9 Agricultural districts as tools for sustainable urban food systems

The case of Milan

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9.1 Introduction

The chapter explores how "agricultural districts", an Italian institution that federates farmers to promote local development, has influenced the urban food system of the city of Milan. The districts take part in a form of multi-level governance (Gemmiti & Conti Puorger, 2008) that produces significant political, economic, and socio-cultural effects. The authors used the Urbal process to assess the impact of this innovation in the governance of the urban food system, by establishing a participatory Impact Pathway Map (see Chapter 1).

On a theoretical level, the topic of agricultural districts fits within a more general branch of research on local development, which stresses the strategic role of local networks and resources in promoting development processes (Becattini, 1987; Dematteis & Governa, 2005; Porter, 1990). More specifically, in the agri-food sector, several researchers have highlighted the need for food "relocalisation" around Alternative Food Networks (Watts et al., 2005), theorizing the development of localized agri-food systems (Muchnik et al., 2008). With regard to cities in particular, Morgan (2015) has shown how agri-food networks are underpinned by socio-spatial patterns that integrate both rural and urban areas.

The geographical context of this research is the area of the Metropolitan City of Milan (MCM), a region of about 1,500 km² with over three million inhabitants, which can be roughly split into three main sectors: the city of Milan itself; the northern part of the region, mostly urban and with an economy mainly built around industry; and the southern part, which is more sparsely populated and has a predominantly agricultural landscape.

The MCM region is characterized by large, protected areas surrounding the city: the South Milan Agricultural Park (SMAP), the Ticino Valley Regional Park to the west; and the two Adda Parks (Adda North and Adda South) to the east. The presence of these protected areas—especially the first two—has supported the development of the districts by limiting urban sprawl, the main challenge for agricultural activities in the region.

Five rural districts operate in the MCM area: the Milan Agricultural District (DAM), the Adda Martesana District (DAMA), the Olona Valley District

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(DAVO), the Neo-rural District of the Three Waters of Milan (Dinamo), and the Rice and Frogs District.

This chapter is organized into six sections. Following the introduction, we present the research methodology in Section 9.2 and the institutional framework underpinning the rural districts of the MCM in Section 9.3. In Section 9.4, we outline the basic characteristics of the five districts. In the fifth section, we discuss the results of the research, showing the impact of the districts on four major areas of analysis identified through the elaboration of the Impact Pathway Map. Finally, in the conclusion, we share some remarks about the potential and challenges of the agricultural districts within the Milan urban food system.

9.2 The Urbal approach: Building an impact pathway map for agricultural districts

Since the main objective of this research was to assess the impact of agricultural districts on the governance of the urban food system, we used the Urbal approach to produce a participatory Impact Pathway Map of this innovation. The map was initially intended to be the result of several focus groups with the key players in the sector, but the constraints surrounding the COVID-19 pandemic partially hindered the organization of public meetings. Consequently, the authors decided to adopt a mixed strategy.

First, drawing on the results of two meetings² and on a first round of in-depth interviews, we produced a draft Impact Pathway Map. Then, this draft map was discussed in a second round of semi-structured interviews with eight relevant actors from the rural district system.

The first focus group meeting aimed to identify the opportunities available to the rural districts to develop a short supply chain within the mass retail system, a crucial part of the strategy adopted by the districts (see Sections 4.1 and 4.2). The meeting involved three representatives of mass retailers (LIDL, Carrefour, Coop) and a number of researchers active in this field of study.³

The second meeting focused on the commercial network of the rural districts. Representatives of all five districts were present and provided basic information about the structural characteristics of each district, their strategies, and their commercial ties. The interviews were conducted in two stages. The first stage focused on understanding the context and identifying the issues most relevant to the development of the districts. The first interview was with the Lombardy Region official in charge of the rural districts system (September 2019), who outlined the institutional framework and the recent change in the legislation (D.g.r. 31 July 2019 - n. XI/2040). The other interviews in this first stage were with leading figures of the rural districts (January–March 2020), and were geared towards understanding the characteristics and strategies of the districts. Specific questions were asked to shed light on three dimensions of the potential benefits of rural districts for the farmers: 1) the empowerment of farmers in their relationship with institutions; 2) the support in accessing public funds; and 3) the enhancement of commercial networks.

Following this first round of interviews, a draft Impact Pathway Map was produced. This map was presented to the leaders of all the districts and discussed in a second round of semi-structured interviews (December 2020–January 2021). Lastly, we established the final map, the features of which are presented in Section 9.5 of this paper.

