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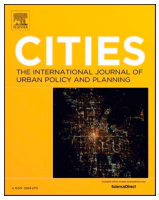

City profile: A history of changing urban powers to feed the city of Barcelona

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ABSTRACT

Cities play a critical role in advancing planetary sustainability and equity challenges, including the transformation of food systems. Addressing this transformation requires urban food scholarship to engage more deeply with their urban contexts and assess interventions within their historical and socio-ecological trajectories. This city profile analyses 800 years of food governance in Barcelona to progress our understanding of how different powers and capacities shape the city's food systems over time. Using documentary analysis, participant observation, and interviews, we first identify five distinct historical periods, showing how local powers have shaped Barcelona's food system through famines, wars, riots, dictatorships, and democratic transitions. We then analyse Barcelona's contemporary urban food governance, highlighting critical challenges, key policies, and their impacts. Our findings reveal how a range of policy instruments and institutions have historically addressed complex urban food challenges - shifting from regulatory and coercive tools to softer, behavior-oriented approaches alongside a decline in citizen mobilization. Engaging with this historical evolution of urban food governance might contribute to a much-needed expansion of urban food policy imaginaries and practices to address planetary emergencies.

1. Introduction

In an increasingly urbanized world (UN, 2022), recent evidence states that the struggle for sustainability and equity will be won or lost in cities (Nijman & Wei, 2020). Furthermore, food system transformations have been considered to be essential to address the climate emergency (Clark et al., 2020; Masson-Delmotte et al., 2022) and to deliver social, economic, environmental, and health benefits in an unequal and malnourished world (Ambikapathi et al., 2022; Fanzo & Miachon, 2023). At the juncture of these challenges, there has been an increasing interest in policy, civic, and academic arenas to transform urban food systems. Hundreds of cities are developing urban food policies and activities to create more sustainable food systems, and studies on urban food governance dynamics are globally expanding (Moragues-Faus et al., 2023). Currently, international agencies, policymakers, scholars, and social movements are calling for food system transformation and increased leadership of cities.[1] However, cities have been continually transforming food systems for centuries, shaping not only how food is accessed and consumed within their boundaries but also the wider global food system (Ghosh & Meer, 2021; Steel, 2013). Barcelona's foodscape is a case in point. In this city profile article, we trace nearly 800 years of change in the city's food governance through famines, wars, coups, bread riots, and periods of democratic control over prices and distribution, culminating in the city's recognition as the Barcelona World Sustainable Food Capital in 2021.

In the last decade, the rapid increase in activity around urban food systems has sparked a growing interest in the study of urban food governance. Research on this area has chiefly revolved around three domains. First, the analysis of the emergence and implementation of specific urban food policies and programs, such as public procurement (e.g., Smith et al., 2016), urban agriculture (e.g., Cohen & Reynolds, 2014), urban planning (e.g., Battersby & Watson, 2019), or health-related initiatives (e.g., Freudenberg & Atkinson, 2015). Second, many scholars have documented the development of urban food strategies that integrate different sectors and activities, from health to environmental concerns and from farm to fork. This includes the establishment of associated multiactor spaces of deliberation, such as food policy councils, which take a holistic and place-based approach to food policy

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[1] For example, the UN Food System Summit gathered in New York in September 2021 recognized the critical role of cities and local governments in transforming food systems.

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reform (e.g., Landert et al., 2017). Furthermore, several authors have conducted comparative studies to provide a comprehensive picture of how these urban food innovations spread. Their findings indicate a concentration of efforts in the Global North (Romero A et al., 2023; Zhong et al., 2023) alongside a generalized slow progress toward effective integration of sectors and goals as well as the establishment of pluralistic governance spaces (Candel, 2019; Doernberg et al., 2019; Sibbing et al., 2021; Sonnino et al., 2019). Third, recent research has investigated how cities build translocal alliances by assembling knowledge, resources, and experiences, rescaling the impact of individual city transformations (Moragues-Faus & Sonnino, 2019).

Despite the expansion of the urban food literature, recent compilations on the field show the need for a more rigorous engagement with the urban dimension of this phenomenon, which involves considering material, relational, and governance specificities of urban spaces rather than just conducting a general local analysis of their food dynamics (Battersby & Haysom, 2018; Moragues-Faus & Battersby, 2021). For that purpose, it is paramount to situate current urban food policy developments in their historical and socioecological context (Duminy, 2022; Friedmann, 2018; Yasmeen, 2022). In this city profile article, we aimed to examine the city of Barcelona as a compelling case study to progress our understanding of the different powers and capacities of city governments to shape food systems, how they have evolved, how they intertwine with other urban agencies, and how they shape current possibilities of further food system transformation to attain sustainability as well as food and nutrition security goals.

Barcelona presents a highly relevant case study to understand the changing role of the city government in shaping food systems and, therefore, key urban dynamics, such as infrastructure, as well as the socioeconomic performance and health status of the population. In recent years, Barcelona has demonstrated leadership in transforming urban food systems (Ajuntament de Barcelona, 2021a; Covarrubias & Boas, 2020). In 2015, it joined other global cities in the Milan Urban Food Policy Pact (MUFPP), an international treaty that promotes healthy, just, and sustainable urban food policies. The launch of the MUFPP, together with the 2030 Agenda for Sustainable Development (2015) and the New Urban Agenda (2016), marked a turning point in situating cities back as key food governance actors (Forster et al., 2022). In 2021, Barcelona was named the World Sustainable Food Capital, which involved the placement of sustainable urban food policies at the center of the social and political agenda. However, this surge in giving centrality to urban food policies is not new. As shown in this city profile, food governance has been pivotal in the city's development throughout the past centuries. The reach and intensity of the interventions to ensure adequate food availability and quality within city limits have ebbed and flowed with the tides of municipal, regional, and state politics.

The historical changes in Barcelona's food system have been the focus of several studies, particularly its markets (Fava et al., 2010 and 2016; Fuertes & Gomez-Escoda, 2022; Guàrdia et al., 2010; Renom, 2016a). Recent contributions include a range of topics from food environments to urban agriculture or sustainability (Camps-Calvet et al., 2022; Covarrubias & Boas, 2020; Garcia et al., 2020; Goossensen et al., 2023; Londoño-Cañola et al., 2022; Planas et al., 2025). Herein, we build on this knowledge to identify the governance changes underpinning the city's shifting foodscape from the 13th century to the present. Our analysis revealed the importance of including a historical and socioecological perspective in urban food governance analysis, which allowed us to reassess the innovativeness of urban food governance in the 21st century, with a particular focus on the governance tools used. Our results contribute to critical debates on the actual transformative capacity of urban food governance and open new avenues to explore political possibilities inspired by former interventions. This is particularly relevant as hundreds of cities are developing urban food policies, yet sustainability and food security challenges are increasing (HLPE, 2024).

The research methods used included documentary analysis, participant observation in Barcelona food governance spaces and activities, and interviews with nine informants, including public sector representatives (4), academics (3), and civil society (2). We reviewed historical and contemporary secondary data sources on Barcelona's food system, such as official reports, statistics, and food strategy, key publications from the Barcelona History Museum, as well as salient books on the history of Barcelona's food provisioning (Planas et al., 2025; Renom, 2016a). Access to additional data on the key trends in Barcelona's current food system and its governance was secured through the participation of both authors in the city's urban food activities from 2019 to 2022. One author participated as an academic, whereas the other joined in the coordination team for the municipality's food policy unit. The most relevant activities included leading a diagnostic assessment of Barcelona's food system, designing and coordinating the development of the 2030 Barcelona Health and Sustainable Food Strategy, coordinating the international relations of the city's food policy unit, and attending interdepartmental and intergovernmental meetings. In total, we participated in over 100 meetings organized by the City Council related to urban food policies. Our interviews and data analysis focused on uncovering what urban powers have been mobilized to shape Barcelona's food system in each historical period, with a particular emphasis on the City Council's actions.

The reminder of this study is organized as follows. Section 2 depicts the city's geographic and social contexts. Section 3 involves a historical analysis of Barcelona's food governance, which identifies five distinct historical periods. Section 4 presents the key trends characterizing Barcelona's contemporary food system. Section 5 examines novel governance, policy interventions, and identified impacts. We conclude by highlighting the importance of historical analysis of urban food governance to expand current political imaginaries and undertake necessary socioecological transformations.

2. Geographic and social contexts

Barcelona is the capital of Catalonia and the second-largest city in Spain. It is located northeast of the Iberian Peninsula on the main coastal corridor linking the Spanish mainland with France (Fig. 1). The Roman city of Barcino was settled in this location during the 1st century BCE, and cities have prospered there ever since.

Barcelona sits on an inclined plain that gradually rises from the Mediterranean Sea in the south to the Collserola mountain range in the north. Collserola was declared a Natural Park in 2010. It covers 8000 ha and separates Barcelona from its inland suburbs. The city is situated between two rivers, the Besòs and the Llobregat. The Llobregat River is separated from the city by the Montjuïc Mountain, a broad, shallow hill overlooking the harbor to the southwest of the city center. Seven more hills rise from within the upper part of the city, namely, Peira, Carmel, Rovira, Creueta del Coll, Putxet, Monterols, and Modolell.

Barcelona is divided into 10 districts (Fig. 2), which serve as administrative units managed by councilors appointed by the city government. Each district possesses its own budget as well as certain autonomy and decision-making powers related to local issues, such as planning or infrastructure. Each district is further divided into 73 neighborhoods.

Barcelona has 1.655.956 inhabitants and is one of Europe's most densely populated cities, with 16.339 inhabitants/km^2 (Idescat, 2023). Approximately 81 % of its land has been urbanized, whereas its woodland mosaic accounts for 17 % and its agricultural land for 0.7 %. This implies only 7 m^2 of green public space per inhabitant if the Collserola Natural Park is excluded and 17.2 m^2 if included (Ajuntament de Barcelona, 2021b). Table 1 presents the demographic evolution of the city of Barcelona from the creation of the Consell de Cent (1249) to the present. The city's population has nearly tripled since 1900. Feeding this rapidly growing city has been made possible by changes in the urban form and critical transformations in the global food system, from production and processing to trade, transport, and logistic innovations.

