



# TORINO FOOD METRICS REPORT 2023



CITTA' DI TORINO



UNIVERSITÀ  
DI TORINO



ATLANTE  
DEL  
CIBO  
Torino Food System



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101000717.

**Realized by:** Department of Ecological and Digital Transition, Innovation, Mobility and Transport

**With the coordination of:** Department of Environment and Ecological Transition

**With the support of:**

Servizi Educativi, Servizi Sociali,  
Dipartimento Commercio  
e Servizio Economato Fornitura beni e servizi

**Scientific support:**

Contributo di ricerca dell'Università degli Studi di Torino,  
Dipartimento Cultura Politica Società (gruppo Atlante del Cibo di  
Torino Metropolitana)

**Graphic design and layout**

Fondazione Contrada Torino Onlus

Photo cover by Jacopo Maia on Unsplash

Photo by Mael Balland on Unsplash

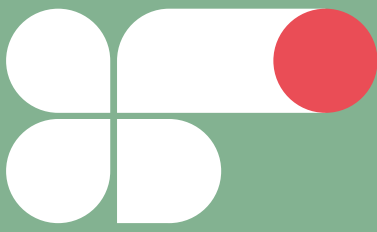
Photo by Steffen Lemmerzahn on Unsplash

[www.torinovivibile.it](http://www.torinovivibile.it)

Collane@unito.it  
Università di Torino  
ISBN: 978-88-7590-282-7



This work is distributed under License:  
Creative Commons Attribuzione 4.0 Internazionale



# TABLE OF CONTENTS

## Preamble

<b>introduction &amp; methodology</b>	<b>p.5</b>
<b>1. Food offer</b>	<b>p.11</b>
1.1 Street Markets	p.12
1.2 Food Stores & Large-Scale Distribution	p.25
1.3 Café, Restaurants & Catering	p.33
1.4 Vending Machines	p.36
1.5 Ethical Purchasing Groups	p.38
<b>2. Food Processing</b>	<b>p.41</b>
<b>3. Urban Farming</b>	<b>p.49</b>
3.1 Urban Vegetable Gardens	p.50
3.2 Professional Farming	p.53
<b>4. Food Poverty</b>	<b>p.55</b>
4.1 Banco Alimentare del Piemonte ONLUS Actions	p.57
4.2 Grocery Coupons for People in Food Poverty	p.68
4.3 Torino Solidale Network	p.68
4.4 Qualitative survey on food poverty in Turin	p.670
<b>5. Public Procurement</b>	<b>p.73</b>
5.1 Vending machines	p.74
5.2 Collective catering	p.75
5.2.1 Social Collective Catering	p.75
5.2.2 School Collective Catering	p.78
5.3 Meal vouchers to employees of the Municipal Administration	p.85
<b>6. Food, nutrition &amp; health</b>	<b>p.89</b>
<b>7. Food &amp; circular economy</b>	<b>p.97</b>
7.1 Waste sorting	p.98
7.2 Smart water dispensing kiosks	p.103
7.3 The Torèt	p.104
<b>8. Training &amp; Research</b>	<b>p.105</b>
8.1 Food & training paths – training institutions	p.106
8.2 Food & training paths – university training	p.107
8.3 Food & Innovation – the StartUps’ experience	p.107
<b>9. Tourism &amp; wine and food traditions</b>	<b>p.113</b>
<b>10. food consumption</b>	<b>p.123</b>
<b>11. Territorial focus Mirafiori Sud</b>	<b>p.131</b>
11.1 Food offer	p.135
11.2 Urban agriculture	p.137
11.3 Public procurement	p.139
11.4 Food poverty	p.142
11.5 Circular Economy	p.145
<b>bibliography</b>	<b>p.147</b>
<b>Attachment – List of indicators</b>	





*Food has been at the core of local policies of the City of Turin administration for many years – from public services, such as school catering and markets, to strategic projects. These include national and international events and participation in European partnerships for the establishment of living labs and innovative experiences.*

*This journey started a long time ago, when the right to adequate food became part of the City Charter. In recent years, a heightened level of awareness has been raised both within and outside the administration, which has encouraged the setup of an Inter-departmental and Inter-council Working Group an essential space for sharing ideas and perspectives to outline the future of our city.*

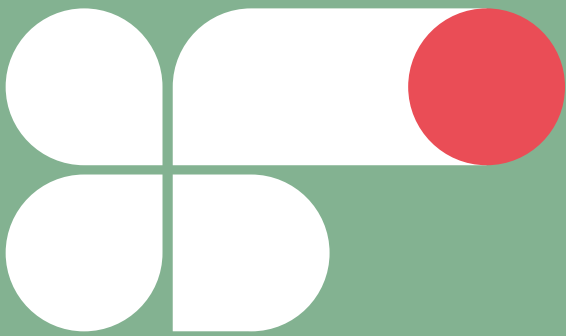
*This third Turin Food Metrics Report coincides with the finalisation of a landmark document drawn up by the Group comprising employees and the City Council: the Food Policy Guidelines of the City of Turin, a Single Programming Document including the drafting of a food policy plan geared to 2030 that takes into account the different sectoral policies. Notably, the City of Turin is committed to adopting an integrated approach based on sustainability criteria with respect to all the components of the urban food system, as well as to protecting and enabling safe access for sustainable food production, developing policies and programmes to support municipal public markets, promoting sustainable diets, guaranteeing access to healthy food for vulnerable groups of the population, encouraging and supporting economic and social-solidarity activities with particular attention to the food sector, reducing food waste at all stages of the supply chain, and favouring the recovery and redistribution of safe food and the circular economy. The set of actions that we have already performed combined with the commitments targeting horizon 2030 make up a framework that brings with it a systemic vision on food.*

*The City of Turin has now reached the stage of mapping out everything it has been working on for many years, thus defining a clear roadmap. In addition, such policies are very likely to contribute to the achievement of the climate-neutrality goals that the City has set for itself as one of the “100 Climate-Neutral & Smart Cities by 2030”.*

**Chiara Foglietta**  
Councillor of the City of Turin

*Chiara Foglietta*





# INTRODUCTION & METHODOLOGY

This third Torino Food Metrics Report (TFMR) provides a snapshot of Turin's food system updated as of December 2022. It can be considered as a transitional report, though – it has gradually evolved from a mere output of Horizon 2020 FUSILLI project to a true instrument in support of local policy and decision-making processes, as well as a precious collection of useful data for researchers.

A tool of the city and for the city.

To do so, the Report should be released on an annual basis in the year following the date on which the information was collected. Compared to 2022 issue, packed with a large number of data from the same year, this report provides an update of the indicators whose values have further changed in the last months of 2022. An exception includes the data extracted from the Turin Chamber of Commerce database due to the challenging task of consulting the platform with a time lag of almost a year.

This means a new stage of TFMR has begun, when the Report shall go full steam ahead, engaging both those who collect and read the data and those who produce them, in a shared, sustained effort to take periodic stock of the city's food system.

In this edition the report has been enriched with new sections, new indicators, comprehensive analyses and territorial insights, all bearing evidence to the growing process that characterises the production of knowledge.

In this respect, the food governance process initiated several years ago in Turin and culminating in 2022 with the creation of the Interdepartmental Group on Food Policies (GIPA) has been essential. GIPA has stood out as a tremendous opportunity for dialogue within the public administration in relation to knowledge, elements, dynamics, and mechanisms peculiar to the city food system. The relevance of data, too, emerged as a primary focus of said dialogue in order to understand how to select the most relevant latest figures and combine them with the existing ones, as well as the bodies likely to provide missing information, and the best way to make it accessible to stakeholders.

In this framework, data sources should be mapped and strategic alliances with data producers/collectors should be forged before swinging into action, with a view to establishing shared knowledge to be given a systematic and integrated reading through TFMR, for the purpose of gaining insight into the multiple dimensions of the city food system and its evolution over the years.

The 2023 Report represents, in some way, the start of a new process.

Flip through it to discover sections enriched with information produced by other parties for other goals, yet essential to the successful development of a just, sustainable, and healthy food system. This is the case, for instance, for the section dealing with food, nutrition and health, detailing the findings of studies and reviews conducted as part of the international Cities Changing Diabetes program on the prevalence of the disease.

Another example concerns the information on the profiles of people in food poverty, as well as their perceptions of healthy and sustainable food, which are the result of qualitative research conducted within the Metropolitan Turin Food Atlas; along with the quantitative data provided by the Food Bank, the City of Turin and Torino Solidale Network, they allow for an increasingly multidimensional and sophisticated interpretation of this phenomenon, crucial for the design of genuinely place-based policies.

A further example is then the new section on food consumption, where data from two surveys – 'Aspects of Daily Life' (ISTAT) and 'Expenditure of Households in Turin' (Osservatorio delle Famiglie Torinesi, Turin Chamber of Commerce) – have been combined to embed this vital dimension in the perspective of healthy and sustainable food policies and systems.



The 2023 Turin Food Metrics Report is thus based on a set of 111 indicators on 10 thematic families (9 from the previous report, plus one on food consumption) and an experimental in-depth territorial study, covering Mirafiori Sud neighbourhood.

1. Food offer
2. Food processing
3. Urban farming
4. Food poverty
5. Health, green and supportive public procurement
6. Food, nutrition & health
7. Circular economy
8. Training & research
9. Tourism and Wine-and-food Tradition
10. Food consumption

In-depth territorial study: Mirafiori Sud.

The indicators in each section are commented on and visually illustrated by means of tables, graphs, infographics, and maps. Where possible, the figures have also been compared with figures from previous years. The analysis refers to a city scale, although in some cases the Figures refer to a district scale. Section 10 examines food consumption from a regional and national scale.

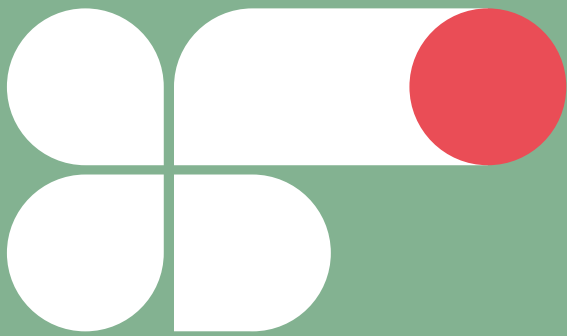
New indicators have been included wherever it was felt necessary to investigate further aspects unexplored by previous Reports; such indicators will be updated in future editions.

The 2023 edition of the TFMR should also be a transitional edition as far as how integrated data and information are made available and interpreted over space and time. Specifically, it should be the last one produced in the form of a printed / digital report. The idea is, in fact, to move the entire TFMR online, for a number of purposes. Primarily, because photographs are obsolete the moment they are taken. By the time the Report is compiled, typeset, and then uploaded to a site or printed, some of its contents are likely to have already changed, and new data will have been produced. Conversely, however, there are numerous phenomena whose transformation time-frame is slower, and which do not show significant changes from one year to the next, such as much of the data in the section on urban agriculture, just to name one.

Working on a dynamic, constantly evolving narrative is therefore considered not only more interesting, but precisely more effective in addressing the need to understand the food system to which the TFMR is aimed rather than focusing on a sequence of snapshots. This would involve adjusting the indicators with the distinctive intervals inherent in each piece of information, as well as providing tools to aggregate data, interpret them in connection with others, and build knowledge packages customised to specific knowledge needs.

Indeed, sharing the methodology, visions, ideas and projects of what we hope future Reports will look like with the readers of this third edition testifies to our will to also share in their design, conscious of its relevance as a common tool produced by the community and for the community.





**FOOD  
OFFER**

No conversation about food can occur without designing and implementing tangible, targeted actions that are very likely to have equally tangible consequences in space. The spaces of food within the city are numerous, all permeated by diverse preferences, practices, and values. Whether it be the food halls or the squares hosting farmers' markets, all food-related venues establish intangible yet certain connecting lines, as in the case of food transport, which includes both large and small-scale distribution and the routes followed by couriers for home delivery. Here, the city stands as a hub where food can become integrated into space and rooted in its territory on a daily basis, while at the same time affecting scale phenomena.

This is the reason why foodscape must be explored. Foodscape can be defined as the set of all the physical and virtual places in which a person comes into contact with food in the course of his / her daily life, including the material, socio-cultural, economic and political influences affecting their food choices at every level. The food-scape concept is often associated with food environment. (Lake et al., 2010, Roe et al. 2016; Goodman, 2016). The foodscape analysis is a recurrent theme in research on the relationship between environment, eating habits and health (Lake et al., 2010), where the link between accessibility to quality food and social-spatial injustice is often emphasised.

Hence, if we are to understand the material dimension of a specific food system foodscape, we must begin from the analysis of the spatial distribution of the physical places where food is accessed, i.e., markets, shops, super-markets, cafés, restaurants, and so on.

The main distribution channels, whose terminals are the material points of access to food by the citizens, include large-scale distribution (LSD), retail shops, street markets, a number of alternative agri-food networks such as direct sales, Ethical Purchasing Groups (GAS), community-supported agriculture-CSA, and other, in addition to an increased use of e-commerce. Food distribution touches on spatial, social and environmental urban patterns – it affects the way in which space is lived, designed, consumed and represented, it concerns the relationships between players, and it generates different impacts in terms of air pollution, traffic and congestion, land consumption, energy consumption, etc., respectively. The events that have transformed the distribution sector since the 1990s have led to markedly longer supply chains resulting in multiple intermediaries, widespread large-scale distribution actors and subsequent decreased retail sales. While this type of distribution system has brought about a general containment of prices for consumers as well as a significant reduction in the producer price, a higher variability and availability of products, including non-local and non-seasonal products, along with an increased purchasing times has increasingly alienated consumers from producers. This has contributed to diminished, almost impossible direct social interactions, knowledge diffusion and trust relationships between them; moreover, over time this has also consumed large portions of territory for sales, storage and logistics areas, and has become highly energy-consuming (Dansero et al., 2014).

Despite the massive spread of large-scale retail stores, the small-scale retail scene in Turin (the so-called neighbourhood shops) still appears to be sufficiently active and widespread; extensive access to food is also favoured by the presence of numerous street markets notwithstanding the gradual decrease in both the number of stalls for direct sales by producers and food stalls in covered markets between 2015 and 2022. This section provides an insight into the different types of food venues in Turin, focusing specifically on street markets, small-scale food stores and large-scale distribution (LSD) outlets.

## 1.1 Street Markets

Turin is one of the Italian cities with the largest number of street markets. This typology of food supply has a strong social value, as it contributes to establishing meaningful gathering spaces on a neighbourhood-scale. The feature that distinguishes Turin Street markets from the markets in most large Italian cities is their daily frequency for most of them in addition to the frequent presence of spaces dedicated to direct-sales by local farmers. In 2022, every day, excluding holidays, an average of 39 markets where to buy foodstuffs, fruit, and vegetables and/or fish are active in Turin. The best served day of the week is Wednesday (41), while the days with the fewest number of markets are Mondays, Tuesdays, and Thursdays (37). The size of food markets varies widely. They range from the huge Porta Palazzo market (an average of 732 stalls per day, 84 foodstuffs stalls, 1322 fruits and vegetables stalls and 612 farmers' stalls per week),



to a handful of streets markets sometimes consisting of just 2 to 6 stalls (pitch) per day. The total number of pitches for the sale of foodstuffs across the city markets is 7586, including pitches allocated on a multi-year license basis and 'ticketed' pitches, i.e. assigned directly on the spot every morning; they are divided fruits and vegetables (5215), fish (577) and farmers (1794) [Trade Division, Municipality of Turin]. These figures suggest a massive presence of stalls dedicated to the sale of foodstuffs, yet some declines are visible, such as the overall number of pitches allocated to (i) fruit and vegetable stalls, which dropped from 5639 in 2015 to 5215 in 2022; and to (ii) direct sales by farmers, which passed from 1910 to 1794 in the same interval (weekly figures).