9.3 Institutional framework

According to Italian legislation, agricultural districts are groups of farmers that come together to secure better economic outcomes (e.g., economies of scale, public fundraising), enhance their communication (e.g., visibility), and achieve greater political influence (e.g., advocacy for policies supporting the farmers). The Italian government started developing the "district strategy" about 30 years ago, first in the industrial sector with the 317/91 law "Interventions for innovation and small enterprise development", and later in agriculture, with the 228/01 legislative decree "Orientation and modernization of the agricultural sector". Further legislative acts (289/02; 80/05) created specific forms of public support for agricultural districts, and the European Commission ultimately endorsed this form of aid in 2008 (C 2008 7843). The Regional Council of Lombardy developed the district strategy with a specific law in January 2007 and regulated the issue with the deliberation 8/10085 (August 2009), creating three categories of agricultural districts: rural districts, high-quality agri-food districts, and supply-chain districts.

In 2017, the Italian government modified the 228/01 decree (205/17 law), creating the "food district" category and expanding the range of typologies to include rural districts, agri-food quality districts, organic districts, and five types of local production districts. Following the 205/17 law, in July 2019, the regional government reclassified the agricultural districts into six new categories: rural, peri-urban productive system, high-quality agri-food, productive system with a high concentration of SMEs, organic productive system, and supply-chain districts. This recent reclassification did not result in any significant changes in operating procedures. However, it is worth noting that among the five districts involved in this research, four have remained "rural districts" while one has been re-labelled as a "peri-urban productive system" district (the DAM).⁵ Compared to the other categories, "rural districts" and "peri-urban productive system districts" are less focused on a specific product (unlike supply-chain districts, for example) or a specific production quality standard (e.g., high-quality agri-food districts), and more concerned with the development of a synergistic relationship between the farmers and the local socioenvironmental context.

Regarding governance, two legal frameworks need to be highlighted. The first is the Milan Urban Food Policy (MUFP), which aims to systematically address all matters relating to food that usually fall under the jurisdiction of separate administrative bodies. The MUFP guidelines set out five priorities: 1) providing healthy food for everyone; 2) promoting the sustainability of the

food system; 3) understanding food; 4) reducing waste; and 5) supporting and promoting scientific research in the agri-food sector. While these priorities are all interconnected, Priority 2 relates closely to the topic discussed here. The guidelines of the MUFP were approved in 2015, the year of the World Expo "Feeding the Planet, Energy for Life", and later became what is commonly known as the Milan Food Policy. The Food Policy Office, created in 2017, supports the districts by coordinating their political action (see Section 4.1) and assisting them in development projects (see Sections 4.2 and 4.4).

The second legal framework directly relating to the governance of the urban food system is the Framework Agreement for Local Development (Accordo Quadro di Sviluppo Territoriale, AQST), approved in 2014. The agreement brings together the agricultural districts, the municipality of Milan, the Metropolitan City of Milan, and the Lombardy regional government,⁶ and provides a channel to coordinate strategies on a wider scale, beyond that of individual districts. The AQST was established to enhance the rural characteristics of Milan's metropolitan area by promoting sustainable development, integrating local economic activities, and carrying out environmental restoration.

9.4 The districts

The research focuses on the five districts of the MCM (Figure 9.1). Four of these districts were created in 2011–2012, a period that saw profound changes in the municipal agri-food strategies, while the DAMA district is the outcome of a more recent effort by local farmers and institutions.

Formally, the districts are consortium organizations with a light management structure and a low operating budget. Four of the districts were established based on geographical attributes (three are connected to waterways and one to the city of Milan), while one is more defined by its farmers' produce (Rice and Frogs).

9.4.1 Milan Agricultural District (DAM)

The Milan Agricultural District (DAM), created in 2011, now counts 34 farms spanning around 1,500 hectares of agricultural land, mostly situated within the boundaries of the city. The main activities of the farmers are those typical of the area—rice (10,000 t), maize (5,000 t), and milk production (2,000 t)—although a horticultural operation also started recently. On the whole, these farms' approach to agriculture is rather conventional: the farmers have adopted integrated farming techniques, but organic farming is essentially absent, with the exception of the horticultural production.

The DAM's focus is on building a positive relationship between urban and rural areas and integrating agricultural activities in the city. The district's development plan identifies its primary objective as the protection of the commons, particularly water and soil, along with landscape and peri-urban environmental rehabilitation.

