However, their direct involvement in local food policy projects is rather absent: "most of the actual actors of the food systems are missing in the current Italian food policies" (Interview 3). They result to be main characters of the food policy processes as partners on specific actions (Interview 6) or when their representative is already involved, under a different hat, in the process. It is very common, especially in smaller contexts such as Lucca, that one individual represents different categories of actors as one (Interview 6): for instance, food production, research, and activism. A good facilitator has been highlighted to be a fundamental actor in the food policy creation as they help mitigate the differences between actors along with understanding needs and challenges: this helps in including more heterogeneous actors, especially the most vulnerable or easily excluded - such as the sectorial actors (Interview 5).

Finally, the administration has the important role of legitimizing local actions (Interview 6) and it is always included in Italian food policy processes, although in different ways. The public administration has the dual nature of being the problem and the solution at the same time: its vertical and "often narrow mindset" (Interview 6) is seen as one of the main challenges of food policies, while on the other side, it is seen as the potential mouthpiece of the policies themselves (Interview 1, 2, 3, 4, 5, 6). Creating a strong administrative group, made by selected public officials, can be a solution to a resilient food policy (Interview 5),

as all case studies analyzed show. These selected officials are seen as "smart" administrative staff – and can be included in the "policy entrepreneurs" category - that try to change the bureaucratic mechanism by working from inside but are also intended to be "unicorns" in their context (Interview 1, 2, 3, 4, 5, 6).

To sum up, a series of needs are at the core of the policy processes Italian cities are encountering in letting the food topic be part of the urban agenda:

- Need of a good communication to keep the engagement high: internal to the administration and external with citizens and territories (Interview 2, Interview 5)
- Need of sharing experiences and knowledge (Interview 2), not only best practices (Interview 5), first among administrations of all the cities that are experiencing similar processes (Interview 1)
- Need of political responsibility and political legitimation (Interview 3, Interview 4, Interview 6) while keeping the political attention high (Interview 6)
- Strong need to have a good balance of political, financial, and cognitive resources to make a policy work (Interview 6)
- All governance levels should work together with a vertical governance integration among government levels and horizontal governance among territorial actors (Interview 5)
- Need to work on enabling the territory to create a mental shift from sectorial to integrated approach where food is the driver (Interview 5)
- Need to create a sense of ownership among the actors in order strengthen the resilience of the projects (Interview 3, Interview 4, Interview 6)

2.1 On collaborative governance and innovation

Starting from the summary of results in section 5.1, it is possible to make a model of the governance structure that local food policies aim to achieve and draw a comparison of the case studies analyzed, to answer to the research question:

How does an alternative urban food governance integrate with the traditional administration system?

The results of these case studies showed that when talking about local food governance the following are crucial points of discussion:

- powers that the governance exercise: deliberative, directing, consultative, control. These powers must be articulated in relation to the numerous areas already formalized that exist in the territory for the discussion and decision of the various related policies (agricultural, commercial, territorial, environmental, social, etc.) and for the definition of the specific sovereignty spaces of each Council with respect to consolidated representations.
- staff: the activities of most of the food councils and alternative governance are based on the work of volunteers or part-time staff, often made available by the Administration.
- links with the administration: this dimension seems to be strongly correlated with the territorial scale; the more you go up the scale the more the new governance is part of the public administration and the more you go down the scale, the more independent subjects they are. In general, several studies underline the importance of positive relations with the administration, or at least with its representatives who formally take charge of the requests represented.
- lenders: a wide range of funding sources is highlighted, such as the public administration (the issue is obviously related to links with the administration, the point previously analyzed), foundations, individual donations, in-kind loans.
- representatives of the various sectors of the food system: the issue of effectiveness sees the enlargement of the number of actors involved to better understand the problems by including more points of view and to facilitate the assumption of coresponsibility by of all.
- leadership and decision-making processes: the level of formalization of the structure varies widely, from informal groups without steering committees to formal groups, with president, vice-presidents, sub-committees, and task forces.
- selection of members that compose the new governance: self-selection (registration open to anyone interested); candidacy examined by the existing Council, by an executive committee or by members of the community that initiated the initiative; election or appointment with varying degrees of publicity.

Looking at the results through the lens of the organizational theories of Mintzberg (1980), this thesis shows that the alternative food governances analyzed share the following components:

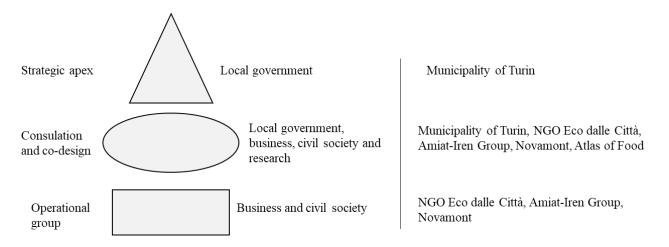
- 1. strategic apex that takes decisions
- 2. a space for consultation and co-design of policies and projects
- 3. an operational group that implements the actions on the territory

The way these three components are composed and how they interact between each other, determine the type of governance implemented and therefore the level of innovation brought into the administration and the food system.