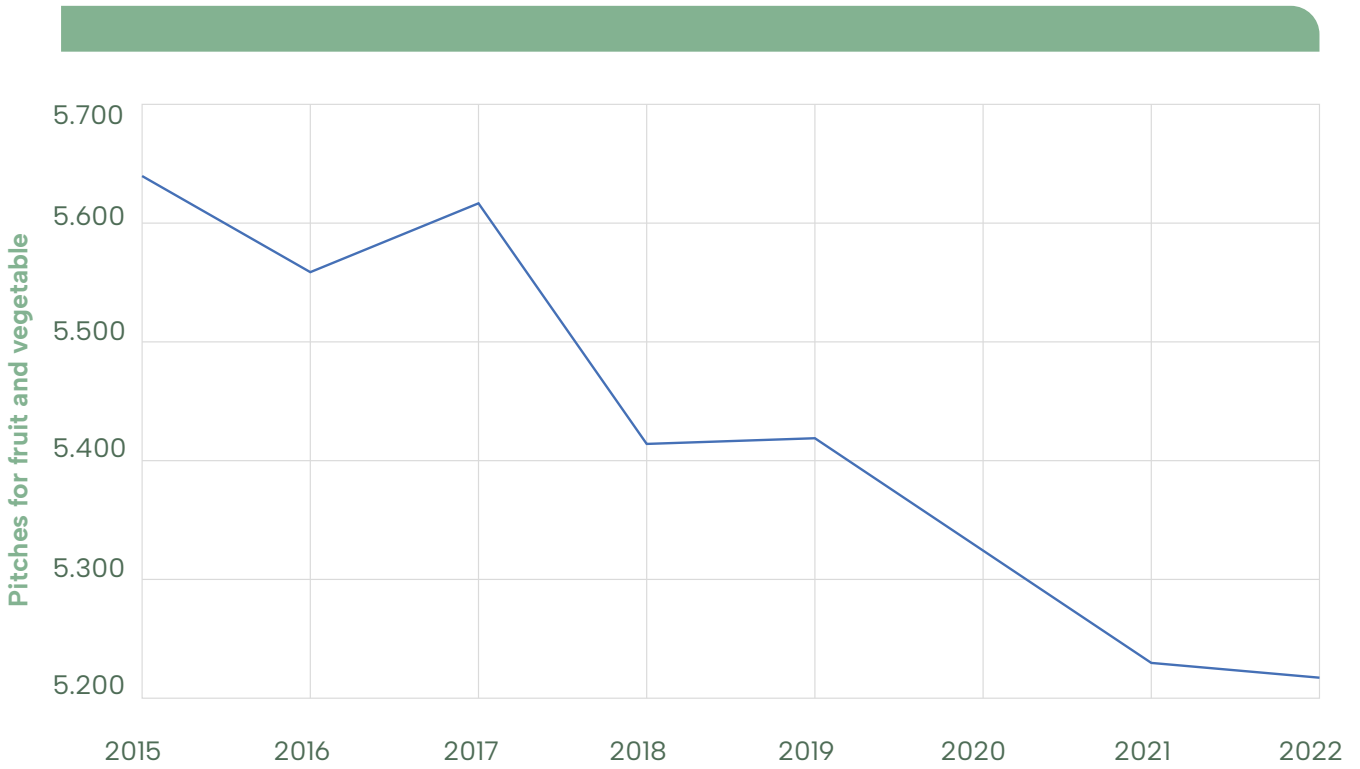


Figure 1.1 - Pitches for fruit and vegetable stalls  
(Source: City of Turin)

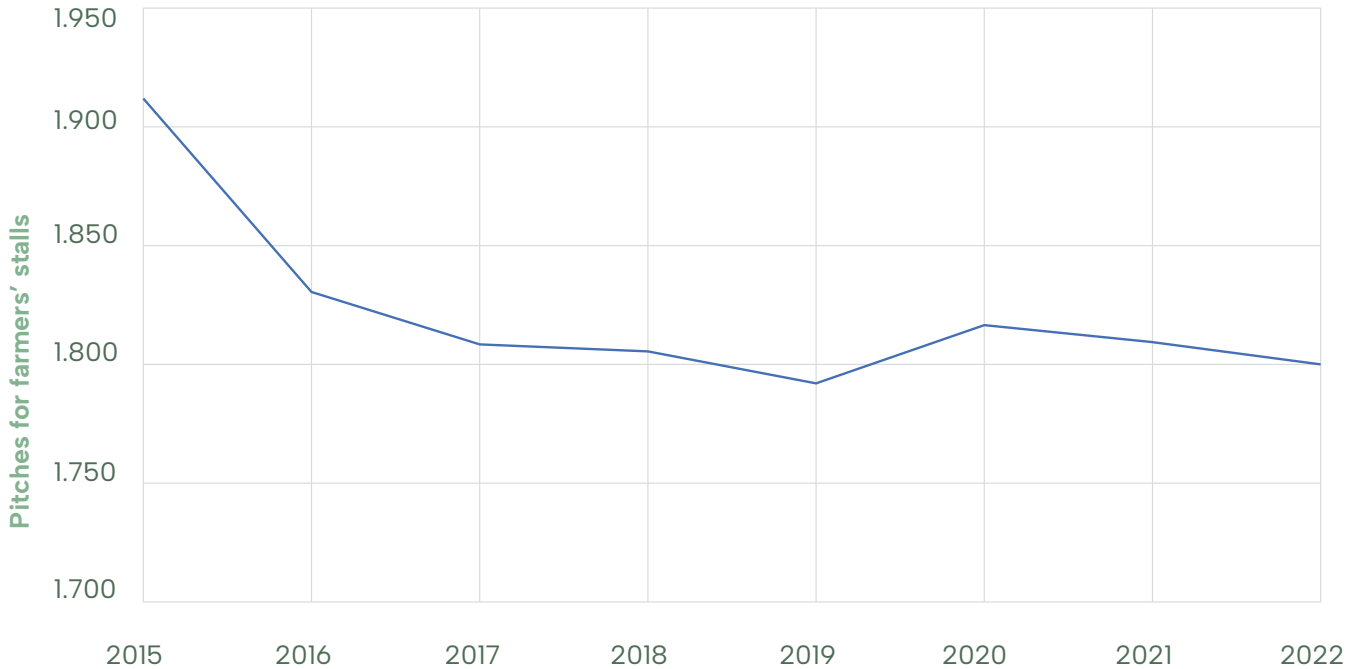


Figura 1.2 – Pitches for farmers’ stalls  
(Source: City of Turin)

For a complete understanding of the actual and potential size of each market, a differentiation must be made between the pitches allocated under a ten-year license to vendors and the so-called “free” pitches, bound to be allocated on a daily basis to different vendors. The potential size of a market is, therefore, the sum of the licensed and free pitches. The actual size, on the other hand, varies on a daily basis, depending on the number of free pitches that are actually allocated. Table 1.1 shows the average daily figures for the different types of food stalls. A crucial feature of our street markets for the connection of the city with the surrounding rural areas is the daily presence of a large number of pitches intended for farmers, mostly from the hilly area to the south and east of the city and its foothills (Dansero and Pettenati, 2018).

N° of street markets	Fruits & vegetables		Fish & seafood		Other food items		Farm produce	
	C: 540	L: 238	C: 51	L: 20	C: 308	L: 165	C: 184	L: 115
39								

Table 1.1 – Average presence of street markets and food stalls in Turin during weekdays (excluding Sundays). C = pitches under license; L = free pitches on a rotating basis. (Source: City of Turin)

(Please note that the Figure for free pitches refers to available pitches only)

According to the annual statistical records, in addition to the large Porta Palazzo market, there are several large outdoor markets comprising hundreds of foodstuffs and fruit/vegetable stalls per week, such as Don Grioli Nord, Santa Rita, San Paolo, Foroni and Vigliani-Bengasi; smaller markets, on the other hand, refer to all ACC - Area Copertura Commerciale (Commercial Area) having up to 6 pitches per day.

The figures in Table 1.2. highlight a significant variability in the number of pitches available on a weekly basis across the markets, ranging from a minimum of 0 (for some types) to a maximum of 2018 in Porta Palazzo. The weekly overall distribution seems to be centred around an average of 100 - 500 pitches evenly distributed among the surveyed markets; yet, notable exceptions exist in a number of markets that deviate considerably from the above-mentioned average, such as, for instance, San Paolo market, with 803 weekly pitches, as well as the aforementioned Porta Palazzo market. The geographical concentration of weekly pitches further underlines a few disparities between markets. The figures underline the diversity of access to commerce in the different markets, thereby pointing to markets located in the city centre with a massive presence of weekly pitches, and others with a much lower number.

ID	MARKET NAME	LOCATION	AVERAGE DAILY PITCHES (2022)	Foodstuffs	Fruits & veg	Fish & seafood	Farmers
<b>district 1</b>							
1	ACC BOLZANO	Corso Matteotti Corso Vinzaglio	6	--	--	6	9
2	ACC CARLINA	Piazza Carlina	2	6	--	--	6
3	CROCETTA	Largo e vicolo Cassini Via Marco Polo vicolo Crocetta	154	61	101	12	24
4	PALESTRO	Corso Palestro	115	35	41	6	24
5	SAN SECONDO	Via S.Secondo, Legnano	68	24	186	12	12
<b>district 2</b>							
6	BALTIMORA	Via Baltimora	58	42	36	6	48
7	DON GRIOLI	via don Grioli, don Grazioli	120	108	228	18	66
8	MIRAFIORI NORD	Via Pavese	104	102	138	12	54
9	NITTI	Via Nitti	120	51	32	6	17
10	SANTA RITA	corso Sebastopoli tra corsi IV Novembre e Orbassano	171	120	201	24	30
<b>district 3</b>							
11	ACC RUA	Via Michele Rua	6	--	6	6	3
12	BRUNELLESCHI	C.so Brunelleschi tra C.so Peschiera e via Vandalino	164	191	193	18	60
13	DI NANNI	via Di Nanni tra C.so Peschiera e via S.Bernardino	104	102	138	12	54
14	MARTINI	P.zza Martini-Benefica	131	51	48	6	42
15	SAN PAOLO	C.so Racconigi tra C.so Vittorio e C.so Peschiera	274	305	414	24	60

ID	MARKET NAME	LOCATION	AVERAGE DAILY PITCHES (2022)	Foodstuffs	Fruits & veg	Fish & seafood	Farmers
<b>district 4</b>							
16	ACC CHIRONI	Piazza Chironi	6	--	--	--	7
17	BARCELLONA	Piazza Barcellona	56	48	66	12	24
18	CAMPANELLA	Piazza Campanella	39	36	54	6	19
19	SVIZZERA	c.so Svizzera tra P.zza Perotti e via Bianzè	159	192	166	18	46
<b>district 5</b>							
20	ACC GROSSETO	c.so Grosseto, via Lulli	16	1	10	--	1
21	ACC LUCENTO	c.so Toscana, via Forlì via Borgomasino	6	--	6	--	--
22	CINCINNATO	c.so Cincinnato tra c.so Toscana e via Val della Torre	121	3	--	--	--
23	VALLETTE	Piazza Don Pollarolo, via delle Verbene, via dei Mughetti	6	126	119	12	60
24	VITTORIA	Piazza e via Vittoria via Villar, piazza Chiesa della Salute	183	126	119	12	60
<b>district 6</b>							
25	ACC CENA	Via Cena, angolo via Bollengo	6	1	3	--	2
26	ACC FALCHERA NUOVA	Via degli Abeti	6	--	2	--	--
27	ACC REGIO PARCO	largo Gottardo	6	--	--	--	--
28	CRISPI(sperimentale pomeridiano)	p.zza Crispi	40	20	410	--	--
29	FALCHERA VECCHIA	viale Falchera, via dei Pioppi	25	4	5	1	8
30	FORONI	piazza Foroni, Cerignola via Baltea, via Monterosa via Santhià	174	193	258	24	2
31	PORPORA	via Porpora	112	94	159	24	60
32	TARANTO	c.so Taranto tra piazza Sofia e via Corelli	60	96	112	12	76



ID	MARKET NAME	LOCATION	AVERAGE DAILY PITCHES (2022)	Foodstuffs	Fruits & veg	Fish & seafood	Farmers
<b>district 7</b>							
33	ACC VILLARETTO	Strada comunale del Villaretto	6	--	--	--	2
34	CASALE BORROMINI	Piazza Borromini	49	73	36	12	78
35	CHIETI	c.so Chieti	40	36	50	6	30
36	PORTA PALAZZO	piazza della Repubblica	732	84	1322	--	612
37	SANTA GIULIA	via S.Giulia, via Balbo p.zza S.Giulia, corso Regina	62	30	96	18	30
<b>district 8</b>							
38	ACC CENA	via e piazza Guala	94	49	46	6	27
39	MADAMA CRISTINA	piazza Madama Cristina	95	85	156	24	77
40	NIZZA	piazza Nizza	54	30	90	6	12
41	SPEZIA	corso Spezia piazza Bozzolo	115	90	150	24	36
42	VIGLIANI BENGASI	via Onorato Vigliani	182	193	239	12	48

Table 1.2 – Markets and daily/weekly pitches for foodstuffs.  
(Source: City of Turin)

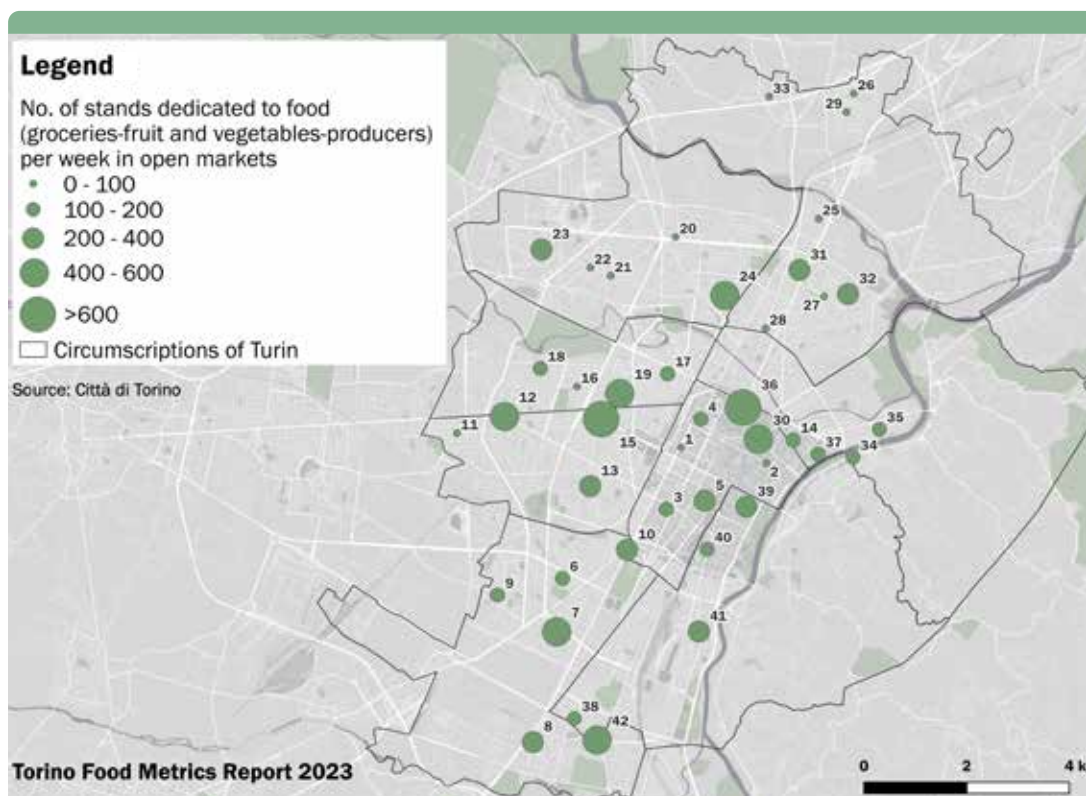


Figure 1.3 – Pitches for foodstuffs stalls available on a weekly basis in outdoor city markets  
(Source: City of Turin – Annual Statistical Records)

The City of Turin has developed an app to locate city markets and learn relevant facts about them. The app is accessible via QR code (Figure 1.4).