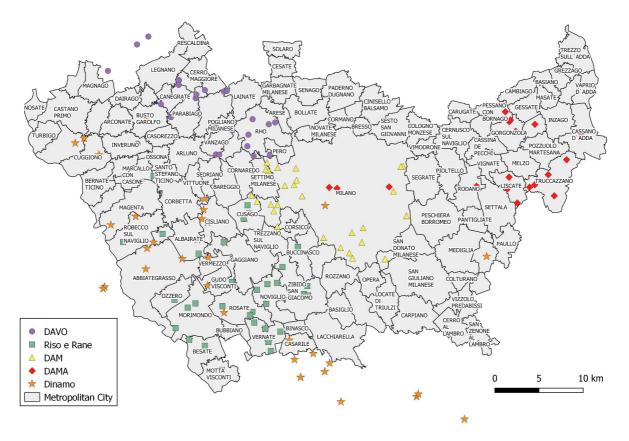


Figure 9.1 Member farms of the agricultural districts of the MCM.

(Map by Valerio Bini based on data collected by Valerio Bini, Giacomo Zanolin, Chiara Pirovano, and Luna Alice Rolle)

The location of the farms is a key feature of the district, in terms of both opportunities and threats. On the one hand, the area is characterized by strong pressure from urban activities—associated with real estate speculation and social and environmental externalities—that have eroded the quantity and quality of agricultural spaces, especially during the period between 1950 and 1990. On the other hand, the city represents an opportunity to enhance the production and distribution of food, in a new synergetic relationship between rural and urban actors.

9.4.2 Adda Martesana Agricultural District (DAMA)

The DAMA was established in 2017, and consists of 25 members, mostly based in the eastern part of the MCM. Agriculture has traditionally had an important place in this part of the region and the area is marked by the presence of two crucial hydraulic infrastructures: the Villoresi channel, built at the end of the 19th century for irrigation purposes, and the Naviglio Martesana Canal, built in the 15th century to connect the city of Milan with the Adda river.

Although agricultural activities still cover nearly half of the total area (Istat, 2010), they are now threatened by urban sprawl and infrastructure—most notably two highways built in the last 10 years (A35; A58)—which are further fragmenting the already shrinking rural area. Agriculture is weaker here than in the DAM area, and the district was specifically created to defend these residual spaces against the erosion produced by urban dynamics. Most of the members are farmers engaged in conventional farming (grain production and cattle breeding), but the district also includes a few non-farm enterprises, such as the service company "La Madonnina" and the fair-trade store in Agrate Brianza.

The general objective of the district plan highlights the conflict between agriculture and urban sprawl, as it aims to preserve and develop high-quality farming "as a form of territorial protection against soil consumption" (*Distretto Agricolo Adda Martesana* (*DAMA*), 2017, Art.1). The first line of action is focused on increasing cooperation between farmers surrounding agricultural activities (new crops or techniques) and communication (e.g., the creation of a district label). A second category of action is geared towards strengthening the ties between farmers and local and regional institutions. Finally, the district strives to enhance its environmental and historical heritage, in part to promote tourism.

9.4.3 Olona Valley Agricultural District (DAVO)

The Olona Valley Agricultural District was created in 2012 by the Olona River Consortium, one of the oldest river management institutions in Italy (founded in 1606). At present, the district counts 39 members from a fairly large area in the north-west part of the MCM and the southern part of the Province of Varese. Due to the natural characteristics of the area, agricultural activities are

less prominent in the northern part of the MCM than in the rest of the region, and urbanization is far more extensive.

Like in the first two districts, grain production and cattle breeding are the dominant activities in the area, but a wider range of products are made in this district than in the DAM and the DAMA. The first strategic pillar of the district plan focuses on territorial regeneration through projects that encourage people to visit and use the area. The second strategic pillar aims to develop services for citizens, companies, and users. Finally, the district strives to improve farm performance through collective and coordinated actions.

Given its specific nature, this district prioritizes environmental actions, especially relating to water issues, and it is involved in important territorial management projects (see Section 4.1). At the same time, like all the other districts, the DAVO has developed more typical activities such as the promotion of local products in local markets and through mass retailers.

9.4.4 Rice and frogs

The "Riso e Rane" (Rice and Frogs) district was founded in 2011 in the south-western part of the MCM. The 23 municipalities involved cover an area of 30,513 hectares (19.37% of the Metropolitan City of Milan) and specialize in intensive rice cultivation: productive agricultural soil accounts for 80% of the area, and 60% of the land used for rice-growing in the metropolitan area of Milan is located in the municipalities within this district.