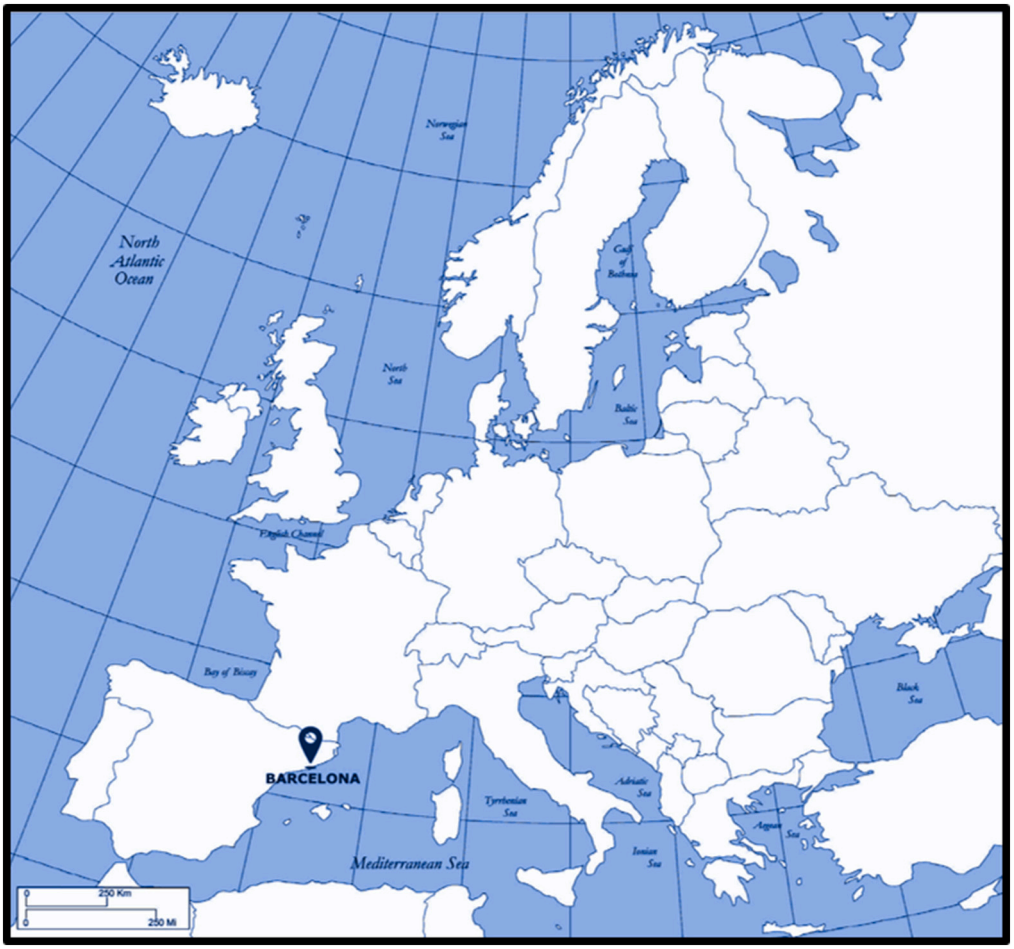

Fig. 1. Barcelona location. Source: Adapted from www.alabamamaps.ua.edu

Barcelona's spatial organization has evolved through different historical periods in line with demographic changes. Consequently, Barcelona showcases an urban form with three distinct areas: 1) The city center, characterized by its original irregular and compacted layout enclosed within city walls until the late 19th century; 2) the Extension Plan (Eixample), developed during the late 19th century and the first half of the 20th century to accommodate population growth by demolishing the walls and expanding through a grid structure with uniform buildings, absorbing nearby towns as neighborhoods; and 3) the periphery, which expanded since the 1950s to accommodate a growing immigrant population and is now mainly residential and features some green spaces and old rural centers integrated into the urban fabric (Reher, 1994). Over the past three decades, Barcelona has focused on the integration of urban peripheral areas, enhancement of public spaces, and improvement of mobility networks.

Like many other European cities, Barcelona is part of a larger metropolitan region encompassing 36 and 164 municipalities in its first and second rings, respectively (Fig. 3). Since 1960, nearly the entire the population growth has been outside the city of Barcelona, creating a dense metropolitan area. Two adjacent municipalities of Barcelona–L'Hospitalet de Llobregat and Badalona–rank 1st and 3rd among the most densely populated square kilometer in the European Union (EUROSTAT, 2020). The metropolitan region of Barcelona showcases two distinct approaches to urban development and land use. In the center of the metropolis, there is a dense and interconnected urbanization model with a mix of functions. Conversely, the outer metropolitan periphery mainly displays zonal functionalism, discontinuous urban fabrics, and lower population densities, particularly in the second ring (Miralles-Guasch & Fulla, 2012).

Barcelona and its metropolis are key economic poles in Spain. In 2023, the city's unemployment rate was 7.3 %, which was lower than the 11.8 % average in Spain (Ajuntament de Barcelona, 2023a). The city's economy is heavily shaped by the tourist sector, which accounted for approximately 12 % of its GDP and 9 % of its jobs (Ajuntament de Barcelona, 2023b). Since the 1992 Olympic Games, Barcelona has increasingly become a branded hub for international tourism, receiving approximately 28 million visitors annually. Barcelona is also a diverse city, home to 180 different nationalities. In 2022, more than half of Barcelona's residents were born elsewhere, and 21.9 % of the population living in the city is from outside Spain (Idescat, 2023).

3. Historical development of Barcelona through a food governance lens

This section portrays how changes in political regimes transformed institutions, regulations, policy interventions, and capacities to act regarding food availability and access in the city. Concurrently, it shows how food governance became a critical tool impacting wider urban dynamics, from shaping public spaces to sparking social revolts with lasting consequences. Based on the analysis of historical secondary data, we identified five distinct periods of urban food governance in the city (Table 2).

3.1. Consell de cent: Mobilizing city powers to feed the medieval and renaissance city (1249–1714)

During this period, Europe was mainly governed by feudalism and monarchical systems, evolving into early centralized state authorities by

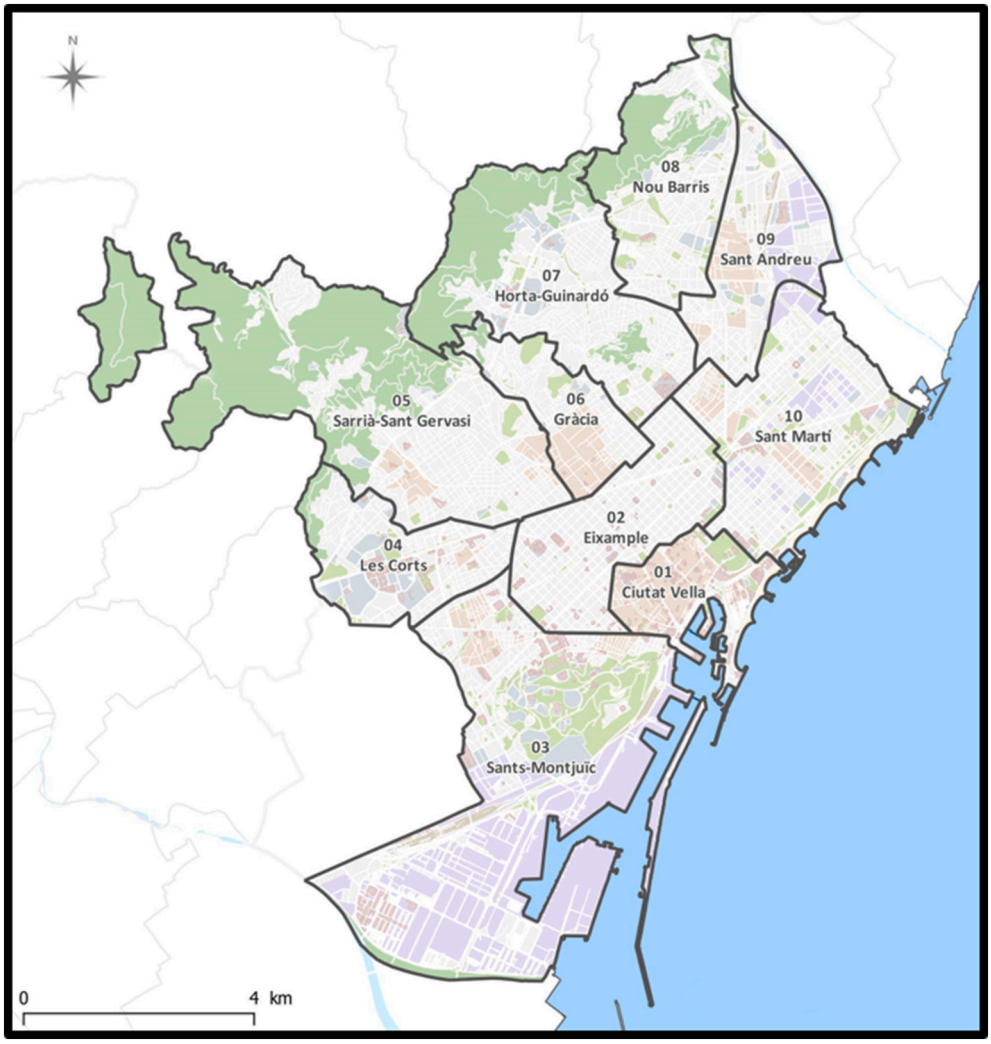

Fig. 2. Districts of Barcelona. Source: Ajuntament de Barcelona.

the later centuries. In 1249, King Jaume I of Aragon granted Barcelona's resident municipal self-government privileges for the first time, establishing the Consell de Cent, which means a Council of One Hundred in English. This body served as Barcelona's executive governing body until 1714. Comprised of one hundred members, including eight council members and a general assembly of citizens, it had significant powers to manage city affairs, particularly food security.

Throughout this period, food systems were predominantly local and reliant on agricultural productivity (Braudel, 1981). Like many large European cities, Barcelona faced recurring food crises, particularly between the 12th and 13th centuries, with famines becoming more frequent (Benito i Monclús, 2016). Wheat was the main staple for both the rich and poor, mostly in bread form (Riera Melis, 2016). As grain production in the region was insufficient to cover the urban population's needs, Barcelona became reliant on imports, which mostly arrived through maritime or fluvial routes, mainly from Italy (Cáceres Nevot, 2016).