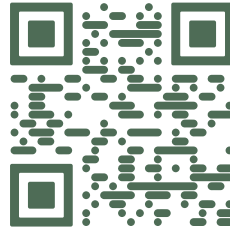


Figura 1.4 - QR code to access Turin city markets app

The food offer of Turin street markets is rounded out by two large indoor markets, i.e., Porta Palazzo (Mercato Alimentare IV, also known as Antica Tettoia dell'Orologio) and Mercato Alimentare V, hosting a total of 127 stalls, mainly dedicated to meat, cheese and delicatessen/gastronomy products.

ID	MARKET NAME	LOCATION	AVERAGE DAILY PITCHES (2022)
43	REPUBBLICA - EST (IV - alimentare)	p.zza della Repubblica 10	80
44	REPUBBLICA - SUD (V - alimentare)	p.zza della Repubblica 26	47

Tabella 1.3 - Indoor markets and daily pitches.  
(Source: City of Turin)

DISTRICT	INHABITANTS	FOOD STUFFS		FRUITS & VEGETABLES		FISH & SEAFOOD		FARMERS	
		Average Daily pitches	Inhabitants per pitch	Average Daily pitches	Inhabitants per pitch	Average Daily pitches	Inhabitants per pitch	Average Daily pitches	Inhabitants per pitch
1	79.186	21	3.771	55	1.440	6	13.198	13	6.091
2	132.691	71	1.869	106	1.252	11	12.063	36	3.686
3	119.926	102	1.176	133	902	12	9.994	36	3.331
4	93.977	46	2.043	48	1.958	6	15.663	16	5.874
5	120.591	54	2.223	69	1.748	8	15.074	15	8.039
6	104.408	68	1.535	92	1.135	10	10.441	25	4.176
7	82.924	37	2.241	252	329	6	13.821	125	663
8	124.701	75	1.663	114	1.094	12	10.392	33	3.779

Tabella 1.4 - Inhabitants/foodstuffs stalls ratio

Zooming in on each district, it may be noted that the number of stalls available on a weekly basis varies from 21 to 102 for foodstuffs, from 48 to 252 for fruits and vegetables, from 6 to 12 for fish, and from 13 to 125 for farmers. The figures suggest a substantial variation between the different districts as regards the size of the population and the types of stalls. District 7 stands out for the high number of fruit & veg as well as farmers' stalls, while District 3 displays the largest number of food businesses. Specifically, differences can be observed in the number of inhabitants per pitch as for foodstuffs, fruit and vegetables, fish & seafood, and farmers; more specifically, District 7 stands out for the lowest number of inhabitants per farmers' pitch (663), while District 5 has the highest number of inhabitants per fruit & veg pitch (1748), and District 4 records the highest number of inhabitants per fish & seafood pitch (15,633).

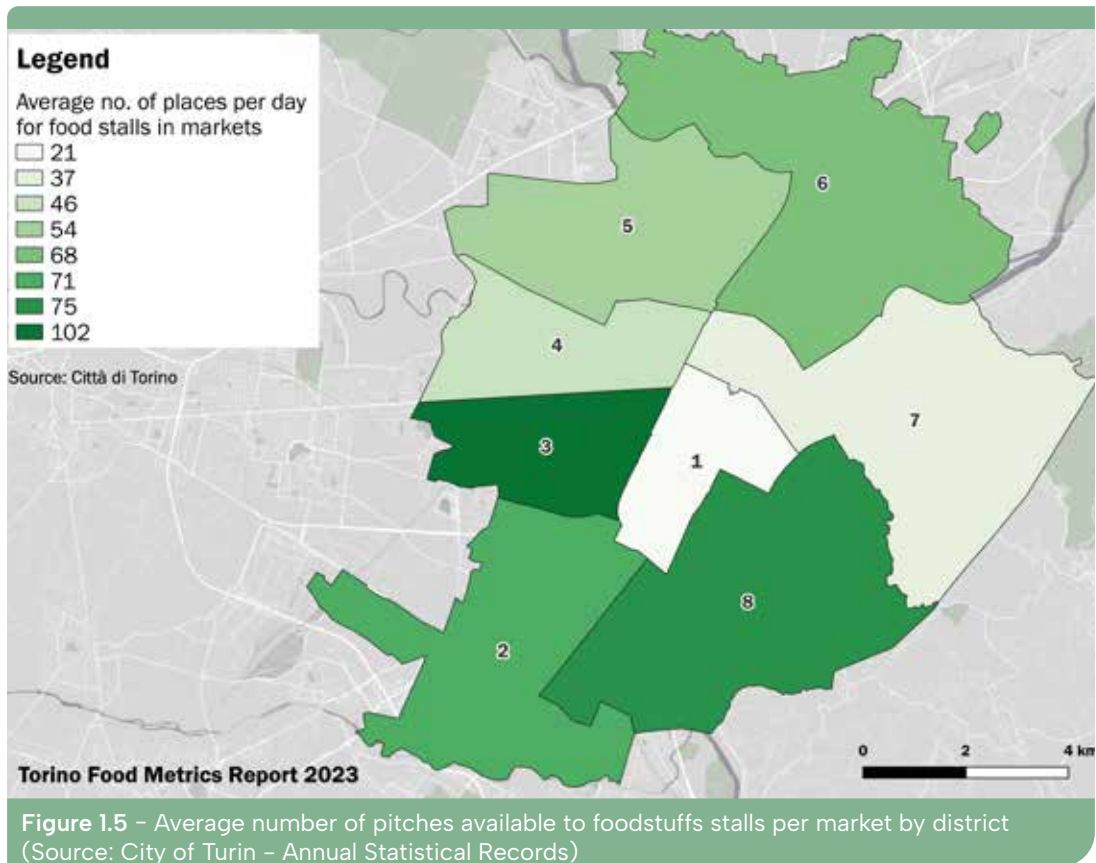




Figure 1.6 – Inhabitants per foodstuffs stall in the city markets  
(Source: City of Turin – Annual Statistical Records)

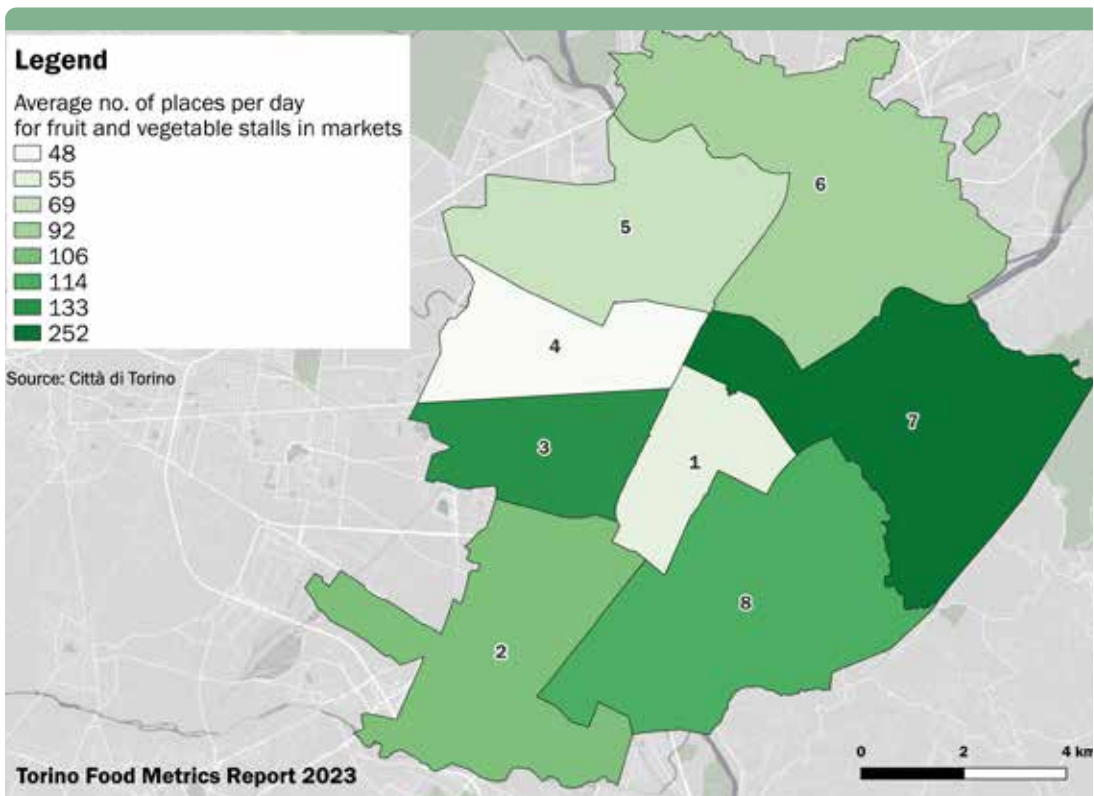


Figure 1.7 – Average number of pitches available to fruit & veg stalls per market by district  
(Source: City of Turin – Annual Statistical Records)



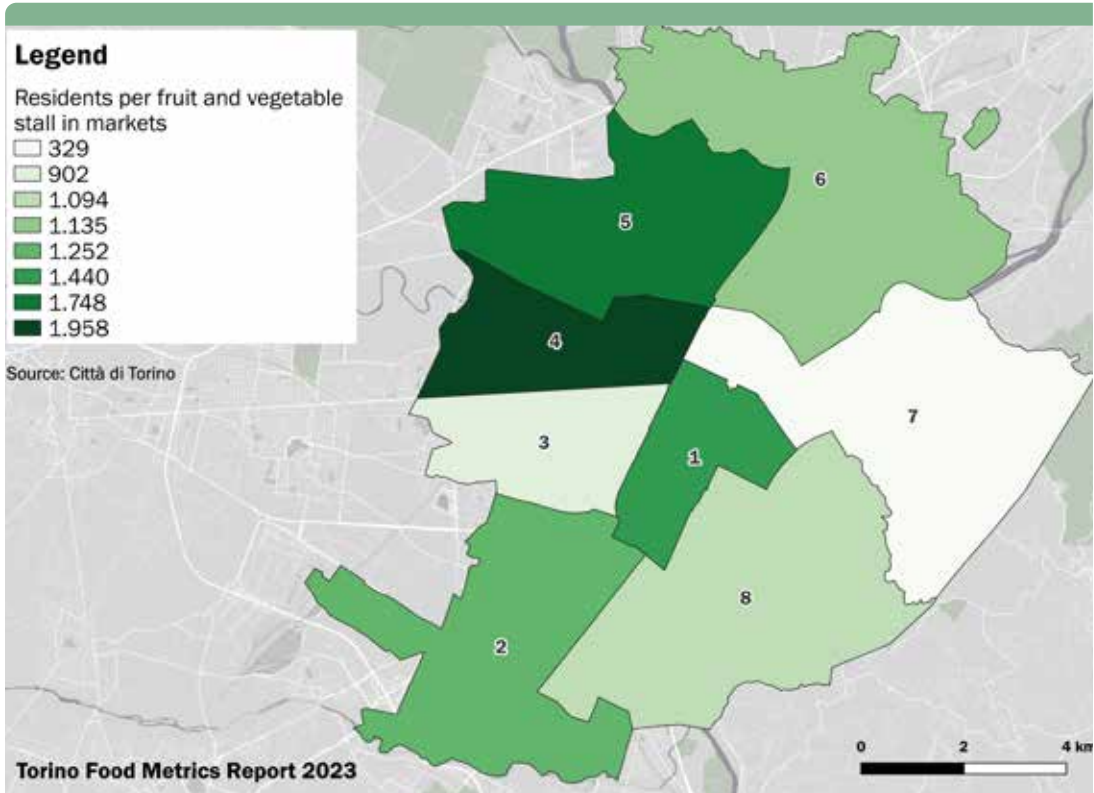


Figure 1.8 – Inhabitants per fruit & veg stall in the city markets  
(Source: City of Turin – Annual Statistical Records)

