



Research article

## School Food Policy through a Project Financing

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**Abstract.** In recent years, the scientific community has focused more on urban food policies adopted by big cities and less on the local food policies adopted by small municipalities. Furthermore, the empirical evidence on school food policy initiatives is quite fragmented, and the management of the canteen service is not directly addressed by the studies carried out. In this work, the school food policy implemented in a small municipality (Corciano in the province of Perugia, Centre Italy) of about 22,000 inhabitants, through the application of project financing with the participation of local social cooperatives is presented and discussed. This paper aims to reflect on the capability of the alternative food networks developed through the project financing mechanism to identify and implement the uses of the resources concerning the local food policy objectives and the project capacity of the network. The analysis is conducted using a methodological approach based on agricultural economics and anthropology. Results from economic data analysis, collective interviews, and participant observation show that: the financial balance of the project financing is positive but quite precarious and very sensitive to market variations, both regarding the overall demand for canteen meals, and the procurement of raw materials and workforce; the project's organizational model through a local network not only can combine the environmental, social, and health dimensions of food, but it can also reshape the local concept of community, as well as new opportunities for the circulation of food products.

**Keywords:** school canteen, small municipality, alternative food networks, collective project, sustainable public procurement, social cooperative.

**JEL codes:** Q18, O22.

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### HIGHLIGHTS

- Local governments can play a fundamental role in food governance by promoting new links and new relations between different stages and actors of the food chain.
- School menus could be considered a driver for the local integration between the city and the countryside.
- Public food procurement provides the opportunity to drive local and regional food economies towards a more sustainable food system.
- Project financing has proven to be a viable tool for realizing a sustainable network collective project.

## 1. INTRODUCTION

In recent years, the scientific community has focused extensively on urban food policies, and the challenge of food planning faced by many cities across the world (Maxwell and Slater, 2003; Blay-Palmer, 2009; Fresco, 2009; Marino and Cavallo, 2014; Dansero *et al.*, 2014; Dezio and Marino, 2016; Berti and Mulligan, 2016). Meanwhile, it focused less on the local food policies adopted by small municipalities, where the link with the local agri-food economy is stronger because of the close relationship between the city and the countryside. The local food policy is an important supporting instrument for local governments, as is found in all aspects that are directly and indirectly linked to the food cycle of the municipal area. Some authors have highlighted how the citizens' change in lifestyle, along with new possibilities for multifunctional rural development, open up innovative spaces for the integration of urban and rural settings (Duvernoy *et al.*, 2005; Torquati and Giacchè, 2010).

Rural and urban spaces are looking for a new balance, necessarily rooted in new urban policies and their ability to restructure rural products and services in response to changing demand for food and urban services. Urban and territorial food strategy can play a key role in improving agri-food systems at the local level especially when local and regional governments, together with civil society groups, define concrete plans of action by creating demand for local and sustainable food (Morgan and Sonnino, 2008).

The adoption of Directive 2014/24/EU on public procurement marked a significant step towards the enablement of school food policies supporting the creation of alternative food networks (AFNs). Both Green Public Procurement (GPP) and Sustainable Public Procurement (SPP) are powerful policy instruments for a transition to sustainable food systems. From the point of view of food procurement, GPP, drives the inclusion of an organic food supply in the catering for public canteens, while, SPP facilitates the development of short supply chains or local/regional food production systems (ECR, 2018).

National procurement laws reflect the transposition of Directive 2014/24/EU and may include additional binding rules for public procurement. In Italy, the Minimum Environmental Criteria (CAM in the Italian language) for catering and food supply were introduced in 2011 (Ministerial Decree 220/2011) and updated in 2020 (Ministerial Decree 65/2020). The mandatory application of CAM promotes the reduction of environmental impacts and more sustainable production and consumption patterns, including, in particular, organic and local food. But, introducing sustainable food into public can-

teens is not a simple process. The changes needed are both cultural and structural and it is why it is a political commitment that drives virtually every experiment.

In Italy, local municipalities are responsible for public school meals, which are usually provided through the services of catering companies. In this work, the school food policy implemented in Corciano (Perugia) a small municipality of about 22,000 inhabitants, through the application of project financing (PF) is presented and discussed. To systematize three strategic objectives (schools, employment, and social assistance), in 2015 the administration of Corciano launched a 12-year initiative that will be referred to here as the collective project (Dufeu *et al.*, 2020; Le Velly, 2019). The subjects involved in the design and implementation of the PF aim at reappropriating healthy food and distributing resources through a network of social relationships and actions that start with food offered in schools, and continue generating a series of virtuous processes. In particular, food becomes the cornerstone of an integrated social sustainability project that aims to change the culture of food consumption through a series of good practices that change the way to access food: from school menus to the creation of a community pantry<sup>1</sup> to social farming in allotments, and across the local food supply, food education programs and the reduction of food waste. This paper analyses the organizational model designed to accomplish the designed tasks in an integrated manner, as well as the economic and social achievements in the first years of the project.

The paper is organized as follows. Section 2 reviews the literature on school food policy, project financing, and community engagement according to an anthropological approach. Section 3 describes the case study project and how the qualitative data has been collected, whereas section 4 presents the results in terms of structural and economic assessment of the organizational model. Finally, section 5 provides the discussion, and section 6 contains the concluding remarks and perspectives for future research.

## 2. CONCEPTUAL FRAMEWORK

The results of research on school food and nutrition programs in middle-and high-income countries demonstrated the positive impact that school feeding can have on health, education, and agricultural improvement (WHO, 2021; Cohen *et al.*, 2021; Molin *et al.*, 2021; Morgan and Sonnino, 2013; Jaime and Lock, 2009). Accord-

<sup>1</sup> In Italian, *dispensa solidale*, which implies a community food pantry project based on solidarity and mutual support.

ing to Nelson and Breda, the achievement of these positive results requires an appropriate and framed policy, robust monitoring and evaluation, and all stakeholders are adequately engaged in the process (Nelson and Breda, 2013). In Ashe and Sonnino's view "School food policy is an excellent context to examine the scope for coalescing the alternative food movement" and it is also able to create new generations of knowledgeable consumers (Ashe and Sonnino, 2013; Sonnino *et al.*, 2014). The literature identifies a wide range of benefits associated with school food reforms and, in most cases, the studies concern the school food revolution of big cities like Zurich, Rome, Copenhagen, New York, Vienna and Malmo (Schleiffer *et al.*, 2022; Smith *et al.*, 2016; Ashe and Sonnino, 2012; Sonnino, 2009).