To address the cyclical food crises, the Consell de Cent increasingly began to regulate grain trading, aiming to stabilize prices and ensure availability (Benito i Monclús, 2016; Corteguera, 2016; Verdés-Pijuan, 2016). It operated in an extremely unstable context characterized by limited food productivity, a lack of food alternatives to the most consumed grains, and often increased prices under the influence of speculative cycles (Cáceres Nevot, 2016). Consell de Cent's interventions included banning grain exports, subsidizing imports, confiscating grain when necessary, creating food stocks, and negotiating with other regions for supplies (Cáceres Nevot, 2016). While the grain market was the main focus for interventions, it also intervened in other important food markets, such as lamb (Banegas-López, 2016) and fish (Comas Via & Vinyoles Vidal, 2016).

Furthermore, inspired by the city of Valencia, the Consell de Cent established a legislative body and created a sui generis institutional authority figure, namely, the mostassaf, whose job was to protect the economic interests of both producers and consumers by ensuring fair-trade practices. The mostassaf oversaw and controlled weights, prices, the activity of traders, and the quality of products to avoid fraud and adulterations. He also had the power to fine, detain, restore goods, or even bar someone from their guild (Bajet Royo, 1995).

In addition, the Consell de Cent oversaw critical food infrastructure and spaces in the city (Fig. 4), consolidating a stable food supply system that helped overcome famines and associated conflicts resulting from the city's periodic food shortages.

3.2. Food provision in a Bourbonic city: Recentralization and bread riots (1715–1811)

Between 1715 and 1820, Europe experienced significant political changes, marked by the consolidation of centralized monarchies, the rise of enlightened absolutism, and the spread of revolutionary ideas that would culminate in the French Revolution (1789–1799) and the

Table 1
Demographic evolution of the city of Barcelona and sociopolitical context*

Date	Population	Key elements of the sociopolitical context
13th Century	30.000	The beginning of a robust institutional regulation period for food provisioning by Consell de Cent.
Beginning of the 18th century	40.000	After the War of Succession, there was a significant population loss, the municipal institutions were suppressed, and the city was ruled by the royal administration from Madrid.
Beginning of the 19th century	100.000	Introduction and consolidation of economic liberalism and free trade of food until the emancipation as independent republics of the former Latin American Spanish colonies in the 1820s. Subsequently, food imports were banned to create an integrated domestic market within the Spanish Iberian Peninsula.
1890	400.000	Emergence of industrial working-class protests over both salaries and the transformations of factory work. After a liberalization period toward free trade (1868–1874), the Spanish Kingdom imposed strong protectionist tariffs on food imports to favor the big landowners who sold grains to Barcelona and other Spanish cities.
1900	550.000	Aggregation of independent municipalities into Barcelona (1897–1921).
1930	1.000.000	1936–1939 Spanish Civil War. In 1939, the Second Republic was replaced by the Francoist dictatorship.
1950	1.300.000	Massive arrival of immigrants from all over Spain to Barcelona.
1975	1.750.000	In 1975, the Francoist dictatorship ended.
2000	1.500.000	The 1992 Olympic Games catapulted the city into an international tourism hub.
2020	1.600.000	COVID-19 pandemic

Source: Adapted from Renom (2016b) with the Barcelona City Council statistical data.
* Round numbers are an approximation to provide a general view, considering the precarity of historical demographic accountability.

Napoleonic Wars (1799–1815). During the War of the Spanish Succession (1701–1714), the Crown of Aragon, including Barcelona, supported Archduke Charles of the Habsburgs, whereas the Crown of Castile backed Duke Philip of the Bourbons, whose victory led to the establishment of absolutism in Spain. Between 1715 and 1820, the Spanish food system was characterized by its reliance on subsistence farming and local markets playing a pivotal role in distribution (Llopis, 2002). Efforts to modernize agriculture were slow, with transportation and storage inefficiencies exacerbating food insecurity problems (ibid). Moreover, the Bourbon reforms were aimed at improving agricultural yields and centralizing control, but their impact was limited by local resistance and political instability (ibid).

The Bourbonic rule established the Nova Planta Decrees, which abolished Catalan institutions and led to Catalonia's loss of control over its own economic, taxation, legal, military, customs, and monetary systems. These changes included dissolving Barcelona's Consell de Cent and confiscating its properties and goods, such as the municipal grain warehouse, which was important in guaranteeing the city's food security (Feliu, 2016; López Guallar, 2016).

The new decree imposed the Council's Castilian model with royally appointed members, an aristocratic composition of governors, and a chief magistrate supervising compliance with the royal will. The new Bourbonic Council, established in 1718, did not have taxation autonomy and accumulated an outstanding debt to the royal treasury. Despite losing autonomy, this new City Council built a new public bakery (Fig. 5) and maintained a bread monopoly with subsidized prices until 1765. Then, a new Royal Decree liberalized bread prices and ended municipal privileges on food provisioning (Feliu, 2016). However, this decree failed to tackle the famines. Just a few weeks before the French Revolution, in February 1789, a sudden, sharp rise in bread prices and declining quality, particularly of the black bread relied on by the poor, triggered widespread bread riots led by women known as els rebomboris del pa (Castells, 1970). Five men and one woman were executed for instigating the riots.

These riots had long-term consequences for food governance in the city. Sortition–the selection of public servants using a random representative sample–was reintroduced to replace royal appointments. Significantly, the riots also halted the liberalization of bread markets. Thereafter, the authorities' fear of triggering more riots shaped policies. The City Council retook control of bread provisioning and once again became an essential player in the wheat trade. This began a chaotic pendulum period of food governance characterized by swinging back and forth between attempts to reinstate the liberalization of bread-making and the municipal government taking market control (ibid).

3.3. The rise of liberalism and capitalism (1812–1922)

In this period, Europe experienced substantial political transformations, such as the decline of absolutist monarchies, the rise of liberalism and nationalism, the growth of democratic institutions, and

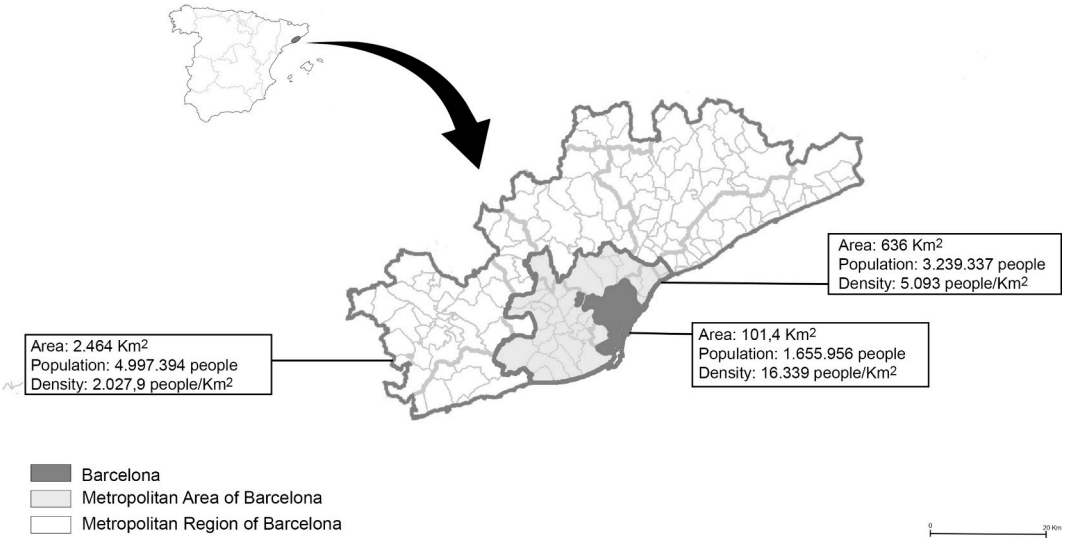

Fig. 3. Barcelona metropolis region with its two rings in 2023. Source: Adapted from Miralles-Guasch and Fulla (2012) with data from Idescat.

Table 2
Synthesis of food governance shifts in Barcelona (1249–2023).

	Governance context	Food governance
Consell de Cent	City self-governance powers through local authority: Consell de Cent	· Consell de Cent as the main city authority · Regulating trading through bans of wheat exports, incentivizing and subsidizing imports, implementing coercive measures (e.g., confiscations), creating food stocks, taxing, and proposing agreements with other regions for grain trade purposes · Overseeing food infrastructure · Controlling Barcelona's food marketing activities and food quality through a dedicated civil servant–mostassaf
Bourbonic city	Recentralization of city and regional Catalan powers, end to Consell de Cent Lack of power over taxation, economics, and customs	· Confiscation by the central government of infrastructure, such as the municipal grain warehouse · City Council invested in infrastructure: public bakery and monopoly on bread (subsidized prices) later liberalized by the Spanish King · Increase in bread price and lowering quality led to bread riots · Return to control of bread provision by the City Council to avoid riots
Liberalism, and capitalism: from availability to regulating access	Political instability: mixed and swinging use of regulation, which included liberal and protectionist measures Liberal city councils	· The Spanish rule focused on banning imports to protect the creation of an internal domestic market and to ensure its integration, together with a tax reform to end feudal privileges. · Labor conflicts and mobilization on living conditions, including food shortages, famines, and food riots at several points in time, led to punctual local political intervention, mostly on bread prices · Development of municipal markets in the city–concentration of food retail in the city and power opportunity for the liberal City Council · Liberal city councils intervened in food provisioning through the creation and management of public municipal markets, the oversight of quality and price, punctual intervention to lower food prices, and the reduction of taxes · Creation of cooperatives for self-organized, affordable food provisioning
Dictatorships	Several dictatorships characterize this period, with a short republic period followed by the Civil War and Franco's dictatorship	· During the war, subsistence gardens and agricultural collectives thrived in Barcelona, partly linked to the anarchist trade union CNT · The end of the Civil War and During the dictatorships, power was centralized by the Spanish State	the dictatorship were characterized by famine, political repression, retaliation, executions, black markets, and ration cards managed by the Spanish central government
Barcelona as a global city	Democracy was reinstated and included elected City Councils Embrace of neoliberalism	· City Council creates the Barcelona Municipal Market Institute to modernize municipal markets · Local management of the relocated wholesale market and internationalization as a global food hub, together with the expansion of the port
Barcelona, the World Capital of Sustainable Food	Consolidated democracy and diversity of powers and capacities at the local, regional, and national levels Capitalist and neoliberal regimes Increased participation of cities in food policies	· Integrated urban food strategy and participative processes and structure. · Key pillars of city council action include sustainable food public procurement, increasing local and organic food provision through labeling in public markets and support to food distribution projects, improving food assistance programs, and supporting urban agriculture projects. · Vibrant foodscape of community-led initiatives mainly operating independently and with limited levels of coordination

Source: Own elaboration.