By looking at the graphics that follow (Graph 4-7) it is possible to see the differences and similarities between the case studies analyzed. For this comparison, the author selected the project RePoPP in Turin, La Piana del Cibo in Lucca, the Food Policy of Milan and the Food Policy for Rome.

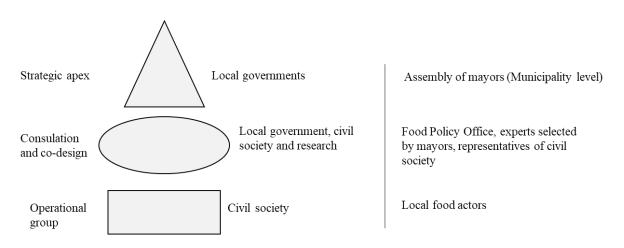
Graph 4: governance structure of the project RePoPP in the city of Turin (source: author)

Turin - RePoPP



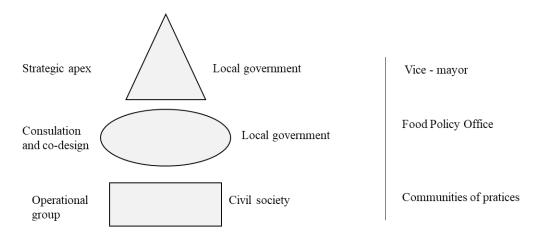
Graph 5: governance structure of La Piana del Cibo in Lucca (source: author)

Lucca - Piana del Cibo



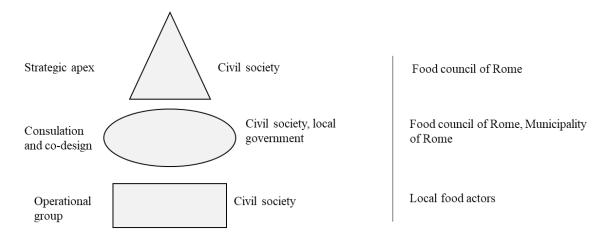
Graph 6: governance structure of the Food policy of Milan (source: author)

Milan - Food policy of Milan



Graph 7: governance structure of the Food policy for Rome (source: author)

Rome - Food policy for Rome



First, the centrality of local governments is pivotal in all these governance systems in which the local administration, in its different forms, is always (except for Rome) located in the strategic apex. This has been highlighted also by other studies on urban food policies (Sibbing et al., 2021) and alternative food governance (Schiff, 2007; MacRae and Donahue, 2013; Gupta et al., 2018). Although the efforts in bringing innovation into the local administration, the new governance structures proposed, still follow the vertical hierarchy of the local government. What is new in many of the governance systems analyzed is that they bring inside the local government forms of cooperation between departments under the umbrella of food. It is the case of Lucca and Milan, which choose to assign the mandate of food policies to mayors and vice-mayors, role that is by nature multidisciplinary and which involve cooperation with all departments of the local government. Further development of the case studies of Rome and Turin also show that cooperation and trans-disciplinarity between internal departments is a priority. In fact, through the European project FUSILLI¹, the city of Turin and Rome are both working in this direction: Turin is creating a multidisciplinary working group inside the municipality with the aim to work on food related policies; while Rome institutionalized the civil society food council, which will now work in coordination with the Municipality of Rome through table of consultation and a coordination between departments of the municipality. Both projects are born by the processes thoroughly described in the previous sections showing the importance of network creation and a fertile context for the growth of food policies.

The second common characteristic is that most case studies intend "food council" as the space for consultation on policies and projects, where experts, civil society, and business advocate for better policies. It is not intended as a policy-making space but as a space where actors from different fields work together to propose projects that the administration could implement with local actors. This has been highlitghed by other studies regarding food councils (Schiff, 2007) which confirm that most of these governance structure have the role of networkers and facilitators across the spectrum of food system interests rather than policy development. However, other studies show that some of these councils can actually inform multiple stages of the policy process, as in the case of California highlighted by Gupta et al. (2018).

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¹ More on FUSILLI: https://fusilli-project.eu/

In the case of Lucca and Milan, the consultation is also coordinated by an ad hoc office that specifically works on food policy. Very important in these spaces is the role of research and experts that have a pivotal role in pushing the rise of these council and the introduction of scientific knowledge. Hence, the level of innovation is determined by two factors: 1) the type of actors included in this consultation rather than administrative instruments. In fact, councils are a very common consultation tool that the administration often use on specific topics; 2) the cooperation and discussion among actors of different fields, united under the umbrella of food. In the case of food council, the variety of actors is new to the administration which often summon for consultation actors of the same field for vertical topics.