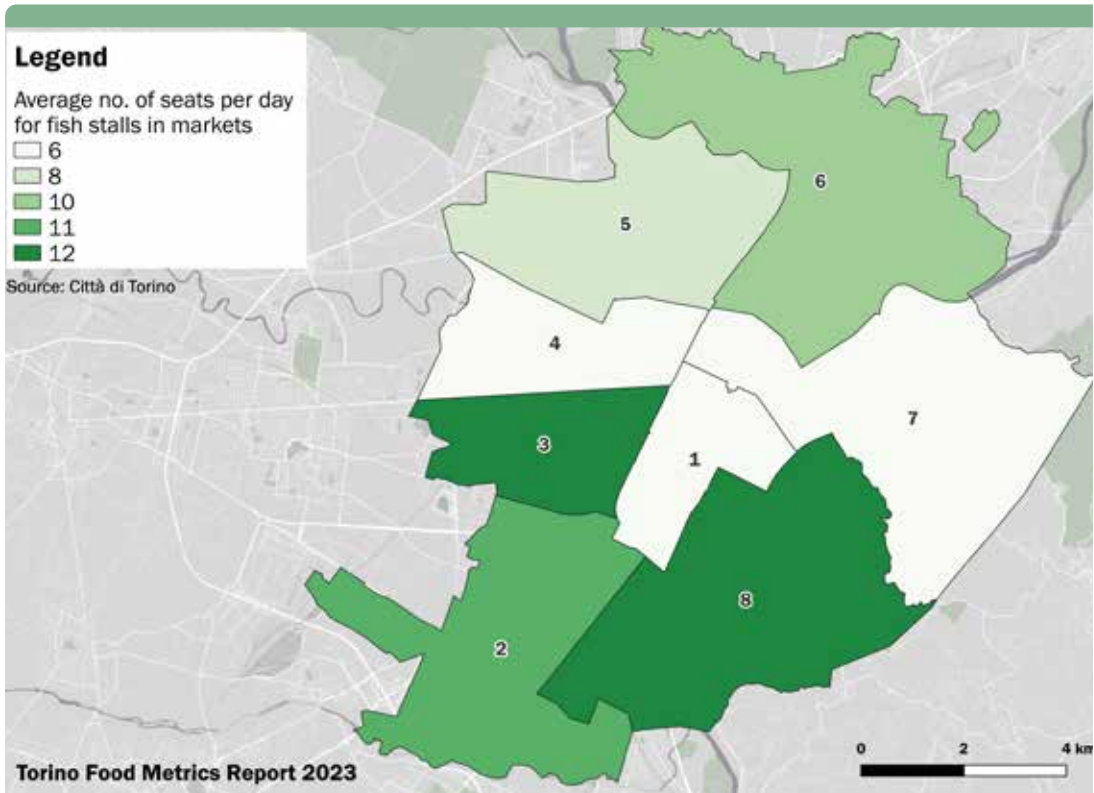


Figure 1.9 – Average number of pitches available to fish & seafood stalls per market by district  
(Source: City of Turin – Annual Statistical Records)

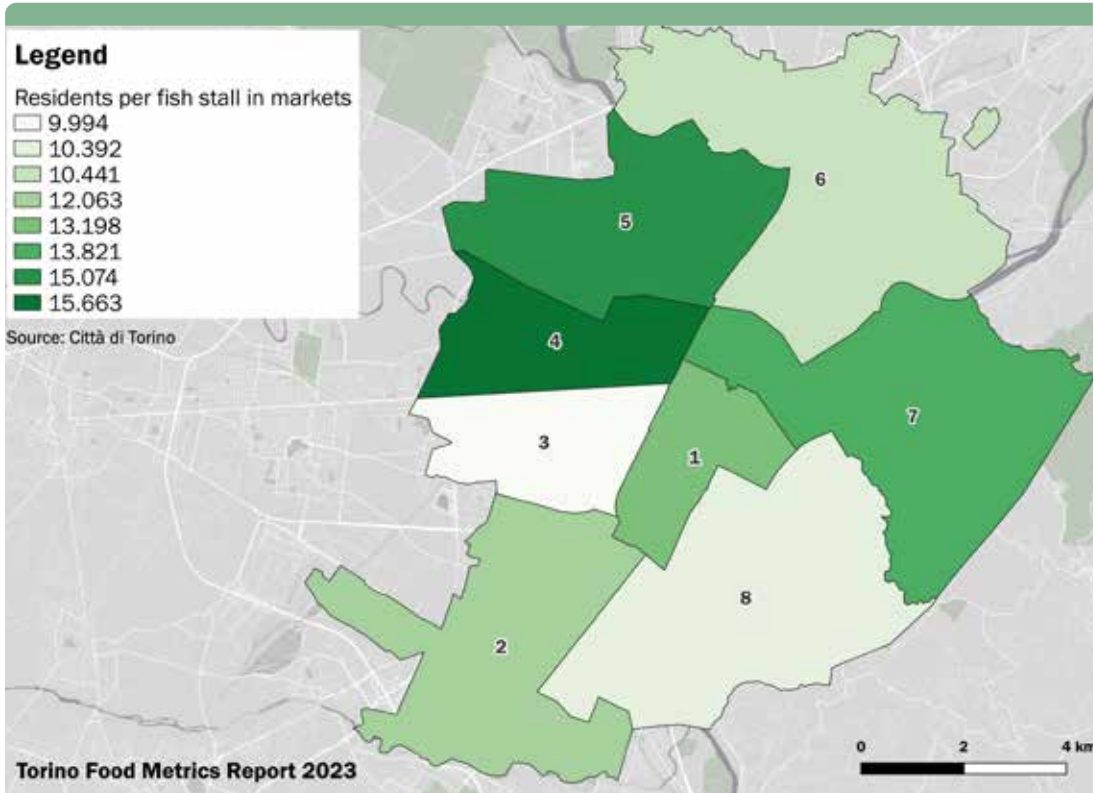


Figure 1.10 - Inhabitants per fish & seafood stall in the city markets  
(Source: City of Turin - Annual Statistical Records)

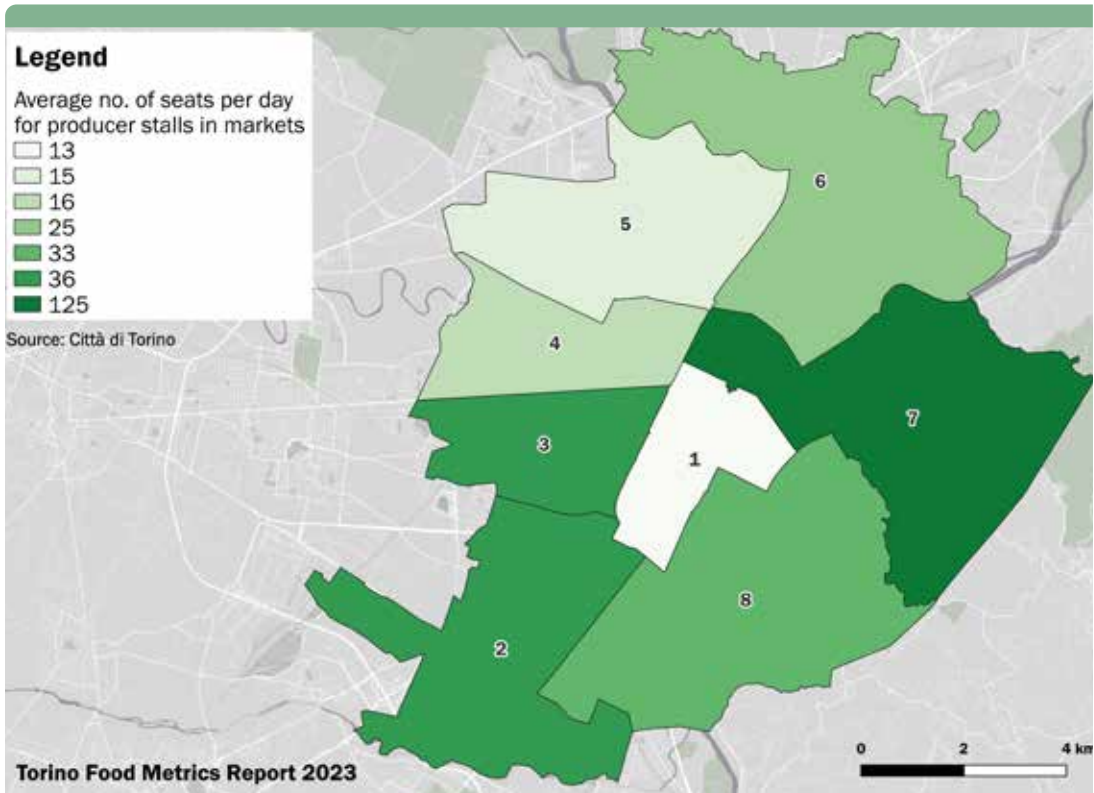
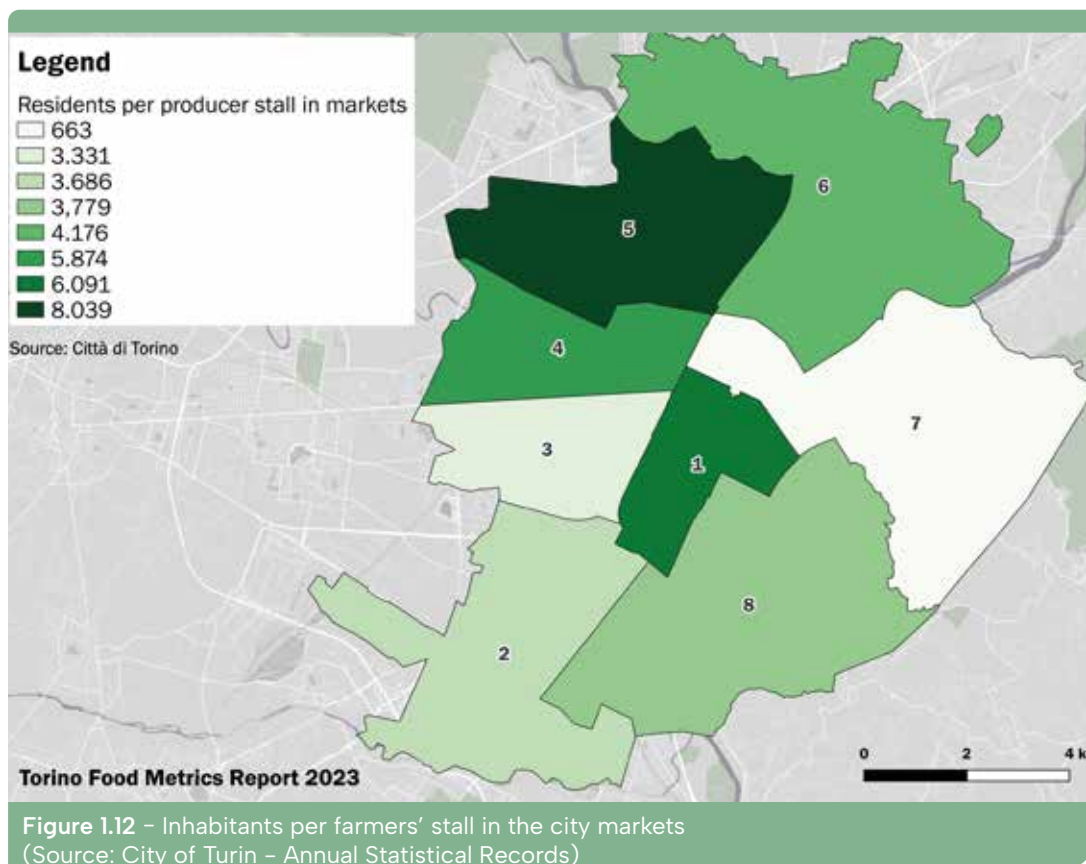


Figure 1.11 - Average number of pitches available to farmers' stalls per market by district  
(Source: City of Turin - Annual Statistical Records)



In addition to that, 16 street markets devoted exclusively to direct sales by farmers are also organised by private operators, such as farmers' associations, namely Coldiretti and Cia which are in charge of organising some of the largest farmers' markets on a monthly or bi-weekly basis in a selection of historical piazzas in the city centre (Piazza Bodoni, Piazza Vittorio, Piazza Palazzo di Città).

FARMER'S MARKETS	LOCATION	NUMBER OF PITCHES AS PER MARKET LAYOUT
CAMPAGNA AMICA	via Francesco Mittone	61
CAMPAGNA AMICA	Giardino Lamarmora	61
CAMPAGNA AMICA	p.zza Palazzo di Città e p.zza Corpus Domini	61
CAMPAGNA AMICA	p.zza e giardini Cavour	61
CAMPAGNA AMICA	p.zza e giardini Bodoni	61
CAMPAGNA AMICA	c.so Umbria (tra c.so Regina e via Livorno)	61
CAMPAGNA AMICA	p.zza Vittorio Veneto	61
LA SPESA IN CAMPAGNA	p.zza Palazzo di Città	30
LA SPESA IN CAMPAGNA	p.zza Giambattista Bodoni	30
IL CAMPO IN PIAZZA	via Nizza 30	10
IL CAMPO IN PIAZZA	via Monferrato	10
GOOGREEN COMUNITÀ DI PRODUTTORI AGRICOLI PER LA BIODIVERSITÀ	Giardino Ernesto di Sambuy (p.zza Carlo Felice)	40
MERCATO DEL PANIERE	piazza C.L.N.	40
AGRIFLOR	p.zza Vittorio Veneto	40
ASSOCIAZIONE BIOLOGICANTE	p.zza Cavour	5
MERCATO DELLA TERRA DI SLOWFOOD DI TORINO	via Ermanno Fenoglietti 14	16

Table 1.5 – Street markets organised by private entities for direct sales by farmers only

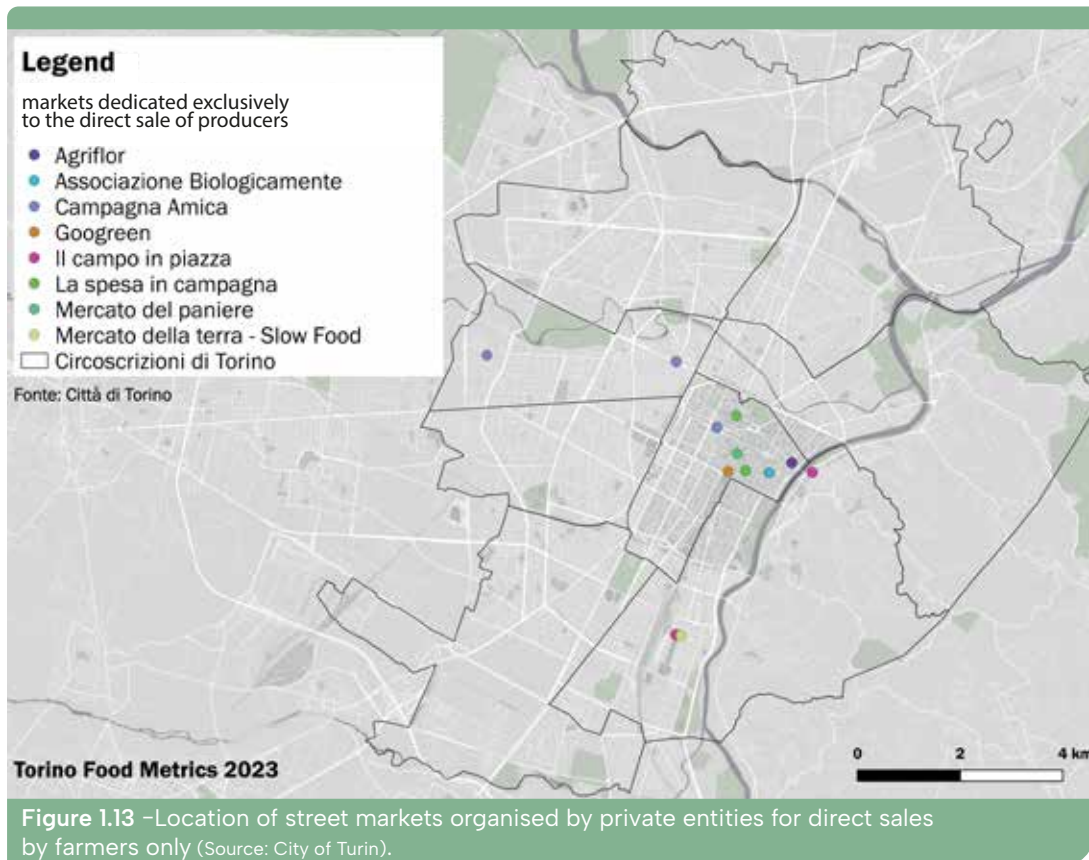


Figure 1.13 -Location of street markets organised by private entities for direct sales by farmers only (Source: City of Turin).