World War I. The 19th century in Spain was characterized by political instability and deep social transformations, beginning with the Peninsular War (1807–1814) and continuing with conflicts between absolutists and liberal elites. This era saw revolutions, civil wars (such as the Carlist wars), and changes in government, including the brief First Republic (1873–1874) and the eventual restoration of the Bourbon monarchy. The turmoil of these social, political, and ideological conflicts resulted in a fluctuating regulatory environment, shifting between liberal approaches and protectionist policies. Different policy tools were utilized to construct a food system reliant on low-productivity agriculture that struggled to feed rural and growing urban populations (Simpson, 2003). Urban markets were vital for food distribution; however, underdeveloped transportation compared with other parts of Europe contributed to food shortages, price fluctuations, and social unrest. Moreover, Spain's colonies provided key food imports, but the loss of most of them after the Spanish–American war in 1989 increased the country's reliance on global markets (Clar & Pinilla, 2008).

In early-19th-century Spain, liberal ideas highlighted free-market competition for food availability; however, for the first three decades, liberalism was paired with protectionism. This approach to foreign trade involved banning imports to protect the creation and integration of an internal domestic market and implementing tax reforms to eliminate feudal privileges (Arnabat, 2016). The 1812 Constitution played a pivotal role in modernizing Spanish State structures, introducing modern city councils elected by certain taxpayers with voting rights (i.e., only in 1890 was the general suffrage for adult males established). Initially, these liberal city councils did not intervene in markets to address issues on food availability. For example, during the Triennio Liberal (1820–1823), grain imports were banned in Barcelona to protect local markets, though historically, maritime and fluvial imports had compensated for limited local grain production. Therefore, the city became dependent on inefficient land-based wheat and flour imports

1. Corrals; 2. Butcher shop on Comptal Street; 3. Plaza of the Grape Harvest (seasonal grape sales); 4. Straw Street; 5. New Plaza (produce, poultry, and cheese market); 6. Plaza of Oil (produce, poultry, and cheese market); 7. Boqueria produce market and Rambla butcher shop (since 1602); 8. Boqueria Slaughterhouse (butchers); 9. Boqueria fish market; 10. Main Slaughterhouse (butchers); 11. Tripe butcher; 12. Market and Plaza of Cabbages (produce); 13. Plaza of the Angel, old plaza of Blat de Dalt ("upper wheat street" in English); 14. Wheat weigh station; 15. Campderà Bridge butcher shop; 16. Born Plaza (produce, poultry, and cheese market); 17. Slaughterhouse of the Sea (butchers); 18. Llull Plaza (firewood weigh station); 19. Portal of Carnage (since 1571) and slaughterhouse; 20. New Fish Market (until 1598) and produce market; 21. Plaza of Wine and Voltes del Encants (literally, "turns of the enchanted")'; 22. New Plaza of Wheat; 23. Royal Palace, old Porch of Wheat and public Bakery (until 1667); 24. Windmills; 25. Fish Market of the Riverbank (since 1598); 26. Plaza of the Palace, old plaza of "Wheat of the Sea"; 27. Customs; 28. Fishermen's barracks.

Fig. 4. Food provisioning spaces in Barcelona in 1697, AHCB.

from inner Spain, prompting the construction and improvement of railroads as a means of freight transport (Arnabat, 2016; Pascual Domènech, 2016).

During this period, the industrial revolution was blossoming in Catalonia. Barcelona was Spain's only industrial city, and its working-class depended on limited wages to buy food (Borderías, 2016; Cussó, 2016). The industrialization led to labor conflicts as workers feared the increasing mechanization processes that entail human labor replacement. The combination of intermittent unemployment cycles and famines fueled unrest among the working class, prompting them to improve their organizational skills. As a response to labor conflicts, workers set fire to several convents in 1835 (Fig. 6). The newly cleared spaces were later used for public squares and municipal markets, such as Boqueria (built in 1840) and Santa Caterina (built in 1844) (Renom, 2016b). Public pressure sometimes led to government intervention in food prices. In 1858, for example, the City Council lowered bread prices in response to demands for more affordable food options (ibid).

The expansion of the municipal markets continued for decades and had significant social and economic implications (Fava et al., 2010). On the one hand, it addressed widespread unemployment and provided investment opportunities for the wealthy. On the other hand, it marked the beginning of a process to organize and centralize food-selling spaces to enhance hygiene and food safety under City Council oversight. Importantly, with the expansion of these markets, Barcelona City Council regained some control over food distribution, regulating quality and prices while generating income through market stall rentals. This income could then lower food prices by reducing taxes (i.e., a new indirect consumption tax that fell disproportionally on poorer families). Therefore, municipal markets became a key instrument for the City Council to navigate the free-market food supply from a position of authority (Renom, 2016b). Concurrently, this market expansion was part of a broader urbanistic transformation that involved the demolition of city walls and development of the Eixample, Barcelona's grid-based urban expansion (Busquets, 2004; Fava et al., 2010; Renom, 2016b).

At the same time, from the 19th through the early 20th century, dissatisfaction among the working class grew over high food prices and the consumption tax. This unrest was expressed through protests addressing wage issues and industrial work conditions (Gabriel, 2009). These protests involved the first general strikes and organized revolts (Borderías, 2002; Fuster-Sobrepere, 2016). During this time, the Catalan working-class movement also established cooperatives to facilitate affordable, self-organized food supplies (Miró, 2016). During WWI, food shortages worsened in various Spanish cities owing to food exports to warring nations (Gabriel, 1988). In response, hundreds of working-class women in Barcelona engaged in direct actions against authorities, attacked shops and food transports, and organized marches and strikes to demand support for their communities' sustenance rights (Kaplan, 1971, 1982).

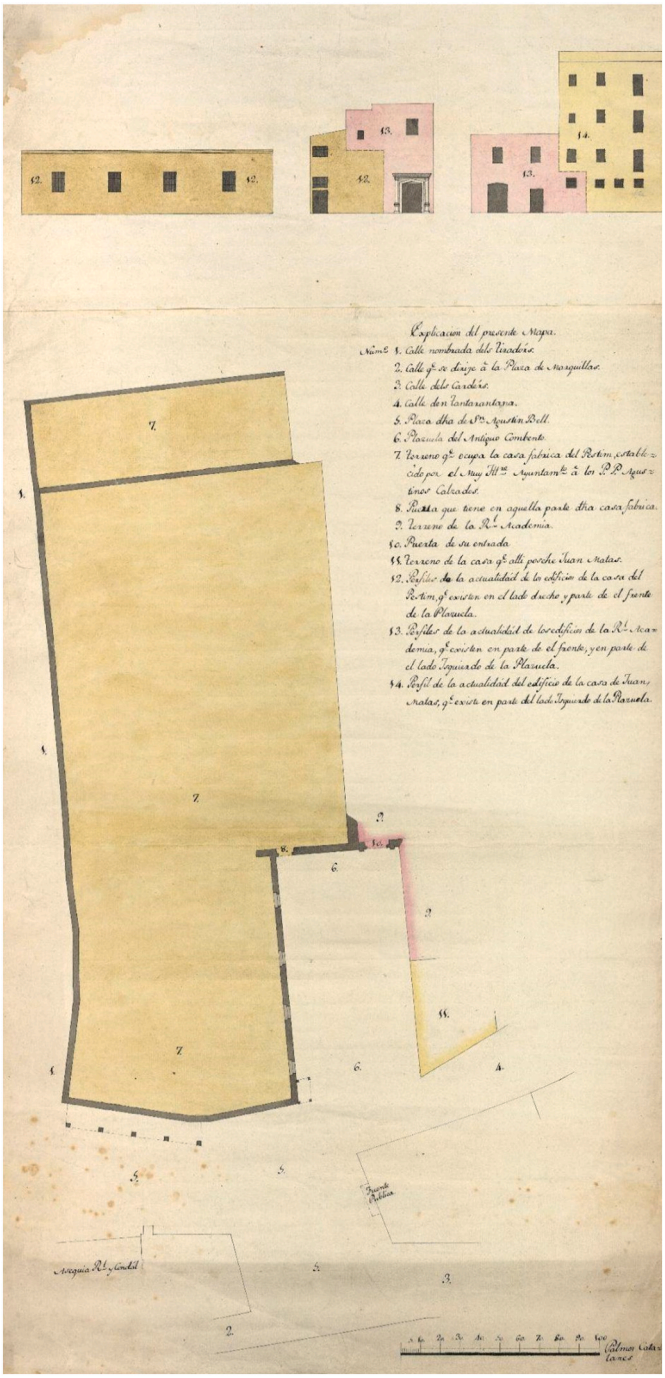

Fig. 5. Map of the Bourbonic public bakery burned during the bread riots, ACHB.

3.4. The Spanish civil war and the dictatorship periods in Barcelona (1923–1966)

The period between 1923 and 1966 in Europe was marked by major political shifts, including the rise of fascism. This period in Spain saw a civil war and three dictatorships. In the first third of the 20th century, clashes between the Spanish State and the employers on one side and workers on the other side became increasingly violent, particularly when the police murdered many labor leaders and union members (Balcells, 2009). This conflict contributed to the rise of military dictatorships of army generals Primo de Rivera (1923–1930) and Berenguer (1931), culminating in the Second Spanish Republic after the end of the monarchy. In July 1936, a military uprising supported by right-wing politicians revolted against the legitimate left-wing government of the Republic (Bengoechea, 2002). While insurgents gained control over nearly a third of Spanish territory, including the major agricultural regions, major urban centers such as Barcelona and Madrid resisted. This initial defeat of the insurgents, along with the support they received from Nazi Germany and Fascist Italy, sparked a civil war that lasted until April 1939 (Preston, 2002).