The empirical evidence on the developmental impacts of school food policy initiatives is quite fragmented, and the management of the canteen service is not directly addressed by the studies carried out. Therefore, it is not always clear the economic sustainability of the different management strategies of the canteen service. In our knowledge, no empirical work has taken into account the entrustment of the management of the public school canteen, in a small municipality, to a third party through project financing (PF). Therefore, the objective of this work is to enrich the existing knowledge on public procurement of food by discussing and evaluating the school food policy implemented by a small municipality using a consortium of local social cooperatives and entrusting PF for 12 years. The analysis is conducted using a methodological approach based on agricultural economics and anthropology. The first discipline is useful in regards to the alternative food network involved in the process that brings food from farm to fork, and the economic aspects of PF; the second one is useful in regards to the school food as "a kind of intersection, a meeting place, of skilled and motivated change agents with a whole host of worthwhile agendas" (Poppendieck 2010, in Ashe and Sonnino, 2012).

Moreover, it has to be taken into account that the food policy initiatives are essentially sustained by the networks of stakeholders (parents, civic associations, groups of producers, etc). Specific forms of the network then emerge which enrich the landscape of food networks and their modalities of action (Renting *et al.*, 2012; Dedeurwaeredere *et al.*, 2017). This study aims to suggest that, concerning urban food policy, the role of alternative food networks can be developed on two main bases: a) the capability of the network to identify and implement the uses of the resources (Martino *et al.*, 2016) concerning to the policy objectives; and b) the project capacity of the network. Alternative food

networks could contribute to food provision and urban food policy of intervention (Matacena, 2016; Badi *et al.*, 2019) characterizing the mobilization of resources concerning the territory (Lamine *et al.*, 2019; Renting *et al.*, 2012; Marsden and Sonnino, 2006) and the governance patterns adopted (Duncan and Pascucci, 2017). This line of reflection explicitly relates to the investigation of the control and management of food systems by civil society actors. However, as part of the transition of the food systems, networks also engage in designing new perspectives and patterns of behavior. The project is how the collective action can then be implemented and substantiated (Le Velly, 2019; Dufeu *et al.*, 2020). Accordingly, the urban food policy design is expected to embed a project dimension able to account for the necessity of making coherent the perspectives depicted and the coordination issues, the motivations and the ends as well as the possible modes of action (Le Velly, 2019).

In this context, project financing (PF) is considered a suitable tool to generate investments and is increasingly used by public institutions that subcontract constructions and the management of public works and services to private firms (Tinsley, 2022). The PF funds public works or services through a specific agreement, in which the public body does not make a direct investment, but the intervention is mainly funded by cash flows coming from the operation and management of the new facility; the management is granted for a time that allows to recover costs and achieve the operative profit margin. As a result, the private body recovers the cost of investment through multiannual management, at the end of which the public work/service goes back to the public body (Fava and Baldassarre, 2002).

The PF presupposes a convergence of interests between the public body, whose objective is to carry out the work/service while minimizing the costs of realization, and the private body, interested in the economic returns related to the realization of the work/service. The concession takes place through the establishment of a Special Purpose Vehicle or Project Company, whose exclusive purpose is the realization and/or management of the project itself. The separation of economic and legal aspects is allowed by its constitution (ring fence), and a complex network of contracts connects designers, financiers, builders, and service managers to grant the concession. Studying the operation of PF applied to the management of a public canteen, with the participation of local social cooperatives, involves: i) economic aspects such as investments, balance sheet, income statement, and cash flows; ii) socio-economic aspects such as creating value for the business and community, maintaining employment, employing disadvantaged individuals, and

assisting disadvantaged families and, iii) cultural aspects such as whole school approach, creation of sustainable food chains, and creative public procurement (Conevska *et al.*, 2019).

When studying or implementing cooperative strategies, it is extremely crucial to consider community involvement and actions that include institutions and citizenship. The literature on what is usually defined as “community engagement” shows how this concept includes a wide range of strategies implemented by numerous social actors. Many actions are characterized by their community engagement and involvement, from co-planning to public space engagement, the practices of activists, and local cooperative projects. Social research, and anthropology in particular, is based on a “social use” of the ethnographic practice, aimed at analysing the problems of society (Seppilli, 2008: 113) which makes it crucial to work directly with communities, and in close contact with social actors.

In such a framework, the actions of the social actors involved – institutions, companies, and local communities – are part of behaviour that could be defined as “political involvement and global responsibility-taking” (Micheletti, 2003: 2). Micheletti explores the phenomena of participation and community involvement, and defines consumption patterns as political actions within which social actors aim to change institutional and market practices based on “attitudes and values regarding issues of justice, fairness, or non-economic issues that concern personal and family well-being and ethical or political assessment of favourable and unfavourable business and government practice” (Micheletti, 2003: 2). In a collective perspective, such choices fall within the scope of this work, as they relate to the institutions as promoters and mediators of such practices.

In this framework of the project application, it may be worth specifying that communities are not to be considered as the places and people from a specific geographical area, but as historical and social phenomena within which shared collective practices are reproduced and developed by the same members (Skinner *et al.*, 2001). In this way it is possible to rethink the link between community and engagement, shifting the focus from the individual to the community, thus connecting two realities that discuss the same theme and are united by an interest in the conscious consumption of local food products, grown to respect the environment and human health.

Starting from these assumptions, an anthropological approach becomes fundamental in our study to build a relationship with the social actors/informants involved in the phenomenon, to detect the individual and col-

lective, dialogic and conflictual trajectories of food production and consumption, observable only in an ethnographic perspective through fieldwork research (Palumbo, 2009). This is often understood as a journey towards and through “otherness” which allows meeting people and learning about their stories.

The journey, like that of the anthropologist, allows one to reflect on one’s interpretative limits and to redefine them through experience and insights:

The ethnographic techniques of participant observation, developed above all by cultural anthropologists starting from the 1920s, are more suitable than purely quantitative methodologies to document the lives of those who live on the margins of a hostile society. Only after having established long-lasting and trusting relationships can you start asking provocative questions and expecting serious and reasoned answers. Ethnographers typically live in the communities they study and build long-lasting, organic relationships with the people they write about. In other words, to collect “reliable data” ethnographers violate the positivist canons of research: we experience an intimate involvement with the people we study (Bourgeois, 2005: 41).