## 1.2 Food Stores & Large-scale Distribution

The analysis of food retailing in Turin shows a decidedly capillary distribution across the city. On one hand, Figures 1.15 to 1.27 indicate that the concentration of food retail stores is as heavy in the central and semi-central neighbourhoods as in semi-peripheral neighbourhoods, characterised by high population density and relatively low socio-economic indices, such as Aurora and Barriera di Milano (Districts 7 and 6).

On the other hand, the concentration of large retailers (LSD) reaches its peak in some non-central neighbourhoods (Barriera di Milano, San Salvario, Mercati Generali, Santa Rita), in line with the population distribution pattern; however, this is also likely to be caused by a higher availability of large retail spaces.

The total number of retail stores, including local units, is 4155, most of which (458) selling meat and meat products, while 278 focus on bread and bakery products, and 247 on fruits and vegetables. The total number of fishmongers is 31, with a deeply uneven distribution – they are totally absent in some areas, such as the northern area of District 6 and the southern area of District 2. Finally, we find 119 shops selling only beverages, and 482 tobacconists. The number of large retailers is 39 (20 more than in 2015), which together with medium-sized retailers reaches 275, most densely present in District 3



Numero di grandi superfici in vendita

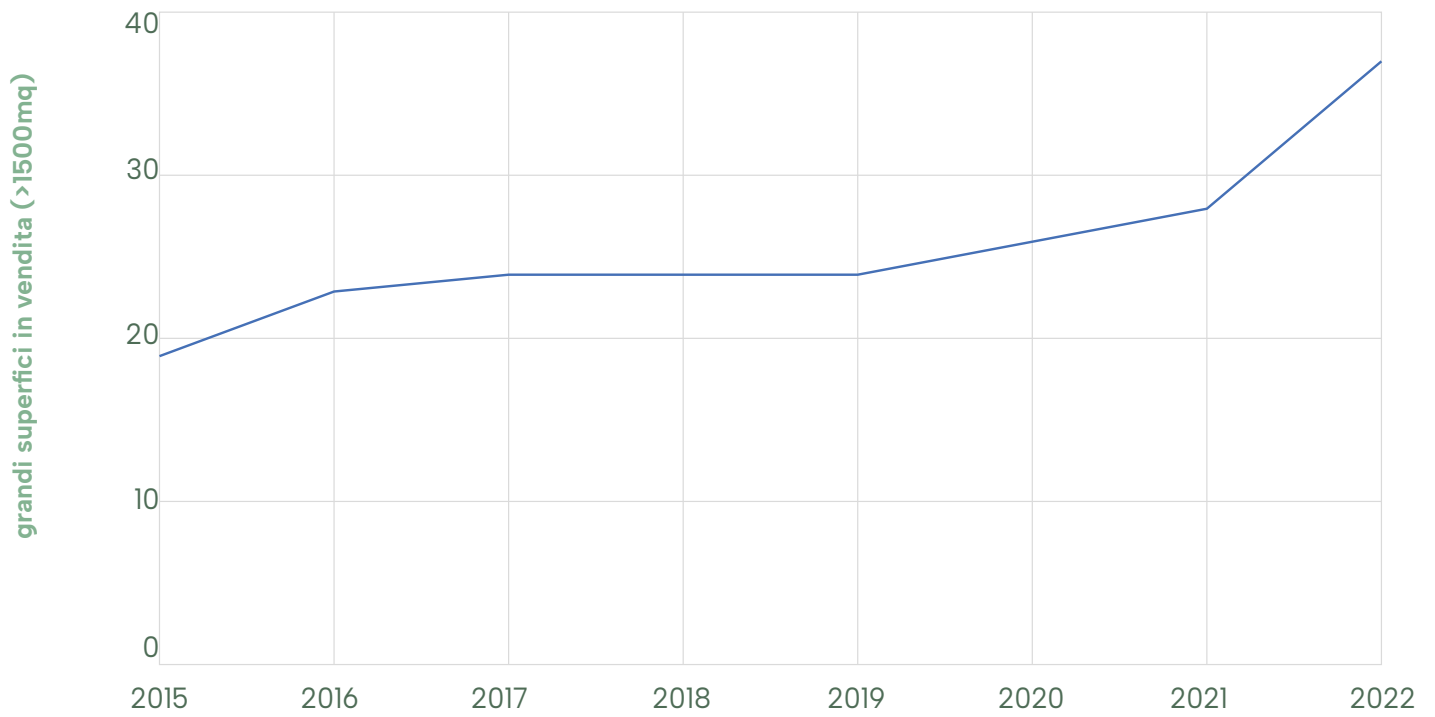


Figure 1.14 - Large retailers - trend  
(Source: City of Turin)

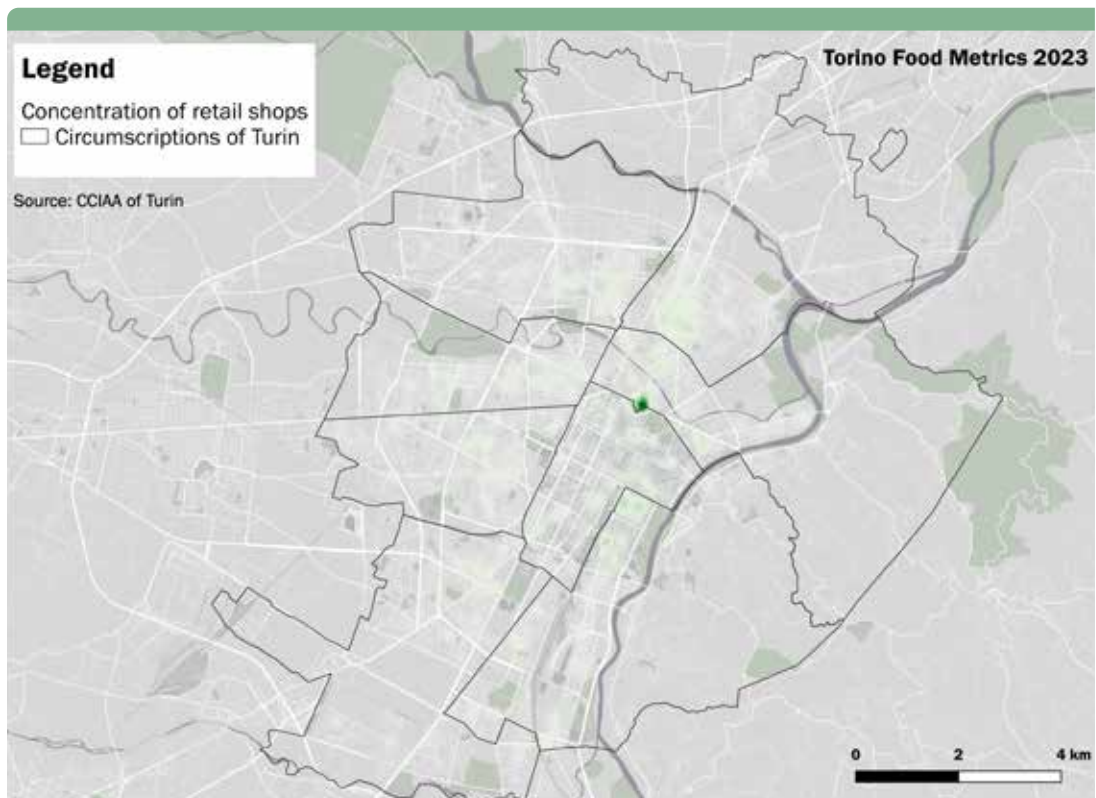


Figure 1.15 – Heatmap of retail shops, excluding tobacconists  
 (Source: Turin Chamber of Commerce)

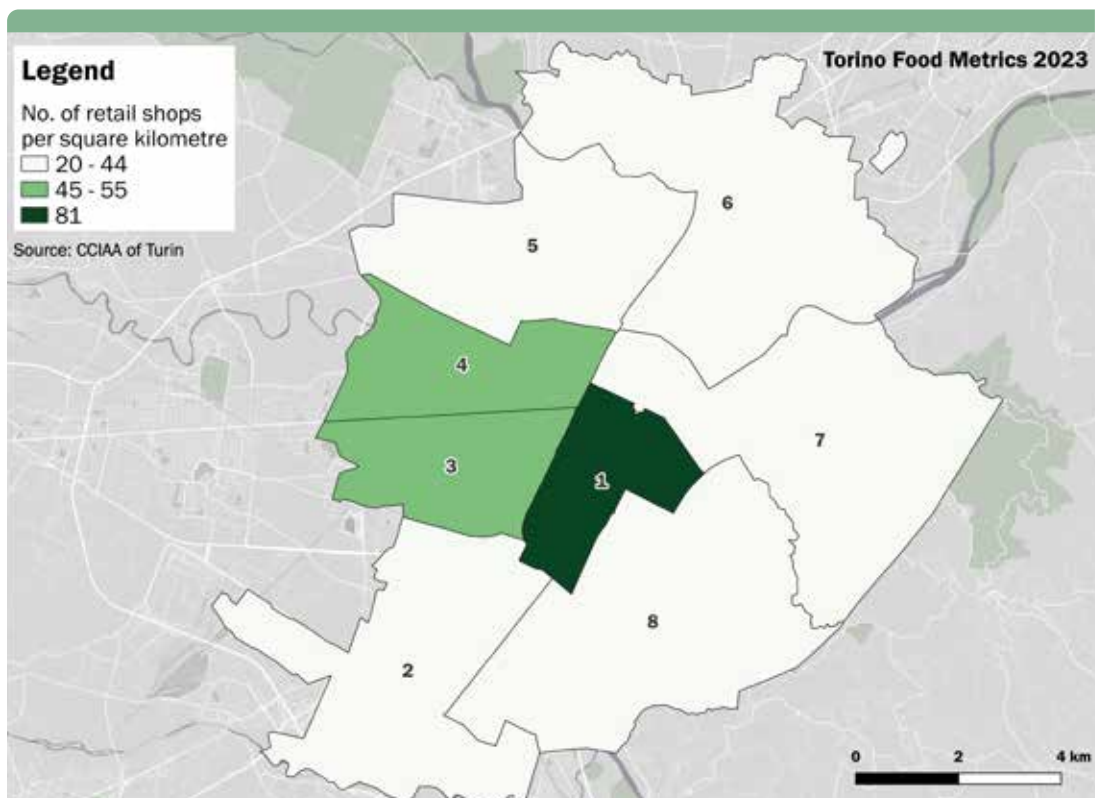


Figure 1.16 – Number of retail shops per sq.km  
 (Source: Turin Chamber of Commerce)

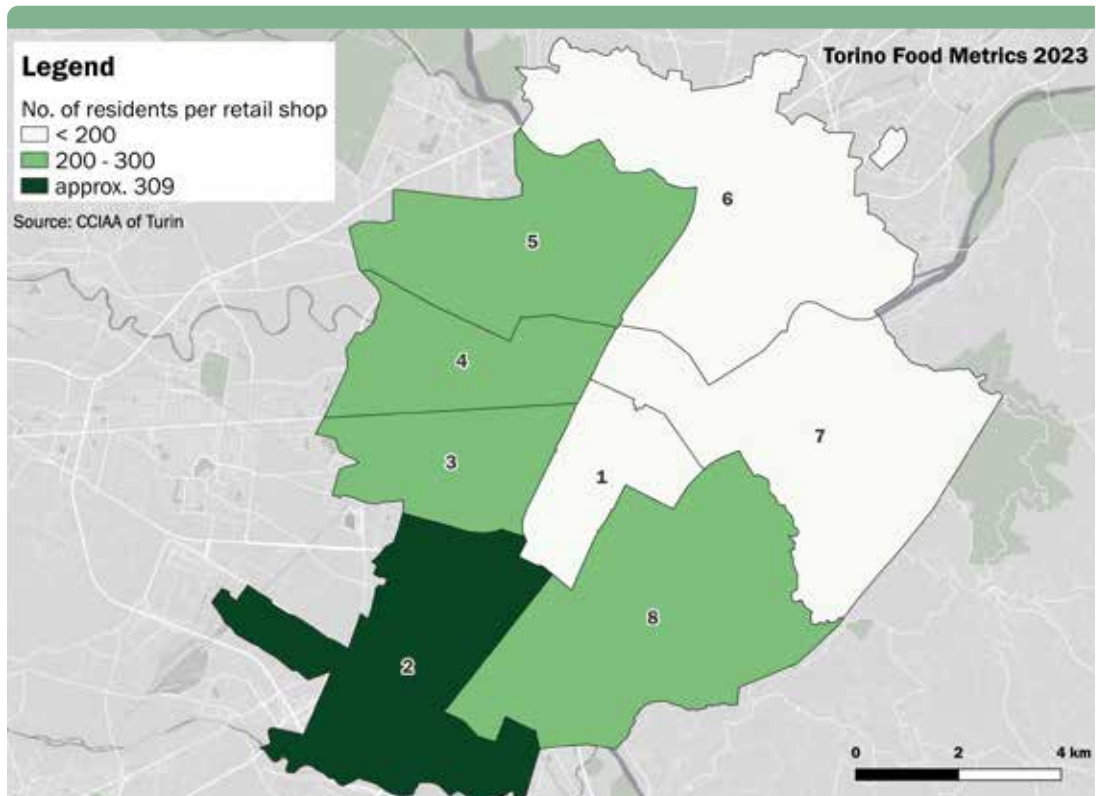
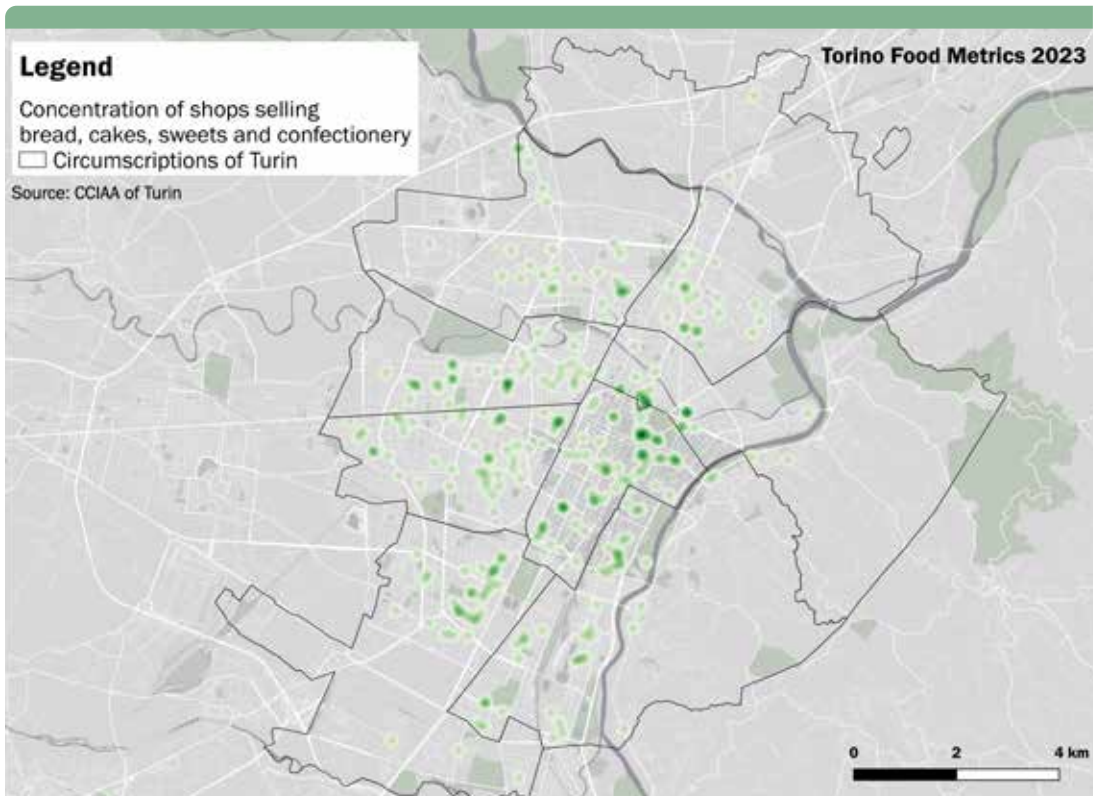