During the first year of the war, the breakdown of the Spanish State sparked a social revolution in Republican Spain, particularly in anarchist-controlled Catalonia (Ackelsberg & Breitbart, 2017; Breitbart, 1978). While Franco's forces gradually gained control of more Spanish territories, blockading and jeopardizing Catalonia's food supplies, subsistence gardens and agricultural collectives thrived in Barcelona. By the end of 1936, the Barcelonian agricultural collective supported by the anarchist trade union CNT cultivated approximately 1000 ha of urban and periurban land. As the war progressed, despite the food rationing imposed by the Barcelona City Council, food provisioning was increasingly complex, and an increasing number of families were independently cultivating (Calve et al., 2021). By 1938, approximately 10,000 garden plots were established in the city (Camps-Calvet et al., 2022).

After the Civil War, Barcelona experienced famine and misery, political repression, retaliation, executions, ration cards, and socioeconomic disparities. Under Franco's regime that restricted freedoms and imposed moral and religious values, society was sharply divided between winners and losers and between wealthy and poor. Those years of hunger, fear, autarky, black market, and smuggling were marked in the memory of an entire generation that had to live through these difficult times (Molinero & Ysàs, 2002). However, overcoming the fear of that traumatic experience under Spanish fascism, a democratic resistance movement led by clandestine labor unions emerged against the enduring Franco dictatorship (Domènech, 2022).

3.5. Barcelona as a global city: Food as a commodity (1967–2014)

This period in Europe was characterized first by the post-World War II recovery and Cold War tensions and second by the creation and expansion of the European Union (EU), which included the first Common Agricultural Policy (1962) aimed at increasing self-sufficiency and ensuring food security. From the 1980s onward, trade liberalization supported the creation of global food supply chains. Spain experienced the end of the dictatorship (1975) and transitioned to democracy, coupled with profound socioeconomic changes. The industrialization of agriculture slowly began in the 1960s and was bolstered by reforms in the 1980s aimed at improving the productivity of the sector, with gradual reductions in rural population as people migrated to cities. The EU accession and adoption of the Common Agricultural Policy led to further modernization and intensification of agriculture with high environmental impacts and a sector reorientation toward export markets. This overall increased participation in globalized food systems included the development of a large-scale agri-food industry and dietary shifts from traditional Mediterranean patterns to Western diets (Duarte et al., 2016; González de Molina et al., 2020; Varela-Moreiras et al., 2010).

During the 1950s to 1970s, a considerable influx of immigrants from across Spain led to a nearly half-million increase in Barcelona's population, reaching 1.75 million. This rapid growth promoted the construction of new residential neighborhoods. These clustered the immigrant community in peripheral city areas, often lacking essential services. Between 1940 and 1979, 24 new markets were constructed to meet the peripheral residents' needs (Guàrdia, 2012). Contrary to the decline of markets due to rapid commercial distribution modernization experienced by other European cities, the municipal markets in Barcelona became increasingly vital. They served as a network of facilities to establish robust neighborhood centers by utilizing available land in densely populated urban areas (Guàrdia et al., 2010). However, since

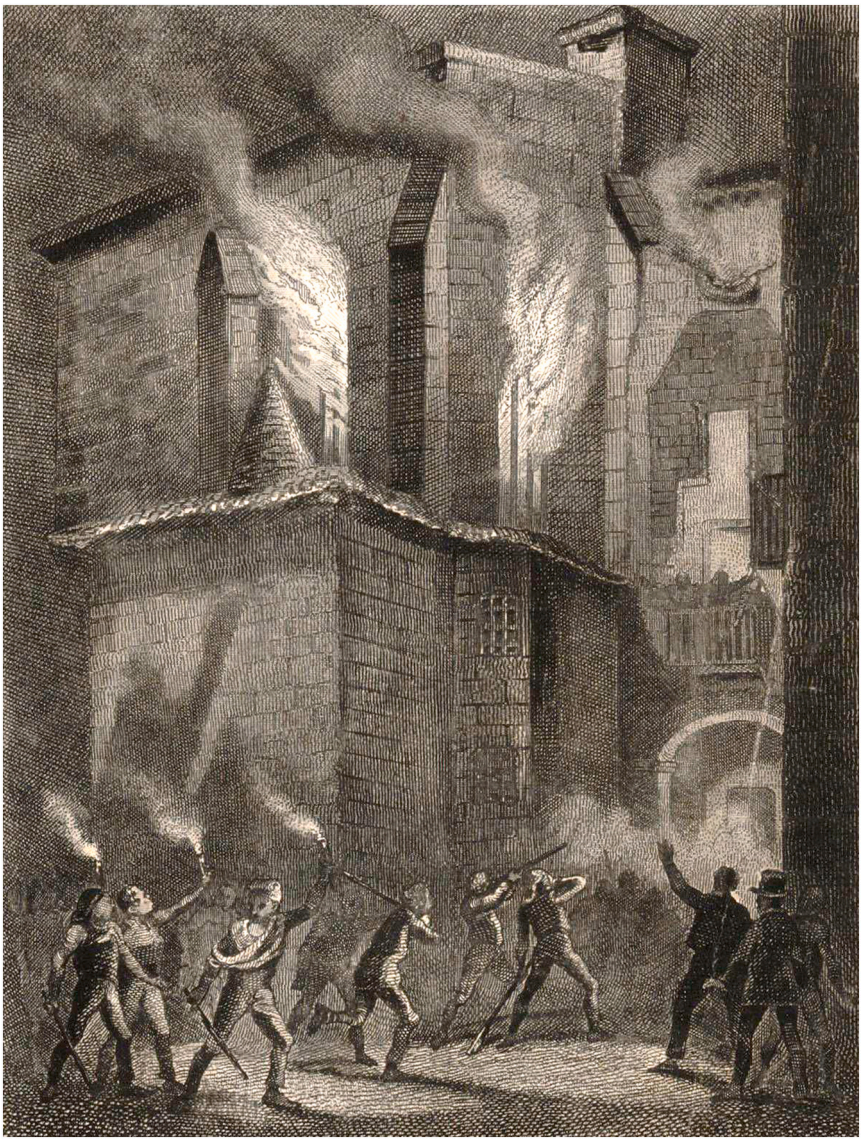

Fig. 6. Engraving showing the burning down of convents in 1835. Source: AHCB.

the 1980s, municipal markets have begun experiencing several challenges due to the transformation of the global food system. Modernization of food retailing impacted consumption patterns. The rise of supermarket chains, changing consumption patterns, and increasing participation of women in the workforce reduced the frequency of market visits, contributing to the decline of municipal markets (Fuertes & Gomez-Escoda, 2022; Soler, 2013).

After democracy was restored in 1977, the newly elected City Councils revived municipal food policies. In 1986, the pioneering Special Plan for Food Facilities (PECAB in Catalan) aimed to regulate food facilities in Barcelona, such as store locations and sizes, and was pivotal in consecrating the role of municipal markets as pillars of food supply in the neighborhoods (Fuertes & Gomez-Escoda, 2022). The initial PECAB highlighted the concept of commercial concentration around market halls as a strategy to enhance the city's food system (ibid.) It also stressed the markets' contribution to strengthening social relations, supporting small businesses, creating good job conditions, and maintaining high-value buildings (Ajuntament de Barcelona, 1986). In 1991, the Barcelona Municipal Market Institute was created to modernize and restore these markets (Fuertes & Gomez-Escoda, 2022).

Changes in municipally controlled markets included the management of the wholesale market, which was located in the city center. The city's rapid urban growth resulted in various logistical, communication, and environmental challenges for this type of market. Starting from 1971, there was a gradual relocation of the fruit and vegetable market, slaughterhouse, fish market, and flower market to the new wholesale market facilities, situated on the outskirts of the city (Mercabarna, 2023). This wholesale market has been managed by a publicly owned company called Mercabarna (Mercabarna, 2017). Throughout the decades, Mercabarna has experienced a process of business concentration as the number of operating companies has shrunk from 375 in 1980 to 154 in 2014 (Mercabarna, 2015). Concurrently, the evolution of the buyers' typology in Mercabarna has gone through substantial transformations (Table 3), shifting from serving mainly municipal market stalls (70 %) to providing services to a wide range of clients, such as independent food outlets, supermarkets, restaurants, and caterings as well as export markets. Furthermore, since the 1990s, many of these clients have been located across various geographical locations.

Over time, Mercabarna has evolved into a global center for industrial food owing to its strategic proximity to the Barcelona port and airport. The origin of the food sold in Mercabarna has also experienced considerable transformations. As shown in Table 4, during the last decades, food imports from the rest of Spain and abroad have increased at the expense of regionally sourced food. Although the data shown in Table 4

Table 3
Evolution of typology of buyers in Marcabarna in %.

	1971–1980	1981–1990	1991–2000	2001–2010	2011–2021
Municipal markets	70	55	30	15	12
Independent shops & self-service	12	7	20	27	22
Wholesales at origin and street markets	10	10	9	8	9
Supermarkets	4	20	26	23	20
Hospitality sector	4	8	10	12	15
Exports	0	0	5	15	22

Source: Ros i Saqués (2022).

Table 4
Origin of vegetables and fruits sold in Mercabarna (1988–2023) in %.

	1988	1993	2005	2010	2014	2020	2023
Catalonia	53	25	16	17	18	13	15
Rest of Spain	39	54	44	53	53	56	57
Imports	8	21	40	30	29	31	28

Source: Ros i Saqués (2022) and Mercabarna (2024a).

extends beyond the currently analyzed historical period, we found it pertinent to include them to show that the declining trend of regionally sourced food intensifies even further in the subsequent period. For example, in 2023, only 15 % of the food sold in Mercabarna was produced in Catalonia, whereas 57 % came from elsewhere in Spain and 28 % was imported from abroad (Mercabarna, 2024a).