Finally, the operational group is always composed by local food actors and civil society intended to be the recipients of the policies but also the implementers of projects. This operational group is often composed by actors that already work with the administration however, also in this case, the real innovation stands in the growth of a network of actors that are willing to implement projects with a common vision. It is interesting to notice that, as already said in the previous chapter, food chain actors -such as business owners, farmers etc- often are missing or are very scarse in these governance structures, creating an important gap especially on the topic of rural-urban linkages.

6. Conclusion

In conclusion, this collection of scientific articles on the topic of local food policies in Italy, aimed at understanding to what extant an alternative urban food governance could bring innovation inside the administrative structure of a local government.

With the study of four areas -Turin, Lucca, Milan and Rome- the thesis convenes that alternative food governance can bring innovation into the administrative system. In particular, following Matino's (2014) definition of governance innovation, already mentioned in the previous chapters², it is possible to state that local food policies in Italy can help achieving governance innovation specifically when talking about "understanding and supporting stakeholders of social innovation practices and the emergence of new solutions; and incubating and building new visions and planning change among a multiplicity of interlocutors, enhancing the presence of new subjects" (Mantino, 2014, p.386).

In particular, the main innovation highlighted in this thesis is related to **the creation of a new narrative**: on one hand the role of cities as game-changer for global sustainable development is perused and, on the other hand, cooperation among actors and coherence between policies is necessary to improve local food systems. The thesis didn't highlight the use of innovative administrative instruments, on the contrary, it showed how **improvement of the administration can be achieved using already existing tools** such as councils, joint managements, trans-disciplinary working groups inside the municipality and more. The type of innovation that these case studies performed, although in very different ways according to the context, is rather related to **showing to the administration that local government can work in a different way through integration of departments, cooperation among actors of the food system and coherence among policies.** Much work still needs to be done to solve some of the issues previously described, which can be summarized as the following improvement points:

²According to Mantino (2014) governance innovation should aim at improving: 1)understanding and supporting stakeholders of social innovation practices and the emergence of new solutions; 2)incubating and building new visions and planning change among a multiplicity of interlocutors, enhancing the presence of new subjects; 3)mediate radical and customary skills, visions, and power structures between subjects; experimenting in a controlled manner with new operating methods and new set of rules; 4)rapidly absorb innovative initiatives in the ordinary fora of governance.

- improve the inclusion of a greater variety of actors into these governance systems, including those that could create conflict
- improve resilience of these governance systems by transforming them from projects to policies
- improve the cooperation with other levels of government
- improve knowledge both technical and non-technical on cross-cutting issues, especially inside the administration.

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8. List of figures, tables, graphs and abbreviations

8.1 List of figures

- Figure 1: The Wedding Cake model from Rockström and Sukhdev of the Stockholm Resilience Centre (Fassio and Tecco, 2019)
- Figure 2: Flows across the rural urban continuum from Forster and Escudero, 2014, p.10
- Figure 3: Local food policies in Italy from the point of view of publications in the book from Dansero et al., 2019.

8.2 List of tables

- Table 1: Socio-economic characteristics of the four areas of research (source: author)
- Table 2: list of interviews gathered for the purpose of the articles collection in this thesis (source: author)
- Table 3: list of lived experiences gathered for the purpose of the articles collection in this thesis (source: author)
- Table 4: Characteristics of food policy councils (source: adapted from MacRae and Donahue, 2013)
- Table 5: Pros and Cons of a relationship between a FPC and the government (source: adapted from MacRae and Donahue, 2013)
- Table 6: summary of actors that compose a urban food policy in Italy and their role (source: author)

8.3 List of graphs

- Graph 1: Geolocalisation of the four areas of research (source: author)
- Graph 2: Graphical representation of method, research activities and outcomes (source: author)
- Graph 3: Graphical representation of the Italian government structure (source: author)
- Graph 4: governance structure of the project RePoPP in the city of Turin (source: author)
- Graph 5: governance structure of La Piana del Cibo in Lucca (source: author)
- Graph 6: governance structure of the Food policy of Milan (source: author)
- Graph 7: governance structure of the Food policy for Rome (source: author)

8.4 List of abbreviations

AFNs – Alternative Food Networks

CAP – Common Agriculture Policy

CE – Circular Economy

CRFS – City Region Food System

CURSA - Consorzio Universitario per la Ricerca Socioeconomica e per l'Ambiente

EU - European Union

FAO- Food and Agriculture Organization of the United Nations

FP – Food Policy

FPC – Food policy council

FUSILLI - Fostering the Urban food System Transformation through Innovative Living

Labs Implementation

IFP – Intermunicipal Food Policy

MUFPP – Milan urban food policy pact

NGOs – Non governative organisations

RD – Rural Development

SDGs – Sustainable Developments Goals

UFPs – Urban Food Policies

UN – United Nations