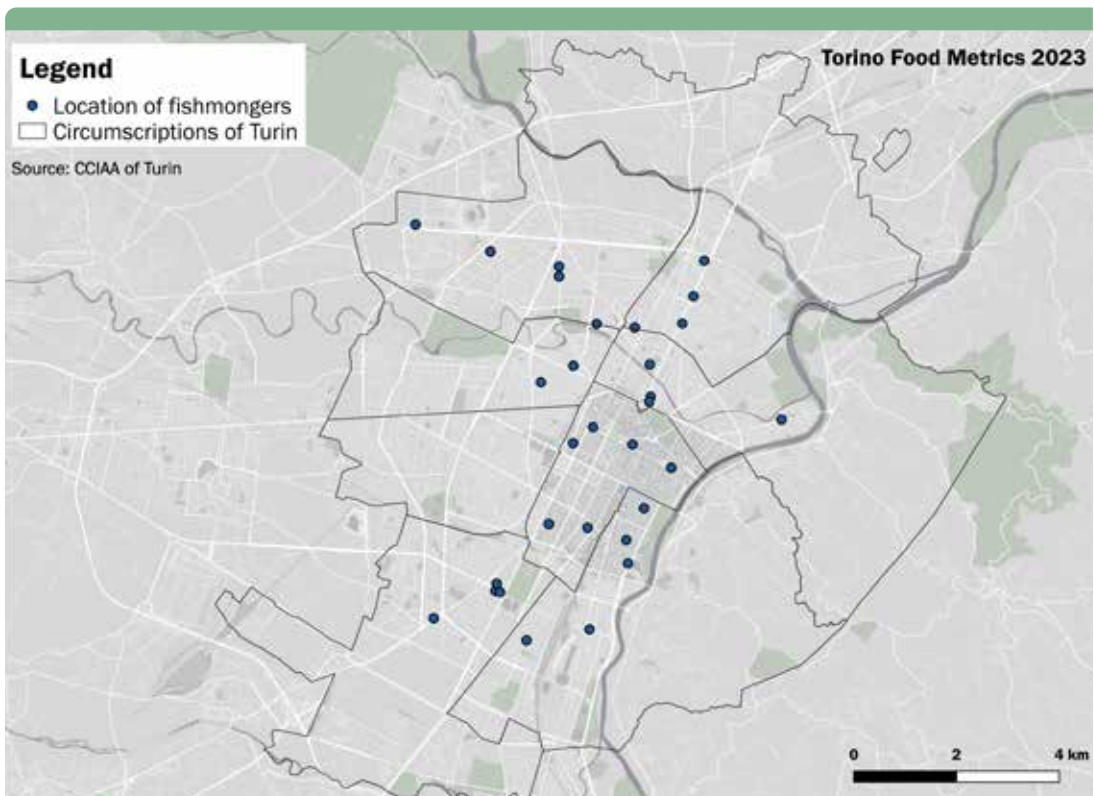
Figure 1.17 – Number of inhabitants per retail shop  
 (Source: Turin Chamber of Commerce processed data)



Figure 1.18 – Concentration of stores selling State monopoly goods  
 (Source: Turin Chamber of Commerce processed data)



**Figure 1.19** – Heatmap of stores selling bread & bakery products  
 (Source: Turin Chamber of Commerce processed data)



**Figure 1.20** – Location of fishmongers  
 (Source: Turin Chamber of Commerce processed data)





Figure 1.21 – Heatmap of stores selling fruit & vegetables  
 (Source: Turin Chamber of Commerce)

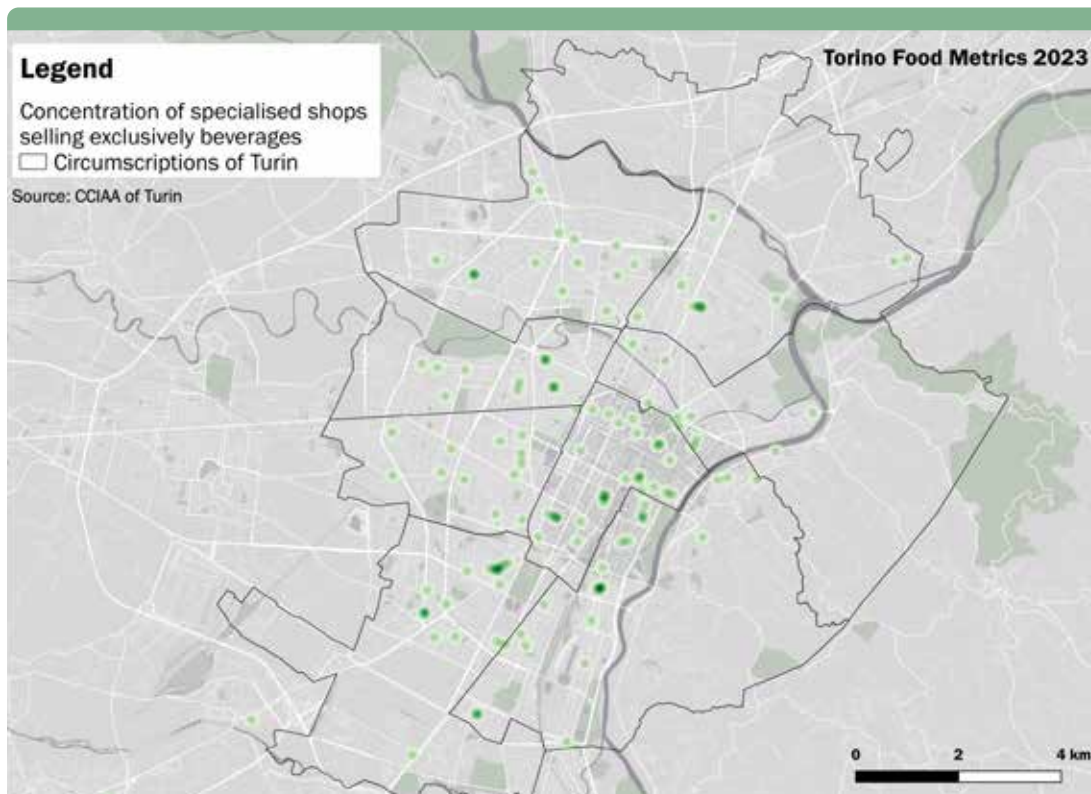


Figure 1.22 – Heatmap of stores selling beverages only  
 (Source: Turin Chamber of Commerce)



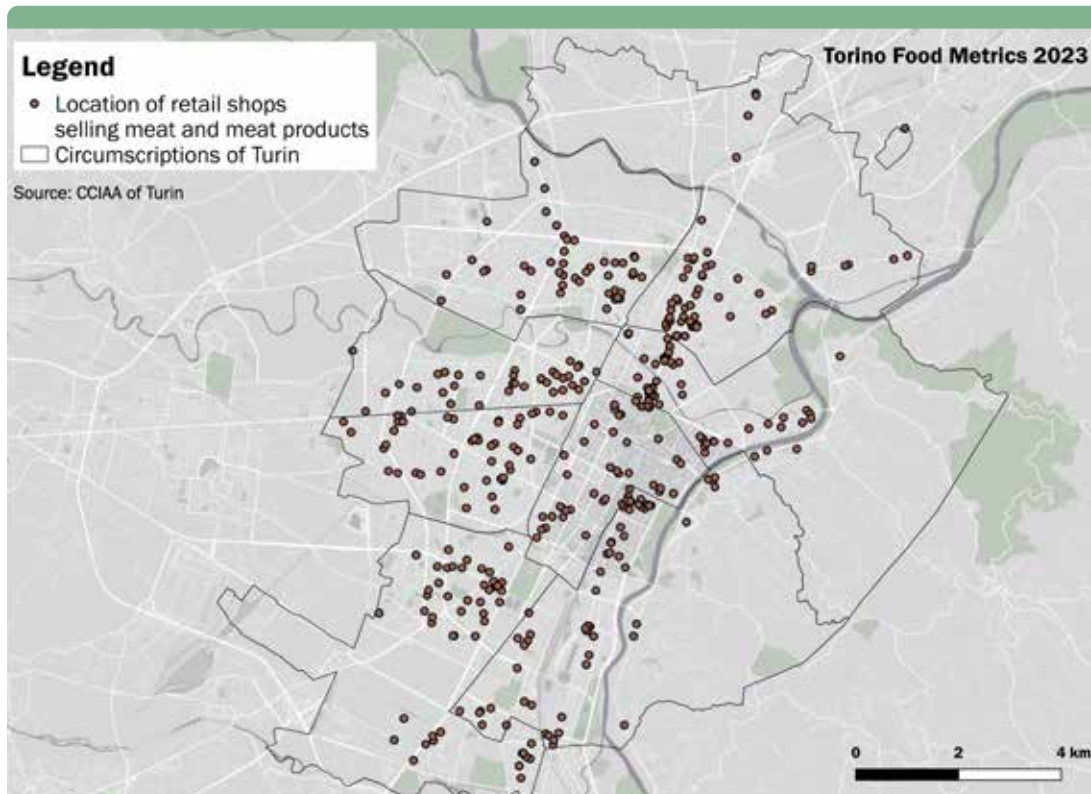


Figure 1.23 – Location of retail shops selling meat & meat products  
(Source: Turin Chamber of Commerce)

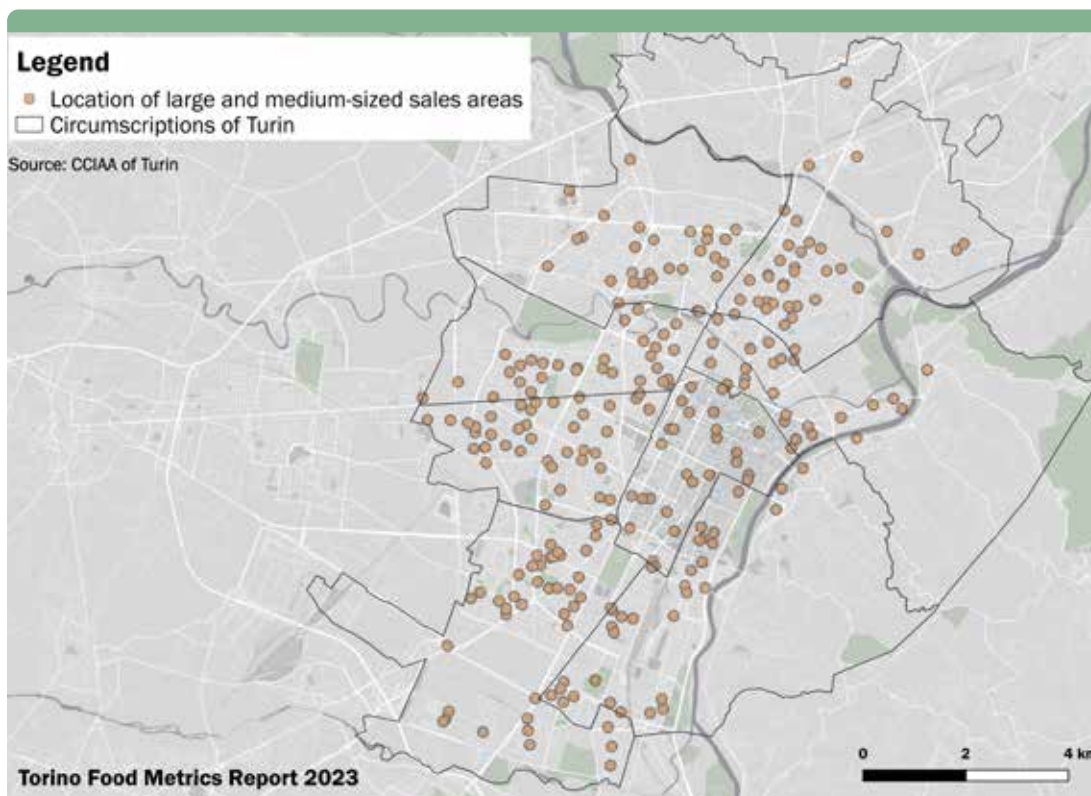


Figure 1.24 – Location of large and medium-scale retailers  
(Source: Turin Chamber of Commerce)

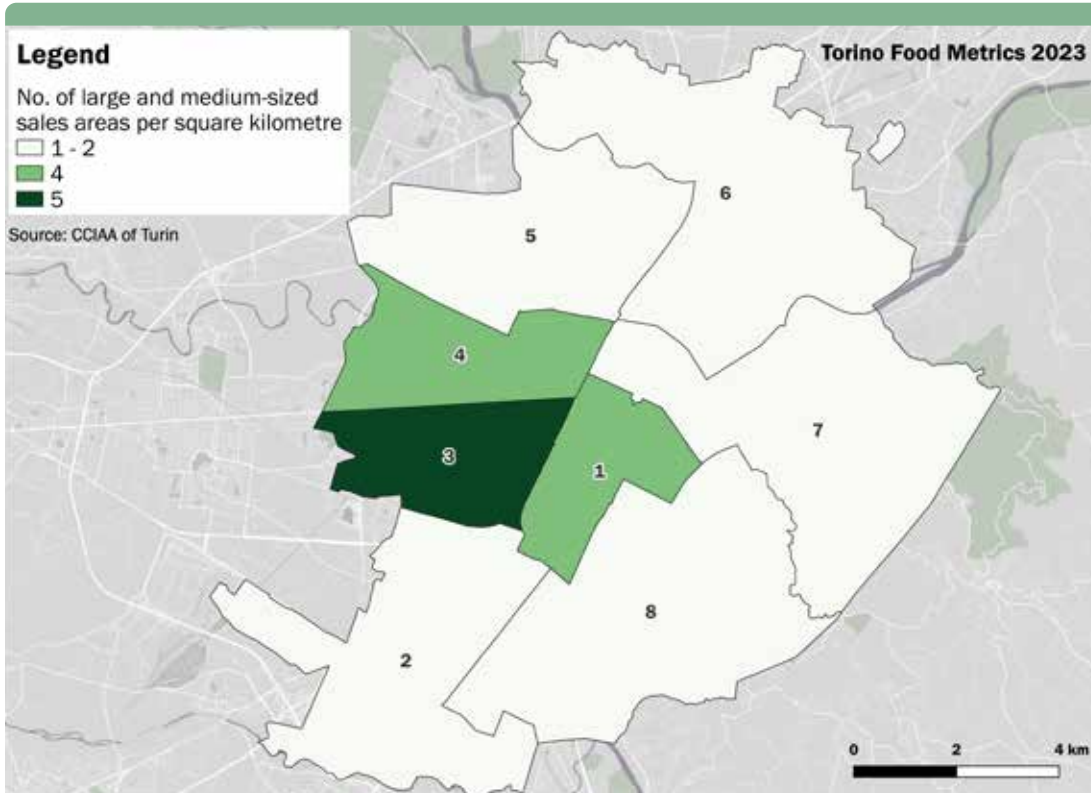


Figure 1.25 – Number of large- and medium-scale retailers per sq.km  
(Source: Turin Chamber of Commerce processed data)