4. Key trends and challenges of Barcelona's contemporary food system

Analysis of the history of Barcelona's food governance revealed deep changes in the powers of the City Council and the role played by citizens as well as a shift in the goals of urban food policy. Indeed, while food supply, food insecurity, and food safety have been the focus of the Barcelona City Council interventions throughout most of its history, particularly since 2015, the local government has broadened its scope of action to include pressing sustainability challenges and adopting a more systemic approach in line with international developments. In this section, we analyzed the city's key urban food system trends and associated challenges. Many of these trends actually have their roots in the previous historical period. However, the landmark year of 2015, characterized by a growing international acknowledgment of cities' roles in food policies, provides us with the justification to define this era as a distinct period of urban food governance (Foster et al., 2022). Building on recent conceptualizations of urban food systems and their key components (HLPE, 2024; MUFPP, 2024), we structured the analysis around four main topics: food production; supply and distribution; diets, consumption, and food waste; and governance, which is addressed in Section 5.

4.1. Food production and fisheries

The ongoing process of urban sprawl has accelerated the fragmentation and decline of Barcelona's urban and periurban agricultural areas (Fig. 7) owing to changes in land use as well as the abandonment caused by lack of profitability of agri-food products in global markets or expectation to changes in regulation as well as their inclusion in urban development plans (Marull et al., 2016). The loss of agricultural land in Barcelona's metropolitan area from 1956 to 2018 has caused an 80.5 % decrease in the cultivated area (21,796.45 ha lost). Consistent with other European countries, the whole region of Catalunya is experiencing a decline in agriculture. For example, the number of people working in the primary sector has decreased by almost 24 % between 2010 and 2019. Generational renewal is currently one of the main challenges for Catalan (and Spanish) farming (Binimelis & Roca, 2021). Furthermore, as regards sustainable food production, the amount of organic food produced in the region is relatively low. While 23 % of the Catalan agricultural surface was considered to be organic in 2021, only 8.2 % were actual crops, and the remaining 14.8 % were pastures and forests (Generalitat de Catalunya, 2023).

Contrarily, Barcelona's urban agriculture is slowly expanding despite the increasing marginalization it experienced throughout the second half of the 20th century owing to different waves of urbanization processes (Domene & Saurí, 2007). Although not a top priority in policy and general public agendas, particularly since 2015, there has been an increase in institutional support for community gardens (Herrero & Moragues-Faus, 2024). At present, there are 544 urban gardens (355 school gardens and 189 allotment and community gardens) (Ajuntament de Barcelona, 2022). These gardens are mainly regarded as community-buildig spaces that promote environmental values and improve physical and mental health rather than productive food spaces with the capacity to feed a considerable part of the population (ibid).

Finally, Barcelona's fish port in 2018 captured 3185 tons of fish for an economic value of 7.44 million; while the volume of catches remained stable, their value was decreasing (Binimelis & Roca, 2021). Most fish are sold at the fish market, where 60 % of the catches go to wholesalers, 30 % to retailers, and 10 % to the food service industry (Gremi de Peixaters, 2020). According to the Barcelona Fishermen's Guild, the fleet has substantially declined to 38 vessels and 300 employees because of reduced profitability, high maintenance costs, and the need for technological improvements to compete in global markets. Sustainable fishing techniques are rarely employed, and the port and market have developed recreational activities related to fishing tourism (Binimelis & Roca, 2021).

4.2. Supply and distribution

Barcelona boasts a diverse range of food outlets, with a spatial distribution skewed toward central neighborhoods (Binimelis & Roca, 2021). Despite this uneven distribution, spatial access to healthy food is guaranteed across the city: Barcelona has no food deserts (Goossensen et al., 2023). The abundant and diverse food supply of the city results in the majority of residents (91 %–97 %) mainly shopping within their neighborhood (Ajuntament de Barcelona, 2017). However, while general access to food may be widespread, the availability of sustainable and organic food is limited, and its access varies across the city. For example, only 5.9 % of all food outlets in Barcelona have been reported to sell organic food (Garcia et al., 2020).

Barcelona has many different types of food stores and associated distribution channels. The most popular are supermarkets, municipal markets, and independent grocery stores, although there are also eight farmers' markets, 58 consumer groups, and even one cooperative supermarket (Binimelis & Roca, 2021). In 2020, 63.7 % of the Barcelona residents bought food in supermarkets, 16 % in specialized grocery shops, and 14 % in municipal markets (ibid). The increasing dominance of supermarkets is impacting the most unique and crucial food infrastructure for Barcelona: the network of public municipal markets. For decades, the city has invested in a decentralized food supply infrastructure, renovating and expanding municipal markets, which have played a pivotal role in the city's structural organization (Fava et al., 2016). In fact, half of Barcelona households have a municipal market

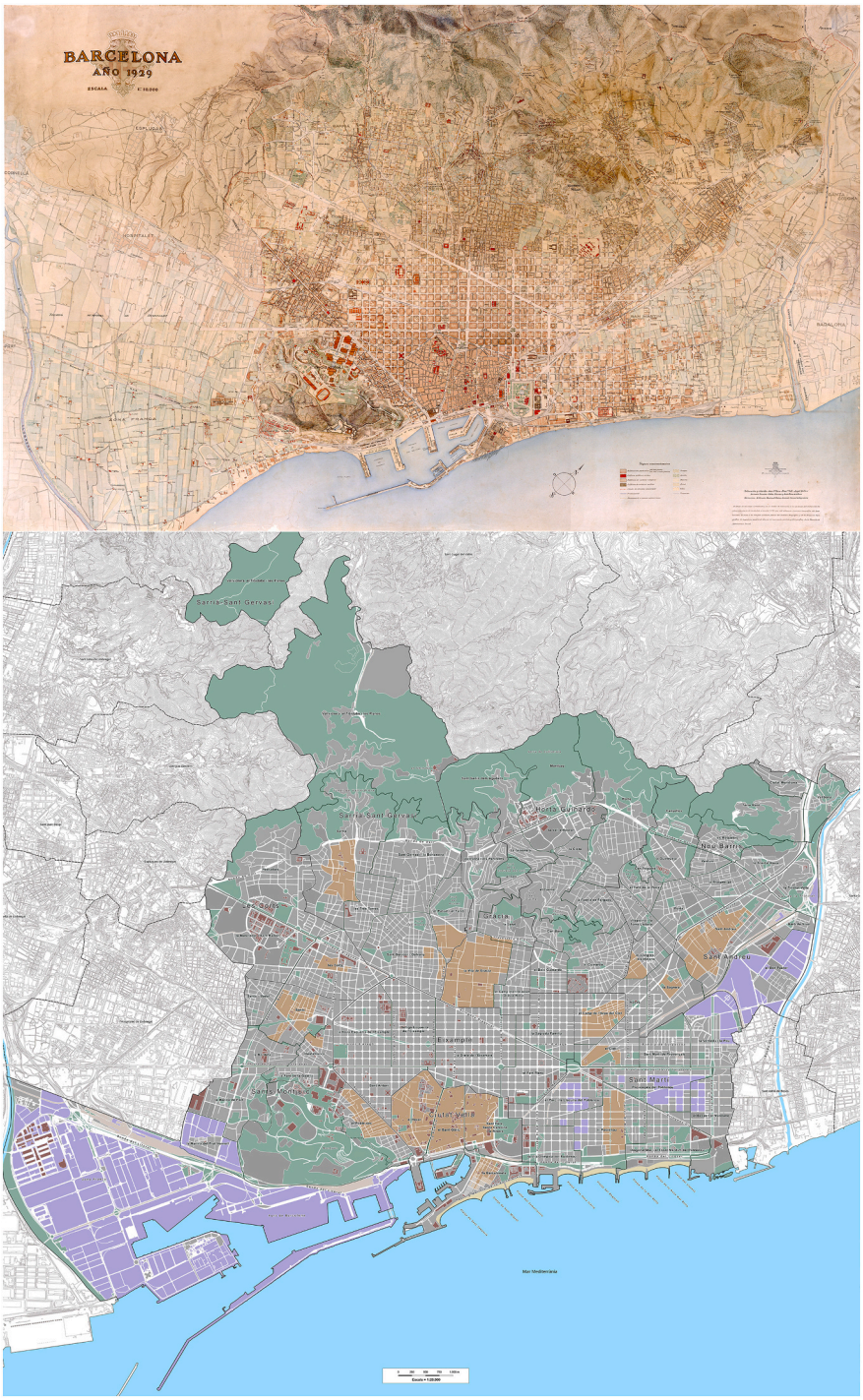

Fig. 7. Comparison between the Barcelona map in 1929 (above) and in 2019 (below). Source: AHCB and Ajuntament de Barcelona.

within 400 m (Fuertes & Gomez-Escoda, 2022). The existing 40 municipal markets (Fig. 8) have 2011 establishments, most of which sell fresh food. The markets employ around 8000 people and generate an annual economic impact of €1.1 billion (Binimelis & Roca, 2021). Municipal markets often strategically include small-sized supermarkets in their buildings to complement their services and retain customers who may otherwise buy their whole food basket in supermarkets. Therefore, customers acquire fresh food from the market stalls and turn to the supermarket for other shopping items, such as cleaning supplies and ultraprocessed foodstuffs (Hernandez, 2011). However, in recent years, municipal markets have shown a decline in the number of stalls and customers who prefer to buy food in supermarkets and specialized stores (Binimelis & Roca, 2021). Notably, the food available in these markets is predominantly sourced from the global industrialized market through the Mercabarna food hub (Table 4) (ibid).

Closely connected to Mercabarna, the Port of Barcelona is also a crucial infrastructure of the city's food system that has experienced considerable transformations. With 73 % of Catalan exports and 22 % of Spain's maritime trade passing through the port, food products constituted 20.5 % of the port traffic in 2019. Notably, a substantial part of this food trade involves supplies for animal feed production, particularly soya fava or soya flour, thereby highlighting the crucial role of the port in facilitating the supply chain for livestock and related industries (Binimelis & Roca, 2021).