In such an operational framework, the work of an anthropologist is to restore the multivocality of the fieldwork through an ethnography understood as “practice”, in the Bourdiean sense, and inscribed in “fields” of sociological, scientific, political, dynamic, procedural, and, therefore, conflictual (Palumbo, 1991).

### 3. MATERIALS AND METHODS

#### 3.1. Case Study

The school food policy of Corciano, a small municipality in Central Italy, was designed to meet specific local needs perceived as priorities, towards which a series of actions were planned by the public body with the involvement and support of private bodies. The project focuses on one central need, which is the promotion of healthy eating for young students, able to generate well-being and psychophysical growth and, at the same time, to trigger cultural change towards food.

Together with healthy eating for young students, the municipality has identified other priorities concerning various socio-economic needs. These include preserving hot food facilities in school canteens to ensure a high-quality level of service; improving production and the local quality food chains to strengthen the link between rural areas and urban areas; providing high-quality food assistance to the most vulnerable families; building a community from the centrality of the canteen commit-

tees; and reducing food waste with a view to the redistributing of resources.

The target population is composed of children (approximately 750) and teenagers (approximately 550) who attend school canteens from nursery up to middle secondary schools, and their families. In addition, the target includes vulnerable families (about 370) registered at the local authority service and the agri-food companies within the municipal and neighboring areas.

The organizational model is based on the allocation of a concession for a range of services under PF. The municipality has invited the consortium of cooperatives “ABN-social network” to a negotiated procedure according to Art. 30 of Legislative Decree 163/2006 for the award of a concession through PF (according to Art. 153 paragraph 9 of Legislative Decree 163/2006), to identify the provider of the municipality school catering service between 1<sup>st</sup> of September 2015 – 30<sup>th</sup> June 2027. After declaring the PF presented by the ABN Consortium to be of public interest, the municipality identified in the same consortium the economic operator that would provide the services. The legal side of the agreement was drawn up by the lawyer of the National Association of Italian Municipalities (ANCI), chosen as an external consultant who assumed the role of independent third party and guarantor for the municipal administration.

The service has been divided into three axes of intervention: 1) food service, consisting of the creation and management of canteen services, the management of civil registry, and the collection of school fees; 2) social farming, focus on zero-km platform and local production, dedicated services for food and agriculture

aimed at developing and strengthening a production system inspired by short chain principles; 3) the recovery of surplus food, thus restoring the value of food products excluded from the traditional market that are still edible, by redistributing them in favour of disadvantaged social groups (Figure 1).

The consortium has allocated various tasks between three of the cooperatives. More specifically, the whole of axis n. 1, part of axis n. 2, and the coordination of axis n. 3 have been assigned to the social cooperative company “La Torre”; the portion of axis n. 2 that deals with the creation of community farming initiative to provide the school meals’ vegetables, in a plot of land rented from the municipality has been assigned to the agricultural cooperative “Umbria Verde”; the services included in axis n. 3, that is the collection and distribution of surplus food to people in need, as reported by the social services of the municipality have been assigned to the social cooperative “Babele”.

The consortium’s self-assigned responsibilities consist of drawing up the annual social statement of the activities carried out, as well as monitoring the quality of the project. For the realization of the PF, a vehicle entity was created to ensure the continuity of the project in case of problems related to individual partners, which took the legal shape of a consortium company with limited liability, called “Corciano a Mensa”. To do this, all the companies that actively operate in the services of the concession have paid a share of the capital which is proportional to their contribution in the service provision.

Investments were planned for the first and second axis of intervention, and were made from the first to the

Figure 1. Structure of project financing.

Project axes	Axis I	Axis II	Axis III
Complementary actions	School catering (food strategy) <i>Canteen staff training</i> <i>Food training for family</i>	Community garden; Zero-km platform (commercial activity) <i>Enhancement of local resources and products</i>	Surplus food collection; families in need (food strategy) <i>Distribution of needy families</i>
Investment, euros	117.000	330.000	
Executive cooperatives	“La Torre” Social Cooperative Society (91.93% of share capital)	“Umbria Verde” Agricultural Cooperatives (2.7% of share capital) “La Torre” Social Cooperative Society	“Babele” Social Cooperative (2.37% of share capital) “La Torre” Social Cooperative Society
General contractor	Consortium of cooperatives ABN- Social Network (3% of share capital)		
Vehicle company	Corciano a Mensa - Consortium company a.r.l. [article 134 of Legislative Decree 50/2016] (Special Purpose Vehicle - SPV)		



eighth year of the project, for a total of 450,000 euros, with more substantial outlays between 2016 and 2018. The major investments, totalling 184,000 euros have been earmarked for social farming and in particular for the purchase of machinery, and the realization of 4 tunnel greenhouses with irrigation systems. This is followed by investments to create the zero-km platform, for a total of 149,000 euros, which includes adjustments to properties that will be used to host the platform, and the purchase of a refrigerated truck for the transport of raw materials. The investments in school catering, corresponding to 117,000 euros, are mainly destined for the restructuring and adaptation of the premises, the purchase of a vehicle to transport the meals, the development of software for the management, collection, and billing of meals, and the purchase of work equipment to improve performances.

The duration of the project has been established based on two elements. The first concerns the investment and its coverage, given that the recovery of capital invested in catering services takes at least 10 years. The second element concerns the coverage of school cycles: the proposed 12 years of canteen service would cover two generations of students, that is two full school cycles starting from kindergarten up to the three years of lower secondary school.

The complexity and criticality of the services provided required a synergy between different professionals, capable of creating a fruitful interaction between the organizational-managerial level of the service, and the strictly operational level. To this aim, a control center has been set up which is responsible for coordinating all the activities of the PF, and all those involved in carrying out these activities.

The operational management of the services required the definition of roles and responsibilities, which have been identified through a specific organization chart within the cooperative La Torre, which was involved in all three project axes.

The employment dimension was estimated as follows: 45 working units for collective catering, estimated based on the management of 6 cooking centers that cater for 1,295 enrolled students; 2 working units for the management of the community garden and the zero-km platform; 1 working unit for the recovery of surplus food. The PF has also provided for the employment of disadvantaged people through a network established with the local services and social structures to address all aspects of the employment process and the complexity of the needs of the disadvantaged. Concerning the management of school canteens, the PF calls for precise product specifications which provide the basis to

select suppliers and establish the minimum conditions of acceptance. In terms of preference about the origin of the products, the following categories have been defined: 1) zero-km and/or short chain – such are considered those products that are transported over short distances before arriving at cooking facilities (zero-km), or are purchased directly from the producer (short chain); 2) organic products with organic certification, even if they are not local, as they guarantee the use of production techniques that respect the environment; 3) self-grown vegetables, vegetables produced on allotments made available by the local administration, to fulfill up to 50% of the school canteens' vegetable needs.