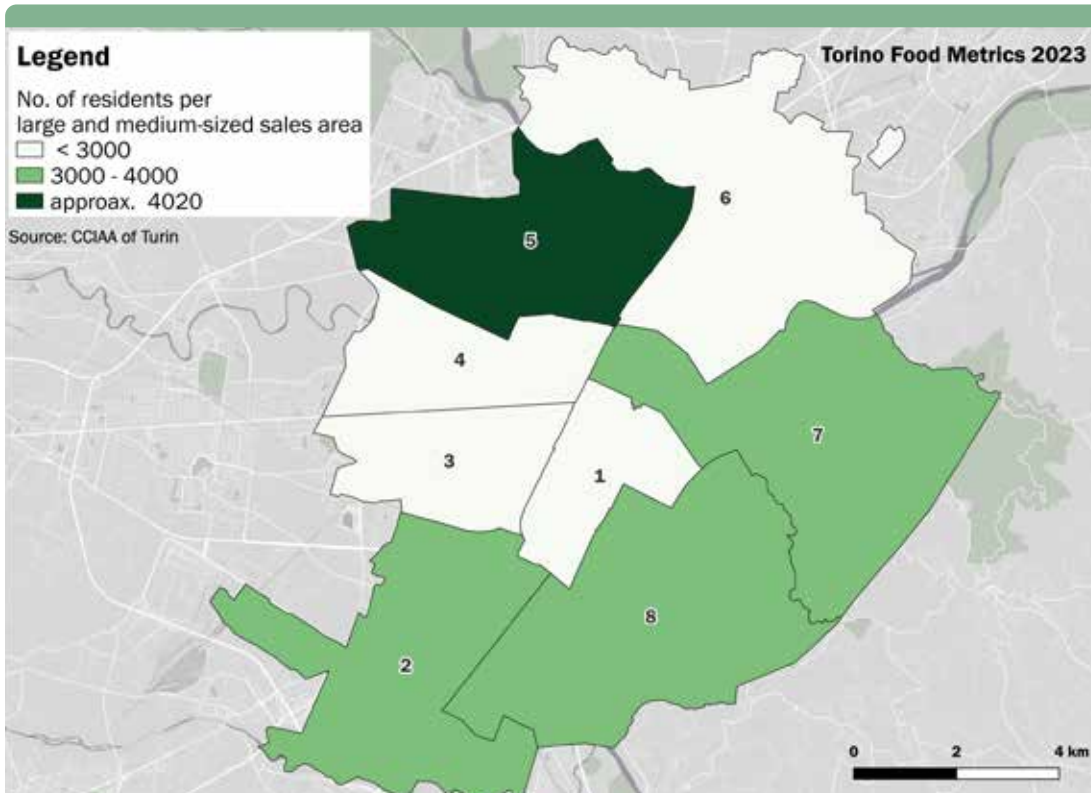
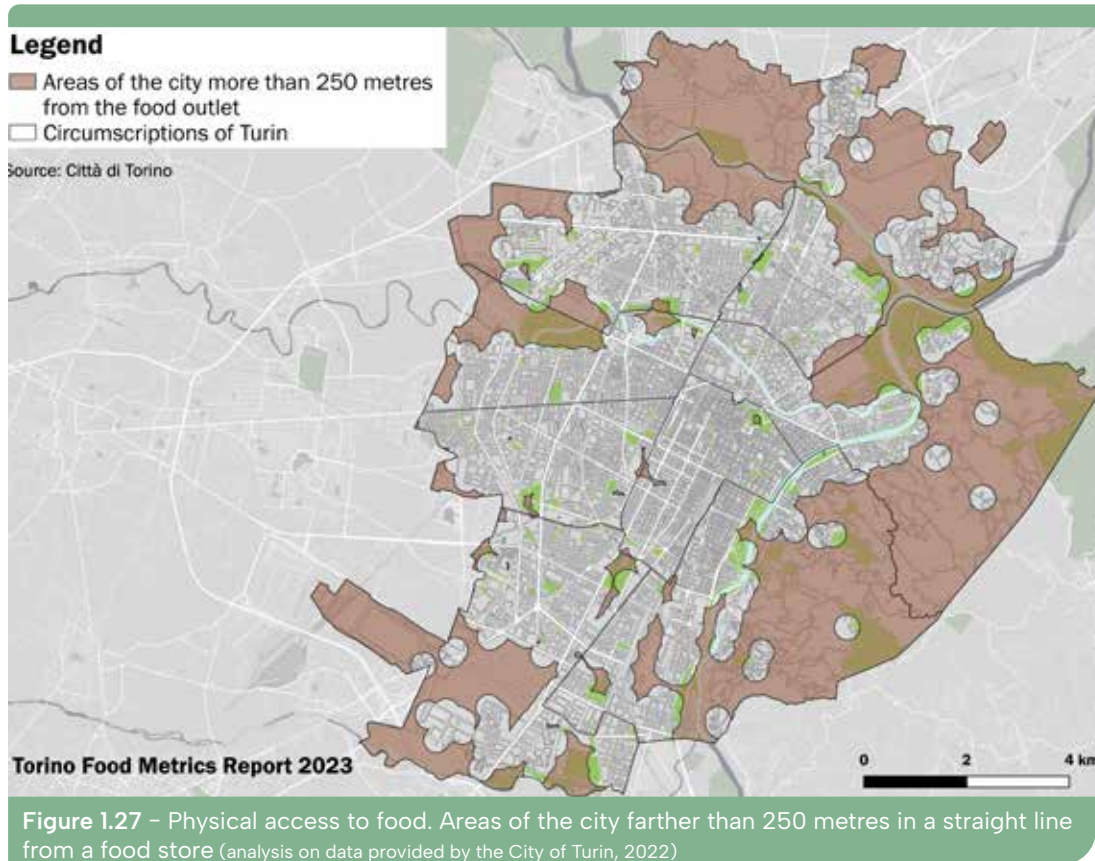


Figure 1.26 – Number of inhabitants per large and medium-scale retailer  
(Source: Turin Chamber of Commerce processed data)

A closer look at the linear distance of all city blocks from all food points of sale, i.e., stores, street markets, supermarkets, and so on, reveals that hardly any of them are more than 250 metres away from a food access point, with a concentration of low-density residential blocks in the hilly and pre-hilly areas, including Villaretto. We can therefore conclude that the phenomenon of so-called “food desert” is almost absent in Turin, at least with regard to the presence of stores.



### 1.3 Café, restaurants, and catering

One of the main phenomena occurring in the central areas and neighbourhoods subject to gentrification processes in most European cities is the increase in the presence of businesses intended for on-site serving and consumption of food and drink. Cafés and restaurants are at the core of a phenomenon addressed by the international debate as “foodification”, i.e., the process of growing specialisation occurring in many urban areas. This has highlighted both the potential for economic development and the possibly adverse effects of this process, such as the risk for social/spatial exclusion and a diversification of the local social-economic fabric (Loda et al., 2020; Bourlessas et al., 2021). There are as many as 8579 on-site food and drink businesses in Turin, reaching a maximum concentration in the city centre and in San Salvario neighbourhood. In particular, the number of food and drink businesses per sq.km in District 8 (where San Salvario is located) is similar to Districts 3 and 4.



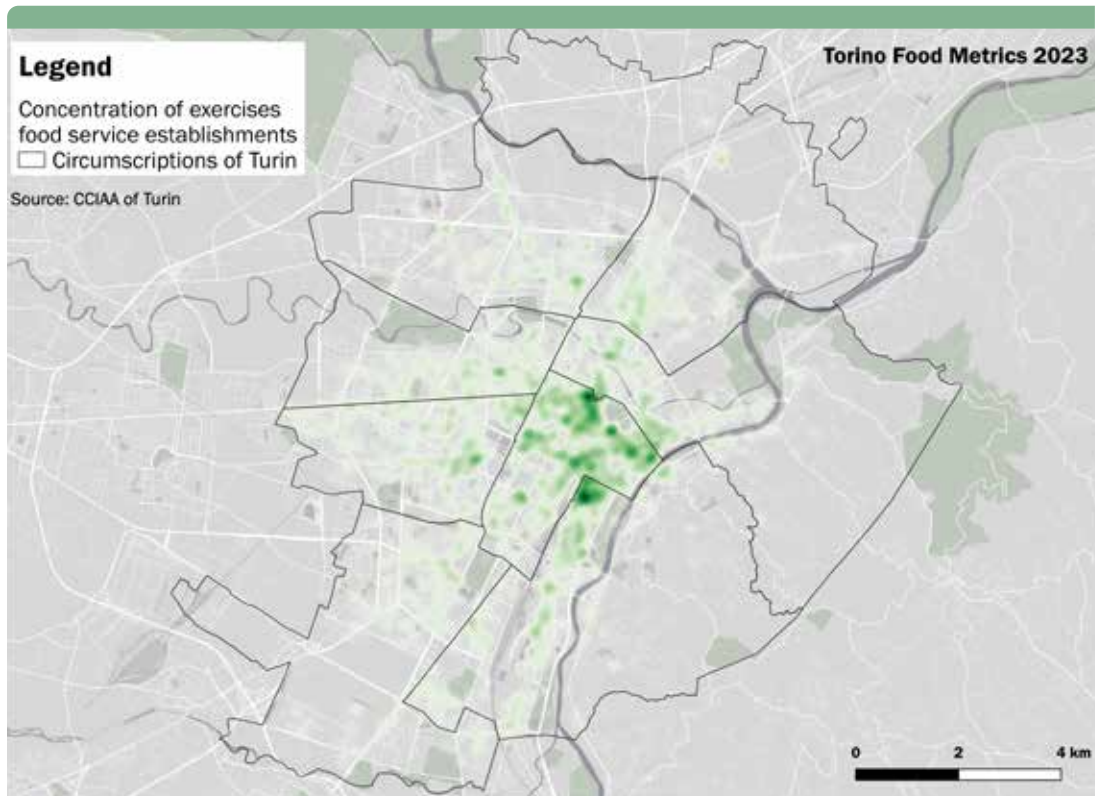


Figure 1.28 – Heatmap of food and drink businesses (2022 City of Turin processed data)

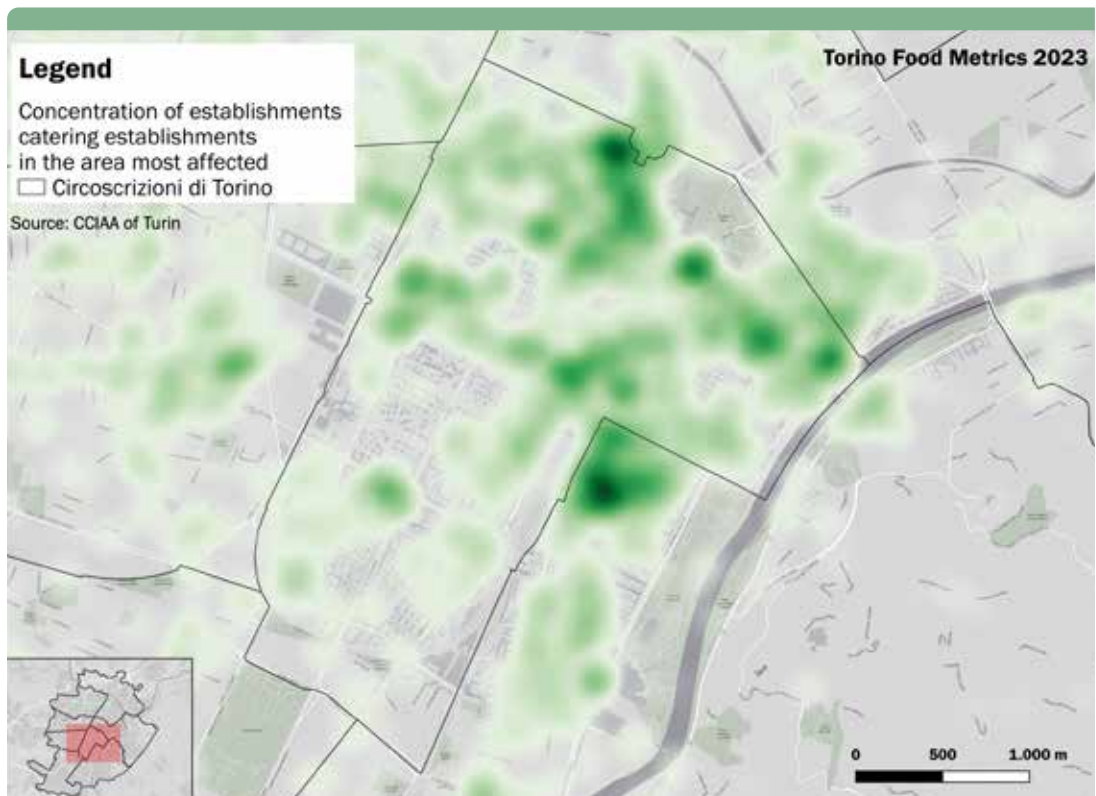


Figure 1.29 – Heatmap of food and drink businesses and their concentration (Source: Turin Chamber of Commerce)