The Rice and Frogs district was created in order to build a network of local farmers, to distinguish their presence on the market by certifying the high quality of the food they produce. To this end, the district has developed a marketing strategy mainly targeting the MCM urban and peri-urban markets, focused on the high quality of its agricultural products. It has also created a specific label for its rice, which has proven useful for penetrating large markets by using recognizable packaging that enables consumers to choose high-quality food certified by the district.

Moreover, to promote the image of the rice produced in this area, the district has developed actions to ensure the quality of the food and its unique value. As part of this work, in 2016 the district launched an important project called the "DNA-controlled brand". The aim of the project is to certify the quality of the local rice with genetic analysis identifying the specific characteristics of the different varieties grown by the farmers (Carnaroli, Arborio, Volano, Baldo, S. Andrea, and Vialone nano).

Finally, an objective specific to the "Rice and Frogs" approach to federating farmers is to motivate them to cooperate rather than compete. The underlying premise of this objective is that an individual farmer cannot compete on the global rice market on their own. The district exists essentially to generate economic opportunities to foster cooperation between farmers who can grow stronger if they buy and sell as a single economic actor.

9.4.5 Neo-rural district of the three waters of Milan (Dinamo)

Dinamo was founded in 2012 by 42 farmers in an area delimited by three watercourses: the Ticino River, the Villoresi Channel, and the Naviglio Pavese Canal. At present, the district counts 36 farms located in two provinces, Milan and Pavia, across an area that partially overlaps with the Rice and Frogs district. The main crop is rice, but in this case the district's strategy is more geared towards diversifying agricultural activities rather than focusing on a single product.

The main aim of this district is to combine high-quality production with agriculture and environmental restoration. These two dimensions are intertwined in the district's vision. In line with the European Union's Common Agricultural Policy, it considers the environment and the landscape as strategic ecosystem services that can generate added value and make local products more competitive in the global economic system. According to the vision of Neo-rural Group, an organization that includes some of the largest Dinamo farms, biodiversity is the key factor distinguishing high-quality food produced in the MCM from low-quality food that could have been produced anywhere in the world. Biodiversity is thus far more than an ethical goal for the district: it constitutes an economic strategy to try to sell agricultural products at higher prices than those set by national and international markets.

In connection with this, a second aim of the district is to promote local products on a local scale, through marketing and branding strategies focused on generating economic demand for high-quality products grown in a high-quality environment and landscape. It has launched two specific brands to this end: "Riso dell'anno mille" and "Cavaliere d'Italia". These brands, geared towards two different sales channels (large-scale distribution and upscale restaurants respectively), illustrate Dinamo's strategy of generating added value through biodiversity and environmental quality.

A final focus specific to Dinamo's work in the MCM is multifunctionality: Dinamo runs several projects focused on building networks to complement food production with proximity rural tourism, social and educational services, and wellness activities.

9.5 The impact of the agricultural districts on the governance of the urban food system

The institution of the agricultural districts in the metropolitan area of Milan has fostered multi-level governance, empowering local farmers and generating a number of positive impacts on the development of a more sustainable urban food system. In the Impact Pathway Map we drew with the farmers (see Section 9.2) following the Urbal process, we grouped these impacts into four areas of action: 1) territorial planning; 2) economic activities; 3) socio-cultural dynamics; and 4) project design (Figure 9.2).

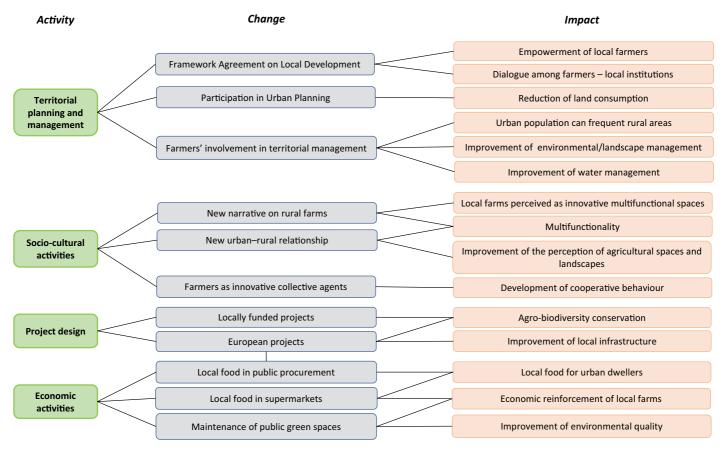


Figure 9.2 Impact pathway map (Bini et al., 2019).

9.5.1 Territorial planning

Agricultural districts provide a useful framework for addressing some of the structural problems facing contemporary agriculture, bringing together farmers who would otherwise have very little agency. For instance, districts have played a role in the negotiations around land-use policies at local level, and some districts, especially Dinamo and the DAM, have emphasized this political dimension, explicitly approaching their role as a force opposing the massive land-use conversion currently witnessed in the region.