### 3.2. Qualitative data collection

For an effective qualitative survey, as already introduced in the second paragraph *Conceptual framework*, a progressive research action was conceived with the function of simultaneously studying the literature on the concept of community, semi-structured interviews, and group meetings.

The research was imagined as a tool for building a network of relationships to be activated about the project. For this reason, we opted for a qualitative research methodology and, specifically, for the ethnographic methodology from a socio-anthropological perspective. Schematically, the following are general characteristics of this methodological approach: travel (in the field/home contrast) (Marcus, 2007; Seppilli, 2003), prolonged stay in a well-defined place, the organization of discussion groups, participant observation and recording of everything observable and listenable through variable methods and techniques (structured and semi-structured interviews, field diary, audiovisual recordings) (Bayre *et al.*, 2016; Causey, 2016; Pink, 2011).

Ethnography is a research practice that is based on immersive attendance in contexts of interest, the so-called "field" (Palumbo, 1991; Ravenda, 2011), and is therefore located as close to people's experience and the concrete dimension of phenomena: «the ethnographic paradigm is grounded in systematic attention to context as a means of accounting for variation» (Csordad, 1992: 397).

Field research, in addition to producing data, information, and analysis ideas, generates relationships which, based on the choices of the various social actors – including the researcher – can branch far beyond the phases and objectives of the research. Long-term ethnography gives the possibility of producing knowledge (co-constructed with the social actors present in the field) and of identifying, through experience, new research paths that constantly manifest themselves with-

in the field's own relationships (Loce-Mandes, 2020). Following this line, anthropological research not only merges with the very life of the researcher, but it is possible that he/her can be "caught" within the same political dynamics of the "field": «The actions of social actors, through art related to a social use of anthropological research, problematises representations of disability and the political debates between social movements and institutions about the D/deaf body» (Loce-Mandes, 2020: 113). Specifically, ethnographies that concern issues related to community engagement and communities that deal with the awareness of environmental sustainability and health can not only be used by activists and social actors to spark debates in public space (Ravenda, 2016 and 2018), but at the same time transforming research actions into unexpected forms: «I engaged in ethnographic fieldwork, not only as a description and uncovering of social movements but also as an applied form of activist practice» (Loce-Mandes, 2020: 115).

The anthropological study presupposes a period of ethnographic observation, of the actions to be studied, and semi-structured interviews in depth with the social actors to analyze the construction process of the case study. In this case, the main creators of the project were involved, such as the municipality of Corciano and the cooperative that manages the school canteens. Specifically, group meetings were organized with the social actors, to reconstruct the genealogy of the project writing, subsequently, individual interviews were carried out to understand the motivations and the complex management strategies implemented. During the fieldwork research, collective interviews were carried out regarding the municipality of Corciano, observing the updating meetings of the organization of the food policy implemented by the ABN-social network for food service, community garden, and the recovery of surplus food, described in detail in the following paragraph.

The consortium started managing cooking facilities in school canteens in 2010 on behalf of the municipality, which was not able to fulfill the task. The project coordinator and, at the same time, the president of La Torre reported:

They contacted us in 2010 to fill the gaps in the provision of this service; they were short of staff because of illnesses, and we performed better than the temporary staff agencies. We, as the social cooperative La Torre, won the tender together with a consortium of partners (from fieldwork diary, July 2020).

As described the work of the consortium was necessary to fill a "gap" in public administration; the public management of the school canteen had been going

on for 5 years, and this allowed the managers to get to know the local dynamics, understand the needs of the area, and above all the needs of the school and the public administration, which consist in policies aimed at children in school canteens. Not being able to observe the canteens and their organization from the inside, several interviews were carried out in 2020 with the president, in particular on the definition of the menus, which are normally carried out through the availability of seasonal products and following the directives of the Ministry of Health and local health authorities.

The president of La Torre reported:

1) For the school menu, we also thought of adding detailed recipes to achieve the right balance of nutrients, such as exact quantities of vegetables, detailed use of spices, and creating a diet that resembled a scientific study. 2) The project is not all about food ... with the vegetable garden, every year we try to develop a different educational project for the children, with a nutrition-based theme. We had in mind an educational place, where children came to see cultivated crops. Not just a tomato seedling, but rows of crops to see. 3) Then, the management of the community food pantry that feeds many people every year; an average of 30 to 40 meals are distributed daily, and brought to people in need as indicated by the local authority (from field diary, July 2020).

What transpires from the organizational model of the consortium, and from what was reported by the president who developed the project analyzed here, is the close relationship with the territory, the community, and its wellbeing. During our investigation, we were often reminded that the project aimed not only at addressing economic questions but also at developing an impact over a long-term period of twelve years. This allowed them to work continuously on the children's nutrition from the beginning to the end of compulsory school, and at the same time, to involve young minds in a process of awareness of environmental sustainability and health through educational projects, such as the community garden. In particular, this step was fundamental to raising awareness in parents, who consequently got involved in the community engagement process.

Furthermore, participant observation of the meetings organized with the schools and the children's parents was carried out.

Upon my arrival in September 2020, the beginning of the school year, I found many people inside the garden space, approximately fifty people of different ages. After a presentation of the day's activities and the cooperative's objectives concerning the space, we took a tour of the different crops. I stop to observe two separate spaces intended

for horticulture: on one side I see families with children taking care of the plants and arranging the land, others taking vegetables ready to be harvested, and on the other side I see plants that no one touches. The coordinator explained to me that these are crops for food production and that they are the responsibility of the members of the cooperative (from fieldwork diary September 2020).

From the various activities of the community garden emerges the desire of the social actors to work on the awareness-raising paths of civil society through food re-education projects, food seasonality, and social well-being. These are all elements that fall within the framework of qualitative education for the involvement of communities in environmental sustainability and inter-generational relationships.