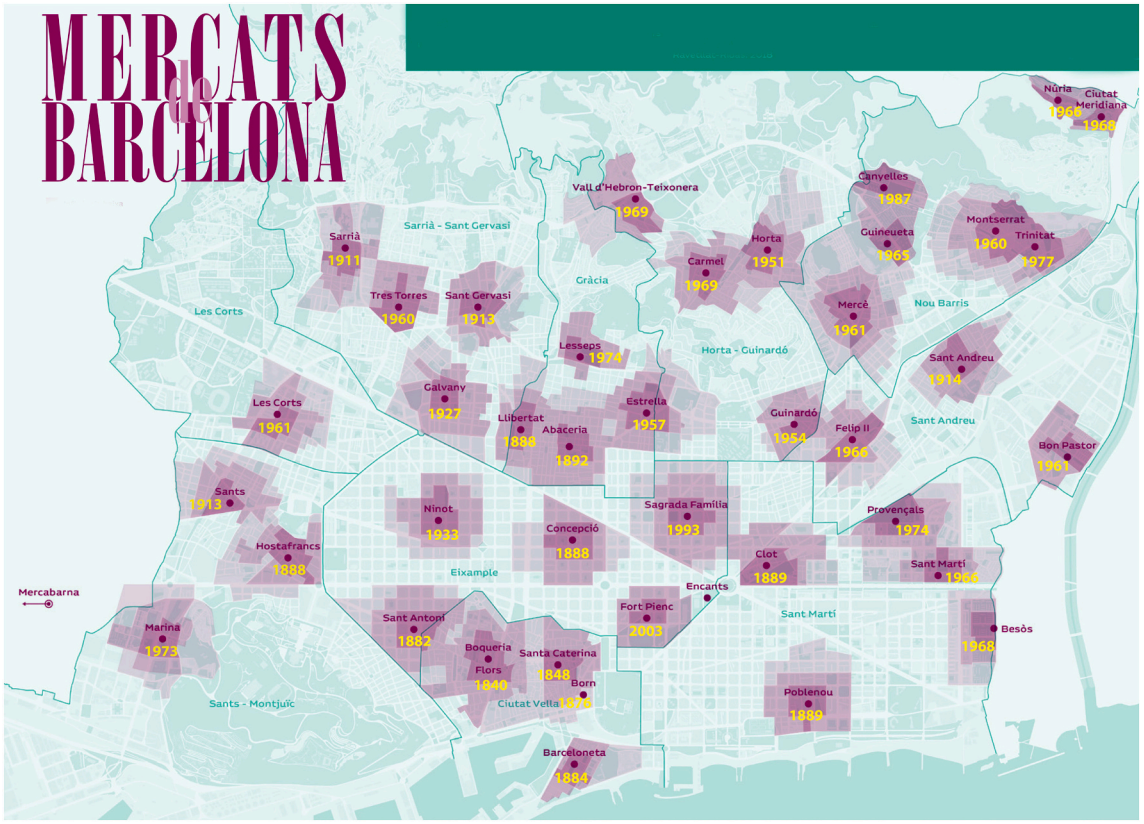

Fig. 8. Current distribution of food municipal markets with year of construction. Source: Ajuntament de Barcelona.

In addition, Barcelona features a large number of bars and restaurants, with 18.12 % of active commercial facilities related to the hospitality sector, a figure that rises to 20.06 % in the city center (Ajuntament de Barcelona, 2019) (Fig. 9). Spanish citizens own 58.2 % of these facilities, whereas 8.1 % belong to other European Union citizens and 33.7 % hail from non-EU nations, notably China at 17.7 %. Within Barcelona, 6.4 % of individuals work in the food service industry, with a higher proportion of men (58.2 %) than women (41 %) employed in this sector (ibid).

The city's food service and retail sector is also being shaped by gentrification and touristification processes, with some districts allocating 41.5 % of beds for tourism accommodation (Cocola-Gant & Lopez-Gay, 2020). Several studies have identified links between tourism growth, short-term rentals, displacement of locals, and transnational gentrification in the city (ibid). Food environments are, thus, changing to include shops, cafes, and restaurants that cater to transnational

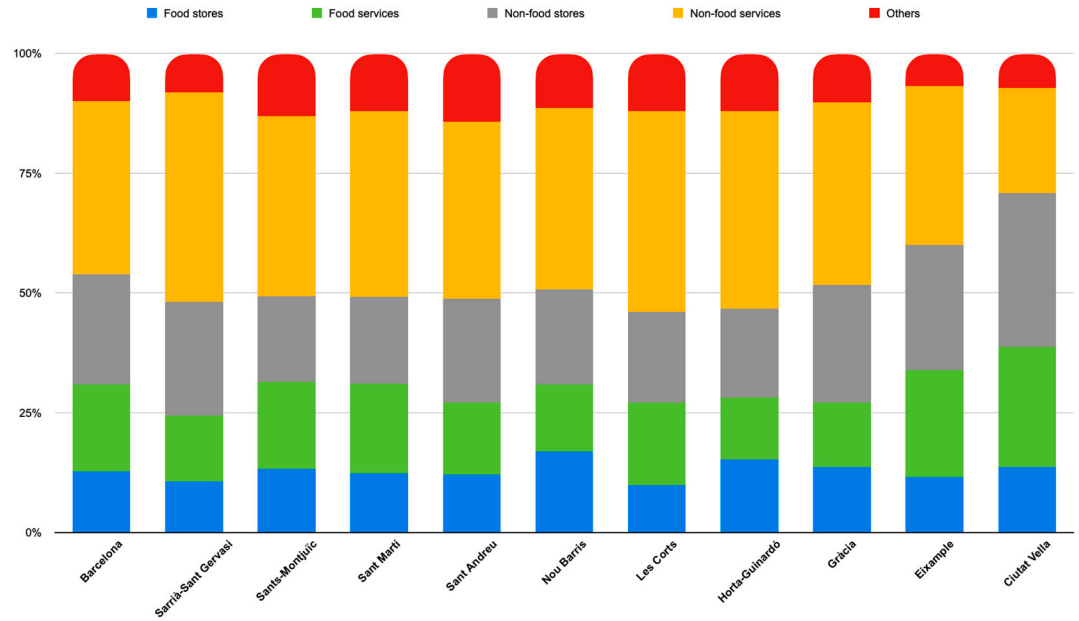

Fig. 9. Structure of commerce and services by categories and districts. Source: Adapted from Ajuntament de Barcelona (2019).

consumers and tourists (Cocola-Gant & Lopez-Gay, 2020). Specific cases, such as the transformation of La Barceloneta, a traditional fisherfolk neighborhood, into a tourist hotspot, indicate the shift from working-class neighborhoods to tourist destinations with high-end establishments (García Lamarca, 2017; Sbicca, 2018). Similarly, iconic markets, such as La Boqueria and Sant Antoni, have been considered to be critical contributors to gentrification (Lindmäe & Madella, 2022; López-Gay et al., 2023).

4.3. Diets, consumption, and food waste

In recent years, diet-related illnesses have posed a significant challenge in Barcelona (ASPB, 2021), mirroring global urban trends (HLPE, 2024). A recent study demonstrated that 7 % of children aged 3–4 years, 12.7 % of children aged 8–9 years, and 6.5 % of teenagers in Barcelona are obese. In all age groups, obesity is more frequently observed in children and teenagers from schools located in disadvantaged environments (Ariza et al., 2019). The study emphasized children's and teenagers' eating patterns, including excessive soft drink consumption, inadequate fruit and vegetable intake, and increasing fast food consumption, with up to 40 % regularly consuming fast food, significantly increasing the risk of diet-related illnesses. Another study reported the widespread existence of food establishments selling unhealthy food options near schools, particularly in disadvantaged neighborhoods (Londoño-Cañola et al., 2022). The latest Public Health Survey of the city also showed critical consumption patterns (Bartoll-Roca et al., 2021). The daily consumption of vegetables and fruit was higher among older individuals and those from wealthier backgrounds, with most people consuming them at least three times a week. Conversely, pastries were eaten at least twice a week by 30 % of people, particularly younger individuals and those from less affluent social classes. Processed meats followed a similar age pattern, with younger men being the highest consumers; however, no clear trend was observed based on social class. Red meat consumption was more common among younger people, with approximately 40 % of women and 50 % of men eating it three or more times a week, regardless of social class.

Scholars and institutions have shown increased efforts to integrate food-related health inequality and environmental sustainability challenges, focusing on sustainable or planetary health diets as critical levers for change (Fanzo & Miachon, 2023). Reducing the overconsumption of animal-sourced foods and unhealthy foods while increasing fresh and diverse plant-based foods has emerged as a critical policy goal as it entails both climate benefits and reduced mortality from diet-related noncommunicable diseases (Masson-Delmotte et al., 2022). This is highly relevant for Barcelona as its food system emits around 2.928.919 tCO^2e/year, with its highest share (28 %) related to meat consumption (Ajuntament de Barcelona, 2022). In fact, while Catalan's annual meat consumption is approximately 51,90 kg/year (Generalitat de Catalunya, 2024), which triples planetary health diet recommendations (Willett et al., 2019), 50.5 % of primary school food canteens in Barcelona never offer a plant protein dish (Ariza et al., 2019). These numbers highlight both a disparity and a field for policy action in aligning dietary practices with sustainability goals.

In addition, there is an underlying problem of food insecurity in Barcelona. The latest available data (2016) indicated that 8.6 % of the population in Barcelona lived with food insecurity, including 4 % experiencing severe food insecurity (Bartoll et al., 2018). Food insecurity was particularly prevalent in specific neighborhoods where over 20 % of residents lacked access to sufficient and nutritious food (ibid). Municipal social services have a range of programs to support individuals, such as soup kitchens, free school meals or food assistance cards, attending 111.564 people in 2020 (XDAA, 2021). Together with the leading food bank network in the city and key charities (Caritas and Red Cross), their combined food assistance and monetary aid supported 195,272 people, accounting for 46 % of the population at risk of poverty (ibid).