Increasing farmers' power in negotiations on land-use policies is an essential precondition for the permanence of agriculture in the region, and consequently for the development of a sustainable urban food system.

The districts' impact on territorial planning can be observed on three different scales: at the municipal level, districts can lobby for sound land-management policies; on a broader scale, districts participate in the management of intercommunal spaces; lastly, on a regional scale, the districts contribute to defining development strategies, especially in the agricultural sector.

On a municipal scale, the negotiations around land use plans highlight the role played by the districts. The MCM is simultaneously an important centre of agricultural production and one of the largest urbanization areas in Europe. The tensions between rural and urban activities are therefore particularly high in this region. This competition has been a source of constant negotiations and conflicts in which, with the exception of occasional initiatives such as the creation of the South Milan Agricultural Park (SMAP) in 1990, urban development has largely prevailed.

As a result of this dynamic, more than 30% of the land in the MCM is covered by artificial surfaces (Ispra, 2020), one of the highest rates in Italy (third, after the neighbouring province of Monza and the metropolitan city of Naples). While this trend has now virtually stabilized (+0.5% artificial surfaces in the last seven years), conflict has been particularly fierce in the past, with documented cases of corruption to influence political actors to convert agricultural land into real estate development areas.

The Milan Agricultural District (DAM) was created in response to one of these scandals: the cheap sale of public farmland to private developers in the 1980s. In 1984, a real estate company bought Cascina Campazzo, a farm owned by the municipality and managed by the first president-to-be of the DAM, as part of a larger operation that was to lead to the construction of a new residential neighbourhood and an urban park. In 2003, after the neighbourhood was built, with the park still in the pipeline, the developer started the process of evicting the farmers from the area. Between 2003 and 2014, pressure from farmers and civil society organizations led the municipality to expropriate the land and the farm from the developer, in order to create an agricultural urban park called Parco Ticinello. This process culminated in the DAM being temporarily entrusted with the management of the 88-ha area. The Ticinello Park Association, that now manages the area, played a crucial role in the institution

of the DAM in 2011, and the municipality's radical change of strategy was made possible by the district's lobbying.

On a larger scale, some districts also participate in the land-use planning of environmentally sensitive areas. This is the case of the DAVO, which is part of the working group monitoring the Olona river, an initiative of the regional government that also involves local municipalities (Legnano, Canegrate, San Vittore Olona, Parabiago), the Olona River Consortium, and the Regional Agency for Agricultural and Forestry Services (Ersaf). The area is at the centre of a decade-long controversy relating to the construction of lamination tanks⁷ to control the effects of river flooding. In the last few years, the DAVO and Dinamo have been working together to obtain authorizations to manage the landscape of the Olona floodway channel, turning this hydraulic work with a high environmental impact into a tourism trail useful for strengthening spatial cohesion and supporting local farmers' economic development through multifunctionality (e.g., educational farms, restaurants, agritourism).

The last dimension of the districts' participation in territorial planning is their contribution to the Framework Agreement for Local Development (AQST). After an initial period of activity by the districts, which mostly coincided with the World Expo 2015, the framework agreement went through a period of relative stagnation until 2019, when the Milan Food Policy office took charge of the process to revise the agreement, leading to the approval of its updated version in June 2020. The updated AQST action plan is structured in seven macro-actions: 1) the improvement of the irrigation system; 2) landscape rehabilitation; 3) land-management improvement; 4) innovation; 5) multifunctionality; 6) the promotion of rural culture; and 7) the consolidation of development strategy. At present, of the 94 actions envisaged by the framework agreement, 42 are coordinated by a district (12 by the DAVO, 10 by the DAM, seven by Dinamo, seven by Rice and Frogs, five by the DAMA, and one by the five districts collectively). The macro-action in which the districts are most involved is the promotion of "product, process and supply chain innovation" (AOST, 2020, pp. 109-137). The action collectively managed by the five districts is the promotion of supply agreements with mass retailers and public catering, which is particularly relevant to achieving a sustainable urban food system.

9.5.2 Economic activities

Italian legislation considers the districts primarily as instruments to enhance competitiveness by creating economies of scale and network effects. Thus, many farmers in the MCM joined the districts with a view to strengthening their position on the market in a context of global competition.