## 4. RESULTS

### 4.1. *The organizational model*

The cornerstone of the organizational model is the school menu which has been developed taking into account the following principles: 1) supplying proteins and carbohydrates not only through pasta and bread but also other foods such as legumes, cereals, rice, potatoes, fish, and eggs; 2) increasing the fiber intake with both cooked and raw herbs and vegetables, with a preference for raw; 3) promoting, where applicable, breakfast and/or snack time; 4) promoting knowledge of local traditions and its excellences; 5) opening towards other intercultural dimensions given the multi-ethnic nature of society.

To promote a healthier food culture and increase knowledge of productive food traditions in Umbria, several food items were identified not only because they meet the established criteria of origin, but also because of their strong link with the area and its traditions. These include organic wholemeal pasta and flours, cold-pressed Umbrian extra virgin olive oil, fresh and local eggs, cheese and dairy products produced in Umbria, Umbrian milk, short-chain organic yogurt, cured meats, and legumes grown in the region. For the same purpose, foods with the following characteristics were categorically excluded: food from GMO farming, rare-cooked meat, industrial frying, and breading items, flavourings containing glutamate, any type of preservative or chemical additive, semi-processed and/or pre-cooked products.

Instead, to raise citizens' awareness of the consumption of some products that could both come from local productions as well as from other countries, it was decided to occasionally introduce the following: lake fish, local legumes, and products from the fair trade.

To carry out what aims to be a food and cultural revolution, the project focused on the involvement of the children's families through nutritional education activities aimed at children and parents, and the suggestion of menus for the family evening meal. In addition, a training plan has been included, which is structured around the needs of the staff involved in the processes of production and distribution of meals, involving also the issue of the reduction of waste and surplus recovery for distribution to needy families. This plan has been conceived in a modular way, to ensure the participation of all staff gradually, and over the course of several years (Figure 2).

To ensure that the school menu constitutes a driver for the local integration between city and countryside – one in which the latter regains its productive and cultural functions – an agri-food supply was designed based on a local and zero-km platform, for the purchase of food and the self-growth of at least 50% of the school's vegetables and fruit needs, through the valorization of uncultivated land allotments owned by the municipality; the platform can also be accessed by all residents within the municipality (Figure 2).

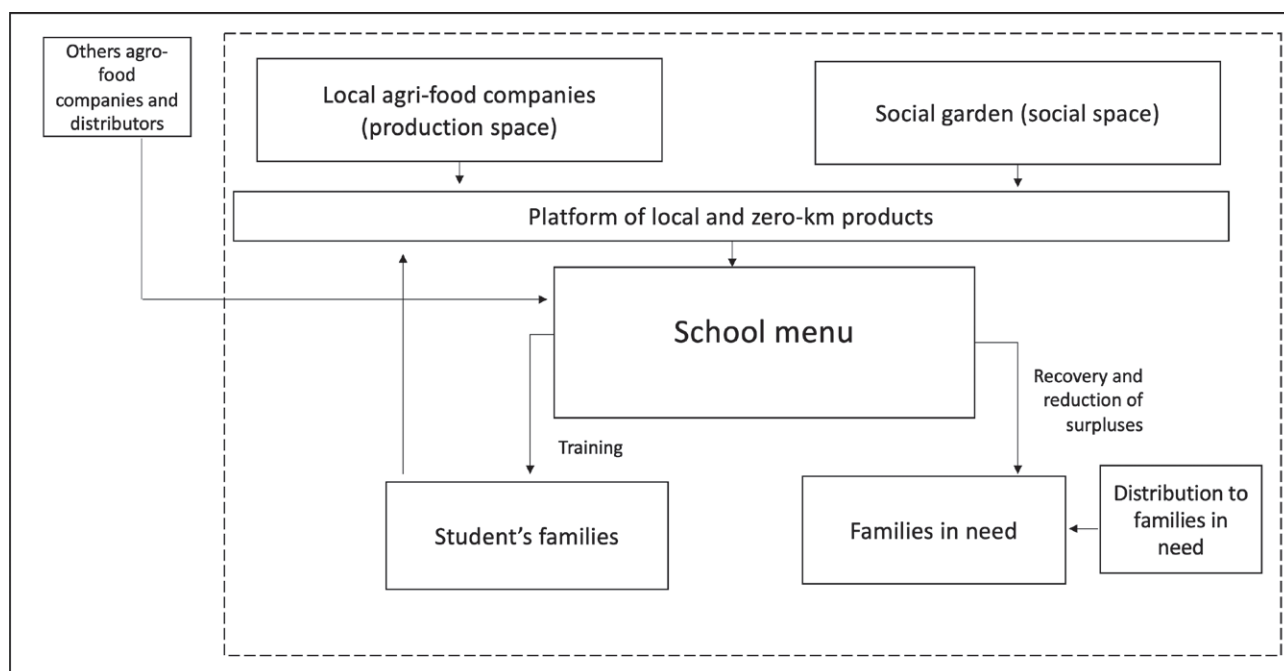
As can be seen from Figure 2, the school menu is at the very center of the organizational model, and this does not only refer to the importance of food quality in schools but also to the duration of the healthy eating program for young students. The project had planned 12 years of activity because this duration would bring positive change in food consumption over an adequate number of generations:

There are two full cycles, one for the children aged six months and up, and one up to middle school. The project spans from the beginning to the end of the school cycle and starts at least a new cycle. The project will function as a trailblazer, then when we're done, someone else will manage it. Our goal is to accompany a child from the first day of school to the end of middle school. This project will span across 12 generations, only one of which, however, will see it from start to finish (from fieldwork diary, August 2020).

Engagement is a fundamental factor to trigger a close relationship between those who produce food and those who consume them, to bring two categories that belong to the same area, but which have been separated and distanced by globalization. Engagement is crucial to actively involve the local community in the construction of a space for awareness and connections, such as the school canteen, the community garden, and the community pantry:

In the early years, we clashed with those children who brought to school snacks such as hot dogs, cream donuts,



**Figure 2.** Organizational food model around the school menu.

and maritozzo con la panna<sup>2</sup>, trying to explain to the parents that they could not give these snacks because they completely upset the food balance we wanted to maintain. Then we tried to promote the playful and cultural dimension of food through seasonality, colorful sweets with seasonal strawberries, or sweets for the holidays (from field-work diary, July 2020).

The organizational model described in Figure 2 can be translated into a conceptual model of a very refined local food policy, in which the collective project raises the provision of food allowing to reach three different kinds of objectives: food safety, healthy food availability, and food security, from the centrality of food and community engagement to the functional relationship between city and countryside (Figure 3).