5. Contemporary food governance in Barcelona: The challenge of creating impactful integrated food policies

While the history of many cities shows how different actors are involved in governing the food system (Steel, 2008), just recently, this diversity has been recognized in food policy making. In the case of Barcelona, it was not until 2015 that the Council established a department dedicated to food policies that attempted to articulate a unified vision for the city. Although this new food policy department was underfunded and had low activity during the first years, the political momentum created by the Barcelona World Capital on Sustainable Food 2021 project sparked changes in food governance dynamics, both within and beyond the City Council and across different scales. First, the city became active in Spanish and international food networks, such as the Network of Municipalities for Agroecology [La red de Municipios por la agroecología], the MUFPP, the C40's Food Group, and Eurocities' food group. Furthermore, at the end of 2019, Barcelona signed the "C40 Good Food Cities Declaration," an international commitment endorsed by 14 cities to promote an increased plant-forward planetary health diet for city residents and halve the city's food waste (C40, 2019). In 2021, Barcelona became part of the MUFPP steering committee.

Second, changes in food governance also implied fostering processes of multistakeholder participation and cooperation with other local and regional institutions. Notably, the first 2030 Strategy for Healthy and Sustainable Food was developed through a participation process involving more than 100 local stakeholders and a broader online citizen consultation process.[2] As a result of this process, two additional governance structures were created to continue the development of multiactor, multilevel, and multisector food policies and interventions, which permeated the other areas of intervention. On the one hand, the city's first Food Policy Council was created in 2023 as a governance mechanism to follow up on the implementation of the food strategy and promote stakeholder dialogue on the city's food policies. On the other hand, as a way to overcome the limited jurisprudence of the current Barcelona City Council on food policies, the Barcelona City Council and the Catalan government created a joint office on sustainable food to create synergies and improve coordination on city-region issues (Ajuntament de Barcelona, 2022).

Finally, beyond this integrated food strategy, the Barcelona City Council has taken proactive measures to create more sustainable food systems, mainly through four public policy arenas. In 2022, the Barcelona City Council reviewed its public procurement guidelines to introduce additional criteria on sustainable food. These criteria included: increasing the amount of plant protein; reducing sugars, ultraprocessed foods, and animal protein; expanding the amount organic and seasonal foods; favouring short-supply chain foods and fair-trade products; reducing transport-related CO2 emissions and food waste; promoting food sustainability education to critical agents; and hiring people linked to the social and solidarity economy. (Ajuntament de Barcelona, 2022). These criteria were applied to catering services managed by the City Council, such as Meals on Wheels, soup kitchens, or the 102 public kindergartens where 8500 meals are cooked daily (Binimelis & Roca, 2021). Our fieldwork also revealed a failed attempt to apply these criteria to the vending machines in municipal premises due to the withdrawal of bids linked to uncertainty over the commercial and managerial viability of the new food offered.

Food assistance programs have also experienced changes. Since 2017, there has been an effort to adopt a human rights perspective, among others, by developing the Network for the Right to Adequate Food, which brings together civil society groups, universities, and several departments from the Barcelona City Council and Mercabarna to promote a collaborative model for granting the right to adequate food while fostering users' autonomy and empowerment as well as

[2] See Herrero and Moragues-Faus (2025) for an analysis of this process

establishing the program Alimenta to address food insecurity, mobilizing dignity and inclusivity principles.

Besides managing specific programs, the City Council supports organizations redistributing surplus food. In 2022, Mercabarna invested in creating a food-recovery facility that distributes surplus food, such as FoodBack, thereby reducing food waste. Barcelona's food bank participates as a second-tier organization that delivers food to grassroot initiatives that redistribute it to vulnerable people referred by social services or organizations. In 2023, 716 tons of fruit and vegetables were recovered through FoodBack (Mercabarna, 2024b).

A third arena of intervention for the City Council has been increasing the supply and access to sustainable food through the Green Commerce [Comerços Verds] program in municipal markets. This program grants visual distinctions to all the market stalls selling local or organic food through short-supply chains to help consumers recognize sustainable food. Concurrently, to facilitate sustainable food supply in municipal markets, the City Council has invested in Farmers' Land [Terra Pagesa], a cooperative project aimed at supporting short-supply distribution to markets and independent shops by sharing logistic facilities, transport, and technology among farmers. According to the initiative, in 2023, 69 farmers participated in this project. In addition, Mercabarna opened the first wholesale market specializing in organic food in Spain in 2021. While these new interventions have not yet been fully evaluated, internal reports showed limited impact.

Finally, the City Council has joined other stakeholders to develop several projects to support urban and periurban farmers. A key project is the Collserola Agrarian Contract, which has been paying farmers up to 5000 euros/year since 2022 for their socioenvironmental services, encouraging sustainable practices to promote an agroecological transition in the Collserola Natural Park (Parc Natural de Collserola, 2023). In 2022, this program benefited 16 farmers, supporting actions such as reinforcing farmer's organizations, maintaining dry stone walls, growing local crop varieties, hosting visits, improving farm access, and protecting farms from wild boar intrusions. While farmers state that funds are limited, they view this initiative as a valuable tool to showcase their work, get some funding to invest in their farms and halt the declining number of farmers and agricultural land in Collserola Park (ibid).

Lastly, beyond the action of the City Council, there is a vibrant foodscape of community-led initiatives. These organizations have endorsed an agroecological food system vision and sustained this vision across different political cycles. Furthermore, they have occasionally exerted pressure on the city's food programs toward more transformative change. However, while there are more than 300 food projects related to the social and solidarity economy, food redistribution networks, or urban gardens (Ajuntament de Barcelona, 2022; Pam a Pam, 2024), only some initiatives seem to build effective, lasting organizational structures to join forces and strategically coordinate. Some of these networks include Coopolis, Agropolis, The Group for Eco-social Transition, and the Farmer's Markets Coordination Group. Many of these initiatives receive funding from the City Council and establish collaborations. However, limited coordination hinders their overall impact, including the alignment of their priorities and their capacity to influence public institutional agendas.

While many recent efforts have been made to develop a more sustainable food system in Barcelona through different urban food governance interventions, the impacts are so far limited or unknown, as discussed above. Secondary data analysis and fieldwork revealed a dearth of available data at the city level concerning food systems and a lack of assessments to monitor the impact of specific interventions or urban food strategy progress. This evidence gap in urban food systems is widely shared (HLPE, 2024; Polman & Bazzan, 2023) and is related, on the one hand, to the complex nature of food itself (Zerbian et al., 2024). As food shapes and is shaped by many different urban processes, the selection of indicators is highly complex. Therefore, understanding the impact of interventions, such as improving school meals in the context of food insecurity or increasingly obesogenic environments driven by global and local processes, is difficult. On the other hand, the contemporary disregard of food as a key urban policy topic (and also its lack of recognition as a right by citizens and governments) compared with others, such as housing, hinders the ability to craft comprehensive, impactful, and enduring interventions that survive political cycles (Parsons et al., 2021). Finally, city authorities view their powers as limited; as an informant put it:

"In relation to food, city councils have few formal powers but many responsibilities."

6. Conclusion: Expanding urban food policy imaginaries to address planetary emergencies

This study has traced the history of urban food governance in the city of Barcelona, contributing to a more situated understanding of the powers and capacities of cities in transforming food systems. Our analysis revealed how Barcelona's local powers from the 13th century up to the Francoist dictatorship included direct intervention in the supply and access to food through various measures, such as subsidies, taxes, limits in prices, supervision of food quality, producing bread, stoking food, and investing in and supervising the urban food infrastructure. Even liberal city councils intervened in bread prices as a response to severe food insecurity conditions and social mobilizations. However, Barcelona's democratic period has been characterized by the framing of food as mainly a commodity, in line with neoliberal tenets, and, therefore, by the use of soft powers to promote the expansion of crucial urban food infrastructure to become a hub in a globalized food system while trying to maintain the cultural and social dimensions of traditional municipal food markets.

Since 2015, cities have widened their food policy remit, and Barcelona has adopted a more systemic approach to transforming the food system. It has created new policies and actions to embrace wider environmental and social goals in its food agenda, including the development of a participatory integrated food strategy. Many instruments used so far continue to focus on shaping consumer and citizen behavior through soft measures, such as labeling, increasing the supply of specific products, or providing information. Despite this trend, it is noteworthy that Barcelona still invests in public food infrastructure to promote the availability and access to sustainable food in the city and beyond. To date, the success of these interventions as well as the public ownership of these key resources cannot be taken for granted in a globalized food system driven by economic profit that fosters industrialization processes, chemical pollution, biodiversity loss, climate breakdown, privatization, and asset concentration. In this context, interventions need to prove effective and gain support, and policymakers need to assume that a deep socioecological transformation in the food system requires winners and losers. Notably, our historical analysis also revealed a sharp contrast in the strength of the city's food movements. In the past, food-related crises and coercive measures led to intense social mobilizations to assert the right to food. Current food movements exhibit limited capacity to incorporate justice and environmental concerns into food policies and broader citizenship demands. This includes low mobilization on the right to food and lack of linkages across related advocacy groups focused on antipoverty, housing, employment, or consumer rights.

Further action and research is therefore warranted to identify key agents and levers for deep food system transformation. This includes increasing monitoring efforts and expanding our knowledge on which and how policy interventions can address the severity of the ecological and inequity challenges. There are increasing contributions indicating the transformative capacity of urban food practices (Hebinck et al., 2021); however, more evidence is needed to understand the material impacts of urban food policies and governance as well as how they (re) produce inequities and environmental degradation within specific cities and beyond (Moragues-Faus & Battersby, 2021). While the world of

urban food policy still needs to demonstrate the impact of novel multi-actor and multisector food strategies, the city profile of Barcelona shows that there is room for experimentation with a wider range of urban food policy tools and interventions, particularly in the context of pressing emergencies. Our analysis, therefore, raised the question of whether public city powers are actually at a historically low capacity to shape their own urban food systems when cities are at the forefront of planetary transformations. Engaging with the past of urban food governance might contribute to a much-needed expansion of the limits of what is portrayed as "possible" in current policymaking imaginaries and practices.

CRediT authorship contribution statement

Amaranta Herrero: Writing – review & editing, Writing – original draft, Visualization, Resources, Project administration, Methodology, Investigation, Data curation, Conceptualization. **Ana Moragues-Faus:** Writing – review & editing, Writing – original draft, Resources, Methodology, Investigation, Funding acquisition, Conceptualization.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Data availability

Data will be made available on request.

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