Most of the farmers involved in the five districts practise rather conventional farming, producing grain (e.g., rice, maize), and dairy. Global competition on the market for these products is particularly strong. This keeps prices low, making agriculture a problematic activity in an area in such high demand for other uses. In many cases, the districts provide innovative answers to address these

structural challenges. While the five districts each have quite different situations, the economic dimension is present in all of their strategies.

We can highlight two main pathways through which the districts produce economic benefits for the farmers: 1) strengthening their position on the private-sector market; and 2) activating public-private partnerships with local authorities.

To strengthen the farmers' position on the private-sector market, the districts have produced many initiatives with interesting potential, even if their economic impact is still limited. The easiest way to leverage the districts to enhance the farmers' competitiveness is by creating a district label that distinguishes the products as "local" and/or "high-quality" food. The idea behind this strategy is to make consumers more aware of the quality of the food they eat, based on the premise that a conscious consumer is willing to spend more to buy high-quality food. All the districts have in different ways promoted a label to market part of their products in specific contexts (e.g., farmers' markets, farm shops, conventional stores, large retail stores, etc.) In this way, the districts help by creating a recognizable identity, fostering economies of scale and facilitating the fulfilment of bureaucratic practices.

The Rice and Frogs district has developed the most structured actions in this regard, for instance with the "DNA-controlled brand" project aimed at highlighting the uniqueness of the rice produced within the boundaries of the district. Four districts have chosen to commercialize their products in the large-scale distribution circuit, Rice and Frogs, Dinamo, the DAM, and the DAVO. In these cases, the presence of a district is essential for negotiating with mass retailers and being able to guarantee the quantities required by such distribution channels.

While this strategy has great potential, the total amount of products commercialized through this channel is currently still low. The farmers of Rice and Frogs, which is the strongest district in this respect, produce around 20,000–25,000 tonnes of rice per year, yet only 1% is commercialized through the district to mass retailers. The situation is similar for Dinamo, with approximately 1% of the certified rice produced by its farmers being sold through the high-quality channels ("Riso dell'anno mille" and "Cavaliere d'Italia"). Moreover, competition among the districts for the same markets (particularly rice) weakens their position on these markets. For this reason, the AQST has envisaged the creation of a special brand for the products of the MCM districts, but the negotiations are still underway.

Another strategy pursued by the districts to enhance their position on the private market is the development of autonomous commercial channels, especially through online platforms. This is exemplified by Agricibo, the website developed by the Dinamo district to sell products directly, with a potential economic benefit for both the producer and the consumer. A wide range of products is available on the website and the district delivers the products within a 10 km radius of the logistics centre, a partner farm of the district located in Rosate (MI).

The second pathway developed by the districts to enhance their economic position is the activation of public-private partnerships, either in the food sector or in the environmental services field. In the last few years, many projects have been launched to connect the districts with urban school canteens. In the focus group discussions, the representatives of the districts identified this as the strategy with the highest growth potential for food distribution. The most advanced project is the partnership between the DAM and the food service company "Milano Ristorazione" (see Chapter 6, this volume), which is 99% owned by the municipality of Milan. This project started in 2016, when DAM members were asked to supply rice for the local school canteens (180 tonnes/ year for a value of €300,000). The municipality is now extending this model to other products—particularly legumes, vegetables, and cereals—with the double purpose of enhancing the local component of the urban food service system and stimulating a transition in peri-urban agriculture from cereal monoculture to more diverse production (see infra, Section 4.4, the "Mater Alimenta Urbes" project).

As for the public-private partnerships around the environmental services provided by the districts to local municipalities, they cover a wide range of activities, from small interventions in urban green management to more complex partnerships, as in the case of the DAVO district which has been appointed to manage the land expropriated for the construction of the lamination tanks on the Olona River (par. 4.1).

9.5.3 Socio-cultural dynamics

The institution of the five rural districts has also produced a number of socio-cultural impacts, both internally on the farmers' identity, and on the urban perception of rural spaces. Many interviews identified the individualist and competitive attitude among the farmers as a relevant barrier to the development of a truly integrated urban food system. The districts have helped foster the emergence of cooperative behaviour, even if the issue of individualism is still perceived as a constraint for the development of the districts themselves. On a deeper level, some interviewees pointed out that the districts are changing the way in which farmers perceive themselves, from upholding a traditional and rather conservative stance towards more active and innovative interpretations of their role.

The emergence of these cooperative behaviours is linked to the economic benefits afforded by the districts, but also to a shared cultural *milieu* that facilitates social relationships among the farmers. The research area is characterized by a significant cultural heritage, with both architectural assets and a distinctive landscape shaped by centuries of farming, especially in the Southern part of the MCM. All the districts are involved in the preservation and restoration of this heritage: the RDP project "Mater Alimenta Urbes", for instance, has developed a specific focus on this theme, striving to rehabilitate places of significance to the identity of the local community.