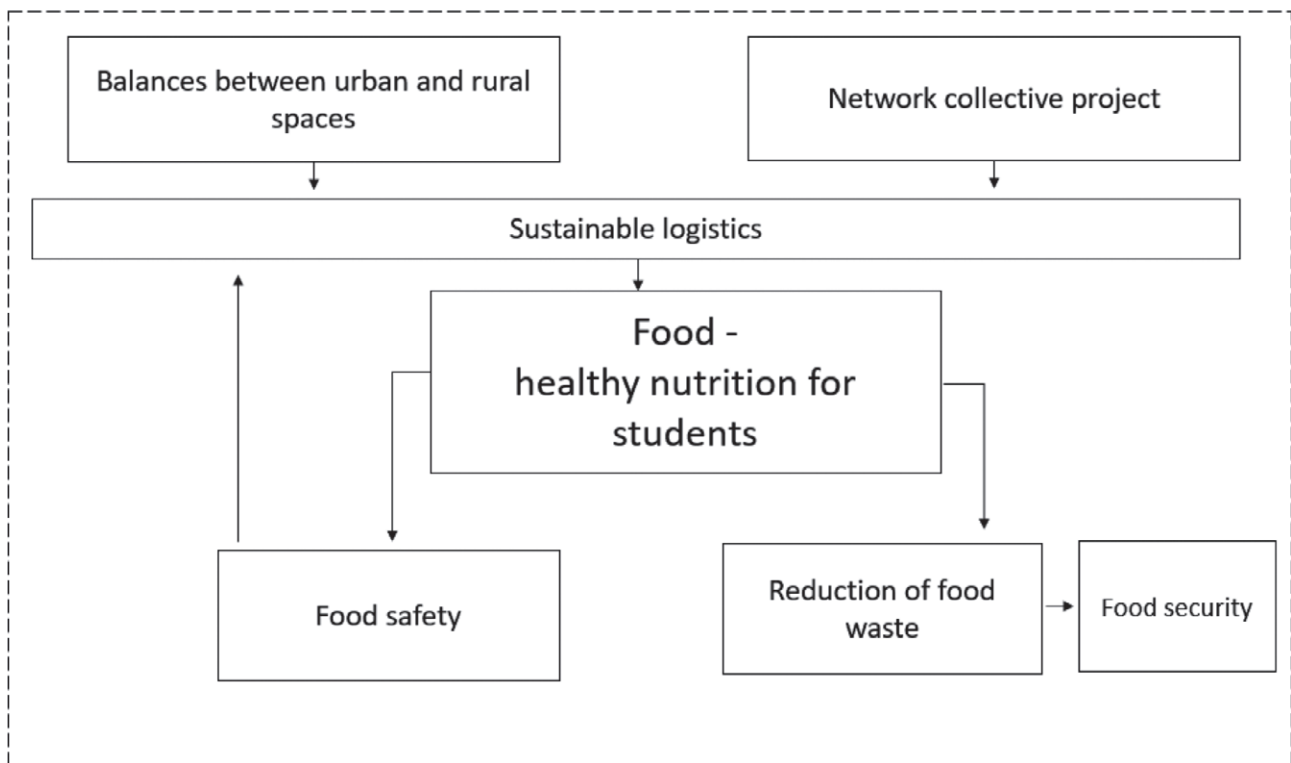
Given the connection between local areas, production areas, and social spaces used for community engagement, which is connected to the consortium activities of the school canteen, it is necessary to analyse how certain practices of reappropriation and remodeling of such spaces are implemented by social actors, to address issues that concern the community's welfare. A recent analysis on the reuse and remodeling of space proposed by Low distinguishes two different ways of using and building social space: "The term social production was useful in defining the historical emergence and political-economic

formation of urban space. The term social construction was reserved for the phenomenological and symbolic experience of space as mediated by social processes such as exchange, conflict, and control [...] Both processes are social in the sense that the production and construction of space are mediated by social processes, especially because they are contested and fought over for economic and ideological reasons" (Low, 2011: 392). From these assumptions, it can be said that the project's connection with community engagement starts from community management, aimed at raising awareness of the community gardens, the community pantry, and the school canteens which focus on healthy eating. These spaces, aiming at the personal and social health of the community, are intended as a series of political actions to raise the citizens' awareness around environmental and economic-social toxins. The products that are sold and processed, the processes of education and knowledge exchange become therefore the result of actions that represent the "community", who tries to work on local networks and spaces for their global wellbeing.

Ultimately, the project's organizational model through processes of community engagement not only can combine the environmental, social, and health dimensions of food, but it can also reshape the local concept of community, triggering processes of intergenerational awareness, as well as new opportunities for the circulation of food products.

<sup>2</sup> A sweet bun with whipped cream, typical of Central Italy.

**Figure 3.** Local food policy around the food-healthy nutrition for students.



#### 4.2. Economic assessment of the organizational model

To evaluate the results obtained from implementation of the PF the pre-Covid period in which all the planned actions had been activated was taken into consideration (years 2018 and 2019).

The number of meals served has averaged 221,000 per year, of which 59% concerned children of nursery schools, 40% concerned pupils in primary schools, and 1% concerned pupils of lower secondary schools. The price of a single meal was set at 6.11 euros, higher than the average price of a canteen meal in the province of Perugia which in the same period was 4.70 euros, but in any case, lower than the price paid in other municipalities in the province (which, in some cases, exceeded 8 euros per meal). This price fluctuation is partly attributable to the different methods to manage the Umbrian school catering service, which can be traced back to four main categories: 1) direct management, where the municipality manages the service provision (12% of the Umbrian municipalities); 2) indirect or outsourced management, where all phases of the service are entrusted to an external company (68%); 3) mixed management, in which the so-called canteen committee carries out some of the phases while entrusting others to external provid-

ers (18%); 4) assignment in PF of a service concession, as in our case study (2%). Among these, reliance on PF is certainly the most complex and rooted in social the local economic issues – factors that can amply justify a canteen meal price that is 30% higher than the average price.

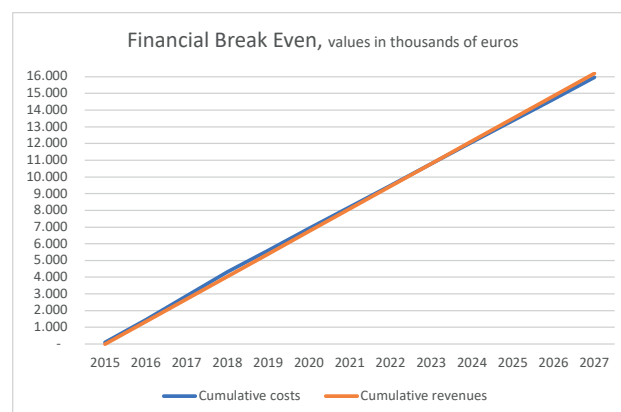
The municipality of Corciano contributes to the cost of the consumed canteen meals by integrating the fees paid by the families who, in turn, contribute according to their financial situation, and to the number of children who use the service. The service generated an average revenue of 1,350,000 euros in the years 2018 and 2019, 39% of which was covered by the municipality and 61% by families.

The analysis of income statements allows to evaluate the economic and financial sustainability of the PF. Table 1 provides an overview of the average values of the income statement for the two years 2018 and 2019. The higher costs are related to the use of operational staff (43%), which added to the costs for staff in administration, control, and coordination (6%). The 30% of the cost of raw materials is represented by the cost of procuring food and 5% for the costs incurred in farming fruit and vegetables. Expenditures for total wear and tear factors are represented by those costs addressing utilities (3%),

safety (2%), and maintenance (2%). The costs for depreciation relate to investments made from 2015 (3%) and were estimated by applying a depreciation rate of 8.4%. A further 3% is represented by the cost of bank charges relating to the opening of a mortgage to cover investments. The costs for the activities linked to the canteen service add up to 4% of the total annual costs, and in particular, 2% is represented by solidarity activities linked to the distribution of surplus food to about 370 needy families, and the other 2% is represented by training courses for operational staff and pupils’ families, and for the organization of meetings aimed at building an aware, open and supportive community.

Against the revenues and costs examined, the net income for the year is positive and represents 1.5% of revenues. Estimating such a result for all 12 years of the PF, and considering the financial outlays needed for the investments, the result is a positive economic and financial assessment based on an estimated net present value of 195,000 euros, an internal rate of return of 11% and a financial break-even reached in 2023, 9 years after the start of activities (see Graph 1). It should be noted that the cumulative revenue line is always very close to that of the cumulative costs, a situation that underlines how the economic/financial balance of the PF is quite precarious and very sensitive to market variations, both regarding the overall demand for canteen meals, and the procurement of raw materials and workforce.

**Graph 1.** Financial break-even of the Project Financing.



During the period of COVID-19, the organizational model of school canteens in Corciano has proved flexible in responding to new needs related to the reduction of users and new more restrictive rules in the distribution of meals. Instead, the inflationary pressure created by the international situation following the occupation of Ukraine has proven to be more problematic. Recognizing the inflationary adjustment required by law for the private body is proving to be difficult for the small municipality.

### 5. DISCUSSION

In most cases, the management of school canteens in Italy takes place through the allocation of the service to an external company, while the assignment in PF is less common, due to its complexity which requires greater planning efforts by the public body, and a strong propensity for investment by private body. Both planning and investment propensity have a common matrix, as they are rooted in society and the local economy. The case study can be considered a clear example of how it is possible to work together to develop a food system that uses and enhances the resources of the territory from production to consumption, thus contributing to the three components of food security (food availability, food access, food utilization) and the three components of social welfare (income, employment, social capital). It represents an integrated food governance approach that stresses the multifaceted and interrelated nature of food challenges and addresses them in a concerted manner (Mendes, 2007).

In the model examined, 80% of available food comes from self-supply on a local scale, and from a distribution system based on a logistic platform of local and zero-km

**Table 1.** Income statement of ABN-social network, average values for the years 2018 and 2019.

Income statement items	Value in Euros	%
TOTAL REVENUES	1,350,000	
TOTAL COSTS	1,329,750	100
of which:		
Operating staff	567,000	43
Administrative, control, and coordination Staff	81,000	6
Food supply	405,000	30
Production of vegetables and fruit	67,500	5
Food security	20,250	2
Utilities	40,500	3
Maintenance	27,000	2
Depreciation	37,800	3
Training courses	13,500	1
Solidarity activities	29,700	2
Community engagement meetings	6,759	1
Bank charges	33,750	3
NET INCOME	20,250	

Source: Our elaborations on the date of the ABN-social network.

products. The determining factors for such availability can be found in supply agreements with 4 organic farms in the area, commercial agreements with 10 regional agri-food companies, the production of fruit and vegetables on municipality allotments, the control of production, transport, management of storage facilities, and the compliance with safety standards.

Food access is guaranteed by the fact that all families can afford the canteen service, thanks to the pricing policy adopted by the municipality which takes into account the income of families, and the number of children who use the canteen service. The fact that families can buy local and zero-km platform products for home consumption amplifies the accessibility to local food and the possibility for families to express their buying preferences for the products of their territory. In addition, the recovery of surplus food and its distribution to needy families widens accessibility to a greater number of families by introducing principles of solidarity.

The food utilization is linked to three determining factors, strongly related to food education that consumers receive in terms of nutritional value, social value, and healthiness of food. From the perspective of the collective project, therefore, one can point out that in the case study, an effective coherence between motivations and ends is achieved, based on the degree of freedom guaranteed by the network and the municipality. The educational project aimed at cultural change in food consumption and, therefore, included an educational project based on food and healthy lifestyles with the involvement of both individuals (students, families, operators of canteens) and the community (municipal administration, school head office). The activities offered to students and families are of different types, from cooking workshops to improve knowledge of food, to the collection of experiences with parents on economic practices related to grocery shopping; from environmental education to understand the seasonality of foods and the importance of organic and zero-km productions, to the relationship between health and prevention through physical activity and conscious consumption.

From the point of view of social welfare, the case study demonstrates great potential for the production of income, employment, and social capital. The production of income concerns both the food supply companies, which can count on stable supply contracts and territorial competition for quality and artisanal products, and the consortium company responsible for the project management, which obtained dividends during the first years of activity. Occupation levels, concerning the direct management of the canteen service by

the municipality before the granting of project finance, were not only maintained but increased with the hiring of 2 working units for the management of the community garden and the zero-km platform, and 1 working unit for the recovery of surplus food. In addition, the work placement of 3 disadvantaged people was carried out in collaboration with the local services and social structures. During the COVID-19 pandemic, due to the stricter rules on the portioning and distributing of meals, the canteen service required the temporary hiring of 4 other working units that were contracted by the municipality. Social capital, understood as a network of social relationships, norms, values, and shared knowledge that facilitate cooperation within different groups (OECD, 2011) was certainly a pre-existing element to the formulation of the PF which, with the implementation of the project, has expanded the business structure involved. The stakeholders of the catering service currently range from users (pupils, families, teachers) to municipal managers, from workers to the management bodies of the consortium company, from suppliers to third sector associations, from regulatory bodies (ASL<sup>3</sup>, certification bodies) to companies that donate and distribute their surplus food (including Brunello Cucinelli SpA and the non-profit Banco Alimentare).