The restoration of this cultural heritage should also be read as a way to promote tourism as a part of a broader multifunctionality strategy. Dinamo farmers in particular have leveraged tourism and environmental education as two strategic pillars for the promotion of their projects. Multifunctionality is part of an ongoing socio-cultural shift in urban-rural relationships fuelled by the districts, from competitive "zero-sum" interaction with the city to a win-win dynamic. This approach sees the two spaces as no longer separate or in competition for the same areas, but instead as having the opportunity to develop synergies that can benefit both urban and rural populations.

This cultural shift is still ongoing, but many districts are explicitly pursuing this objective in their plans and actions. Only Rice and Frogs—the "single-product" district—seems to remain focused on a rather conventional cultural framework and less geared towards the kind of radical change described above. This district's strategy is more focused on economic and productive impact, fostering change in consumer attitudes rather than a broad cultural shift.

To promote a new narrative, the districts organize public meetings and participate in scientific conferences focused on urban-rural interaction, such as the "Agriculture, Community and Climate" conference of 20 February 2020 organized by the Dinamo district, involving the South Milan Agricultural Park, the Ticino Park, the University of Milan and the Polytechnic University of Milan. In addition to this conference, we should also mention more practical initiatives such as "Cascine aperte" (Open Farmhouses), an annual event aimed at allowing citizens to get to know the farmhouses in the South Milan Agricultural Park (SMAP). Initiatives like this aim to overturn the traditionally closed-off positioning of the agricultural world and the corresponding indifference of the urban population towards rural life.

9.5.4 Project design

The last type of impact that we wish to highlight pertains to the farmers' ability to access external funding through project design work. The socio-economic environment of the MCM provides many opportunities for this kind of activity, in both the public and the private sector. However, farmers often cannot easily access this funding, due to operational barriers such as a lack of time to work on project design or difficulty expressing their needs and their solutions in the project design language. The districts thus represent powerful tools to aggregate the farmers' needs and to achieve economies of scale, allowing the farmers to benefit from this kind of opportunity, whether to support everyday activities or to develop innovative strategies.

In the private sector, the Cariplo Foundation has played a crucial role. Based in Milan, the Foundation is the philanthropic branch of one of Italy's leading banking groups (Intesa Sanpaolo) and the largest private donor in the area. It typically funds projects based in Lombardy with a specific focus on the MCM, and in the last ten years it has backed at least ten projects that have contributed to the development of the districts and of an urban food system in the MCM.

The institution of the DAM, for instance, is directly linked to the project "For an Agri-Cultural District in Milan", funded by Cariplo Foundation in 2010.

The existence of the districts makes farmers more visible to other actors in the area, thereby facilitating the creation of partnerships with institutions and civil society organizations to initiate projects for developing and protecting the territory. This is the case of the "Olona entra in città" project, developed in cooperation between the municipality of Rho (MI) and the DAVO from 2014 to 2018, or the "Librarsi" project, launched in 2016 by Legambiente, one of the biggest environmental organizations in Italy, in collaboration with Dinamo.

The importance of the districts is even more visible in the case of institutional projects such as those of the EU Rural Development Programme (RDP), which requires applicants to have specific project design and management skills. In this regard, the most interesting case is the project "Mater Alimenta Urbes" (Measure 16 "Cooperation", Action 16.10.02 "Integrated Area Projects"), approved in 2019. This project represents an innovative form of collaboration between local bodies (six municipalities of the MCM are directly involved in the project), farmers (21 farms), and agricultural districts (the DAM and the DAMA). The project aims to strengthen collaboration between farmers and local institutions in the public food service sector, promote land-scape restoration activities (hedge and tree-row restoration), and improve slow-mobility infrastructure (signage and cycle lanes).

Neo-rural projects promoted by Dinamo are also closely informed by the EU Rural Development Programme, for example Measure 214 (Agri-environment payments) of RDP 2007–2013 and Priority 4 of RDP 2014–2020 (Restoring, preserving and enhancing ecosystems related to agriculture and forestry). Biodiversity and rice production have been promoted by Dinamo through these instruments (Bogliani & Della Rocca, 2014), deeply transforming the landscape in a large area between MCM and the province of Pavia, and offering a unique example of the potential of agro-ecological ecosystems to produce high-quality food and regenerate the environment (Assandri et al., 2018).

The RDP also funded the institution of the Rice and Frogs District in 2011 and its flagship initiative, the "DNA trademark" rice certification project. This initiative was recognized as best practice by the Lombardy region in the project "Rural-Urban partnerships Motivating Regional Economies" (Rumore), an international initiative co-financed with ERDF funds from the Interreg Europe Programme.

9.6 Conclusion

The five rural districts presented here emerged in the same socio-political context, but evolved in slightly different ways, emphasizing one or another of the dimensions of food system sustainability addressed by the Urbal project (environment, society and culture, economics, health, nutrition, and governance) based on very local characteristics.

The political dimension is evident in the districts that are more exposed to pressure from the urbanization process, such as the DAM, which sits within the boundaries of Milan. On the contrary, the Rice and Frogs District, which is deeply embedded in an agricultural landscape, has focused on the economic aspects of sustainability. The environmental dimension is crucial for a "riverbased" district such as the DAVO and for the more innovative, neo-rural Dinamo district, the strategy of which explicitly strives for a new form of agriculture and an integrated relationship between urban and rural spaces (Van der Ploeg, 2018).

The environmental dimension introduces a decisive challenge for the development of a sustainable urban food system. On the one hand, the districts are crucial instrument for protecting agriculture from urban sprawl and developing a locally anchored food system; on the other, many members of the districts still practise rather conventional agriculture with a significant environmental impact. The MCM involves widely diverse configurations, ranging from single-product conventional districts (e.g., Rice and Frogs) to more experimental and agroecology-oriented farmers (e.g., Dinamo). The conflict between local and agroecological agriculture represents a potential fault line within districts in the future. The relative heterogeneity of the districts can be a strength that fosters inclusiveness, but it also has the potential to hinder coordinated action by the districts and limit their action on small-scale projects. In terms of scale, the districts have prioritized local action based on micro-interventions, and the main challenge for the future will be to scale up these initiatives to have a bigger impact on the region's socio-spatial dynamics. In this regard, the RDP project developed by the DAM and the DAMA could provide a template for these actors' development, showing the potential role of the districts in larger projects funded by bigger players, such as the EU.

On the whole, the districts offer an excellent opportunity to innovate with the food production process (Calori & Magarini, 2015), activating Alternative Food Networks (AFNs) (Dansero & Pettenati, 2018) that are capable of reshaping the relationship between the city and the peri-urban countryside (Donadieu, 2013). Districts are bearers of a creative vision with strong innovative potential, underpinned by two fundamental elements: 1) the ability to create and manage multi-level governance tools; and 2) an approach to land-use policies guided by landscape agriculture (Poli, 2013). District farmers recognize the value of the landscape in which their farms are located, which not only plays a role in grounding production activities, but is also a crucial factor of production capable of generating a fundamental surplus value for local food and making it competitive on the global market and attractive to city dwellers, who are becoming increasingly interested in buying good and healthy food.

These are key issues that lead us to reflect on the role of agricultural districts from the point of view of land governance: through the districts, farmers transcend their role as workers of the land and become protagonists of a movement for radical change in land-use policies. The districts work to promote

access to the tools and funds of the Common Agricultural Policy, provide technical support for the implementation of projects that have concrete effects on food production and distribution, and contribute to the maintenance and production of the local environment and landscape.

Measured in purely econometric terms, their impact is still very limited. Nevertheless, at present, the agricultural districts can be considered as emerging actors that are playing a crucial role as innovators of metropolitan food systems governance, and forerunners of change in the making.

Notes

- 1 In Italian legislation, the denomination of "agricultural district" has changed over time and differs according to the scale of analysis (e.g., agricultural districts, rural districts, agri-food districts, food districts, etc.). This chapter will use the term agricultural districts to refer to the general concept and the other terms to identify particular forms of organization defined by specific regulations. For example, the five districts analysed in this chapter have been labelled "rural" by the local legislation (see Section 3).
- 2 The two focus groups were organized before the COVID-19 outbreak, in collaboration with the Milan Food Policy Office.
- 3 The meeting was co-organized with the Food Policy Office of the City of Milan, in order to develop one of the strategies identified in the Framework Agreement for Local Development (AQST, see Section 3 and 5.1), namely strengthening the districts' commercial networks.
- 4 In this case, the first term refers to more general and diverse farm clusters, while the other two denote districts more specifically linked to particular products.
- 5 The name change reflects only the location of the districts and did not result in changes to the way they operate.
- 6 In 2016 two more institutions signed the agreement: the East Ticino-Villoresi Consortium and the Olona River consortium.
- 7 A lamination tank is a temporary rainwater storage tank.

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