The local resources are often used to encourage relations with the territory, while food education courses allow the maintenance of relationships centered on the canteen, between the workers assigned to the meal production, the teachers, and the parents.

From a social point of view, the recovery of surplus food in connection with the community pantry is one of the strengths of the entire project. The idea of a community pantry, focused on recovering surplus food and distributing meals and raw materials produced in the area, saw the involvement of local companies that share the vision of lowering food waste and disseminating the principles of solidarity amongst citizens. These actions of great ethical and moral value also aim at raising awareness among the new generations about the requirements of those most in need, as well as reducing food waste: it is not only a question of avoiding waste, but also of redistributing for those in need. It is apparent that a community pantry activated within a school food policy does not solve the problem of poverty per se and then other appropriate welfare-support measures are necessary. There are a lot of critiques on local redistribution systems that are not backed up by more structural measures (Psarikidou *et al.*, 2019; Galli *et al.*, 2019; Rob and Cattaneo, 2021; Papargyropoulou *et al.*, 2022)

<sup>3</sup> ASL (Azienda Sanitaria Locale) indicates the body for national health service.



The case study highlights the economic and social sustainability of the organizational model of PF realized in a small municipality. However, the great variety of school food situations does not make a good practice easily replicable everywhere, although PF is increasingly being used by public bodies. To apply the model in other contexts, the following basic conditions should be met: i) the local public body has to identify the priority objectives to be achieved and ii) the private bodies have to be of the third sector because they naturally have a social and inclusive approach. It should be borne in mind that long-term projects can suffer negative repercussions due to crises outside the local system, as in the case of COVID-19 and the invasion of Ukraine. Due to superficial union disputes or shortsighted political disputes, some objectives may only be partially achieved. In these cases, it is only the intelligence of individuals that makes the difference.

The urban food policy analyzed provides an example of constitutive processes undertaken by civil society to intervene in local food systems and to innovate its governance pattern (Martino *et al.* 2016; Duncan e Pascucci, 2017; Dedeurwaerdere *et al.*, 2019). This governance innovation locally articulates the processes of food democracy (Lang, 2005; Hassenein, 2003; Stella *et al.*, 2022; Borsellino *et al.*, 2023). Moreover, the case also illustrates that food networks can contribute to the provision of public goods, by health co-production and environment protection (Martino *et al.*, 2016). From the perspective of the collective project (Dufeu *et al.*, 2020; Le Velly, 2019), one can point out that in the case study, an effective coherence between motivations and ends is achieved, based on the degree of freedom guaranteed by the network and the municipality.

Two main contributions can be drawn from the emerging picture. First, food networks seem to be effectively able to sustain the transformation of the local food supply becoming an actor of local food policy. Second, food networks also appear to be able to include public entities (schools, municipality), while they in turn become actor of the transition.

Finally, we considered what might occur once the project is finished in 2027. The local municipality, if will still be responsible for public school meals, would like to repeat the experience of PF or to consider the possibility of transforming the consortium of cooperatives “ABN-social network” or the vehicle entity “Corciano mensa” into a public utility company. The consortium of cooperatives is receptive to both possibilities and also contemplates transforming into a service catering company.

## 6. CONCLUSION

Some interesting reflections emerge from this work. First, local municipalities can play a fundamental role in local food governance by promoting “new links and new relations between different stages and actors of the food chain” (Sonnino, 2009: 429). Although the integration of food policy at the local government level is a relatively new concept (Candel and Pereira, 2017), empirical studies (Cretella and Buenger, 2016; Hawkes and Halliday, 2017) such as this one highlight that interesting socio-economic results can be achieved using innovative tools.

Second, more research is necessary to compare the characteristics of different local integrations of food policy in different geographical areas, and in different economic contexts, as recently done by Sibbing and his collaborators (Sibbing *et al.*, 2017). This will allow us to better understand the results of food policy integration at a local level, and to build a database of typologies of food system interactions which could be useful for different management or analytical purposes (Ericksen, 2008). Furthermore, actions should be monitored and evaluated according to the objectives proposed by the policy itself.

Third, in highlighting its virtuous actions but also the reasons and the steps behind its design, this contribution emphasizes the project’s need for in-depth knowledge, or better still ethnographic knowledge, to structure projects aimed at the development of community welfare (Loce-Mandes and Ravenda, 2021).

From these assumptions, it can be stated that the connection between community engagement and multifunctionality starts precisely from the community management of green areas, urban gardens, social farms, and school canteens focused on healthy eating – spaces for the personal and social health of the community – understood as a series of political actions to raise awareness among citizens about environmental and economic-social toxins. The products sold and processed, the educational and knowledge exchange processes become the result of actions that represent “collectivity” and try to work on local networks and spaces for global well-being. Thus, agriculture in a multifunctional key through the community engagement process manages not only to combine the environmental, social, and health aspects connected to food but also to reshape the more personal aspects of food production, job placement, relationships between city and environment, of intergenerational encounters and on environmental protection with feedback on human health, triggering new possibilities and imagined and practical designs for a sustainable future.

Only through this knowledge, it was possible to structure community actions for public health through

a community engagement process that included school, family, agri-food sector, and citizenship – thus without the institution, in this case, the municipality of Corciano, acting with laws and decrees from above to improve the health of their citizens, like a “nurse-state” (Vineis, 2020). The case reported shows a virtuous line of action, “a unitary line on community welfare, made up of actions and strategies to activate regenerative processes above all through stakeholder activities and community engagement” (Loce-Mandes and Ravenda 2021: 216).

Fourth, to make local municipal food policy integrations stronger and more impactful, it would be desirable to resort to a food sovereignty plan at the local level by applying a decision support system (DSS) (Stella *et al.*, 2019), whose outputs can be used to coordinate the stakeholders involved in the food supply, to build a food production system capable of increasing the resilience of the territory and experimenting with paths of “food sovereignty”.

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