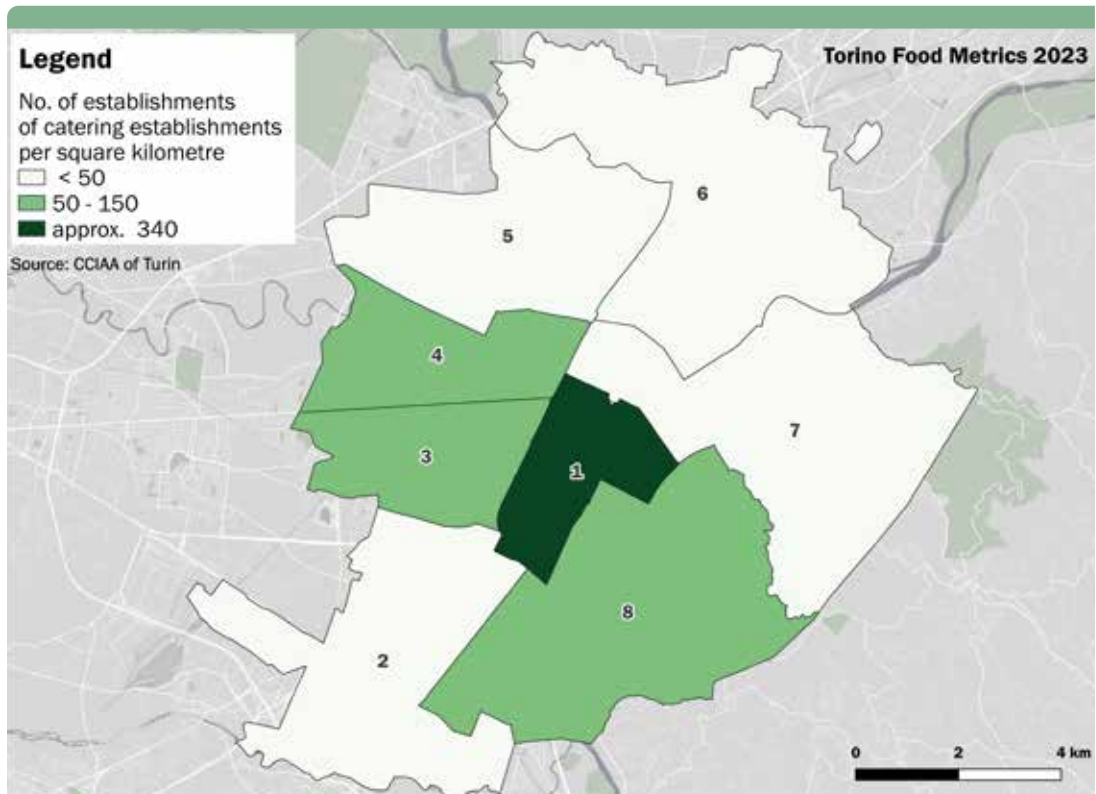


Figure 1.30 – Number of food and drink businesses per sq.km. (Source: Turin Chamber of Commerce)

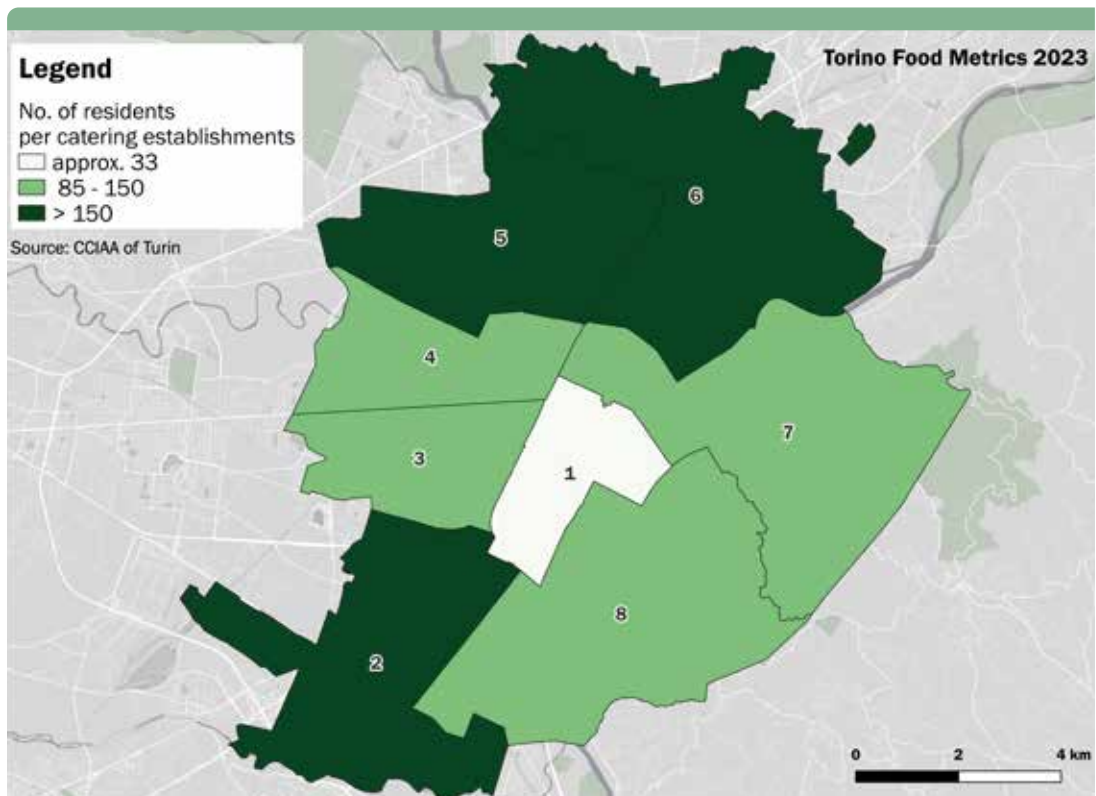
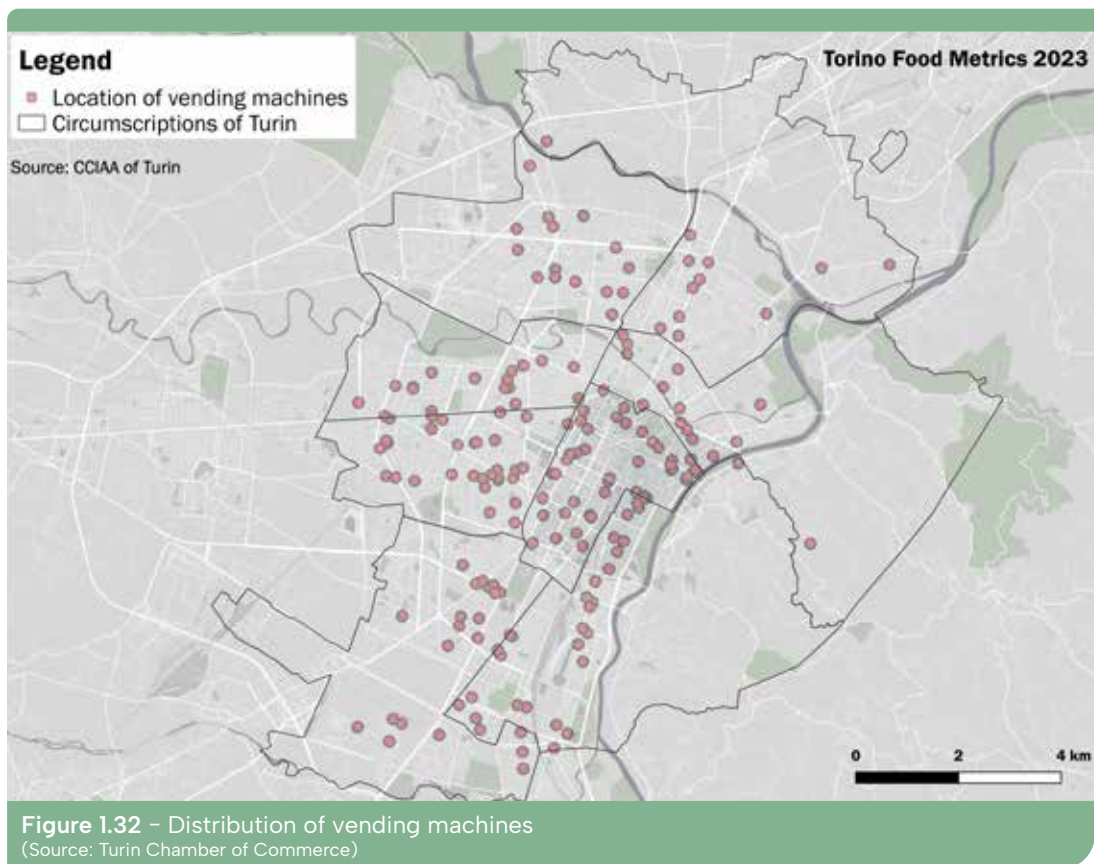


Figure 1.31 – Number of inhabitants per food and drink businesses (Source: Turin Chamber of Commerce)



## 1.4 Vending Machines

The distribution of vending machines for hot/cold drinks and various foodstuffs across the city territory in compliance with Leg. Dec.n. 114 dated 31.03.1998 serves as a further key for a proper understanding of the city food-scape, they being, by their very nature, directly linked with the consumption of highly-processed, unhealthy food. A total of 192 vending machines are present in Turin, mainly concentrated between the City centre/District 1 (specifically in Via Po), the area around Piazza Sabotino in District 3 and along Corso Vittorio Emanuele II.



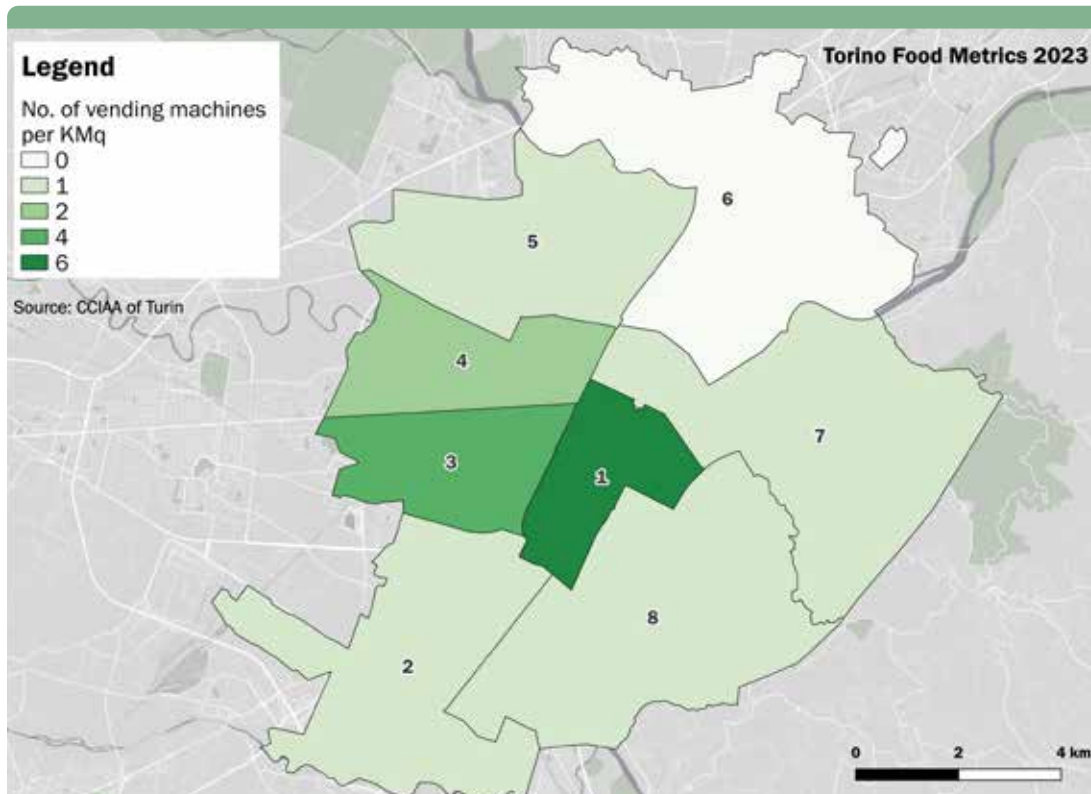


Figure 1.33 – Number of vending machines per sq.km.  
(Source: Turin Chamber of Commerce)

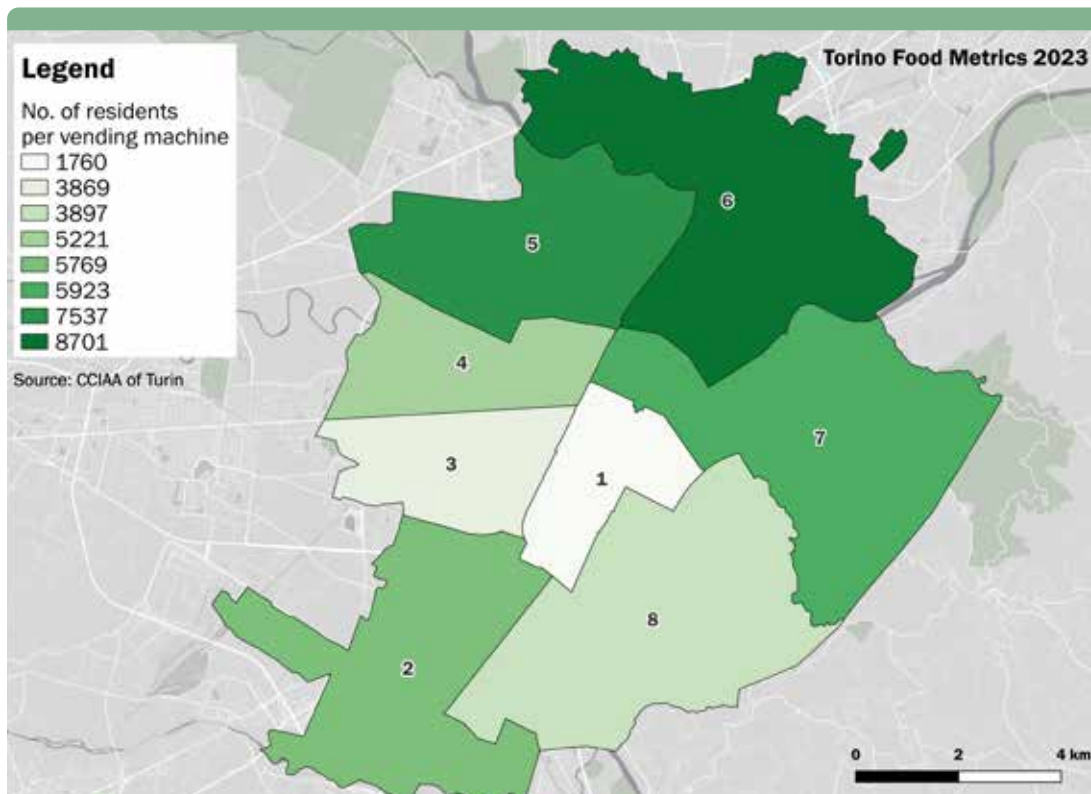


Figure 1.34 – Number of inhabitants per vending machine  
(Source: Turin Chamber of Commerce)

## 1.5 Ethical Purchasing Groups

The range of food purchasing opportunities is broadened by various types of Alternative Food Networks (AFN), as referred to in the international debate. They consist of a variety of practices through which consumers can buy food produce in an 'alternative' way as compared to conventional channels, most often by purchasing directly from producers, often on a collective basis. One of the most widespread types of AFN is known as Gruppi di Acquisto Solidale, whose members explicitly intend to support specific models of production and distribution through purchasing (Grasseni, 2013; Pettenati e Toldo, 2018).

The quantity of GASs in a given territory is particularly difficult to determine, since many of them are informal and only some are formally established, for instance as associations.

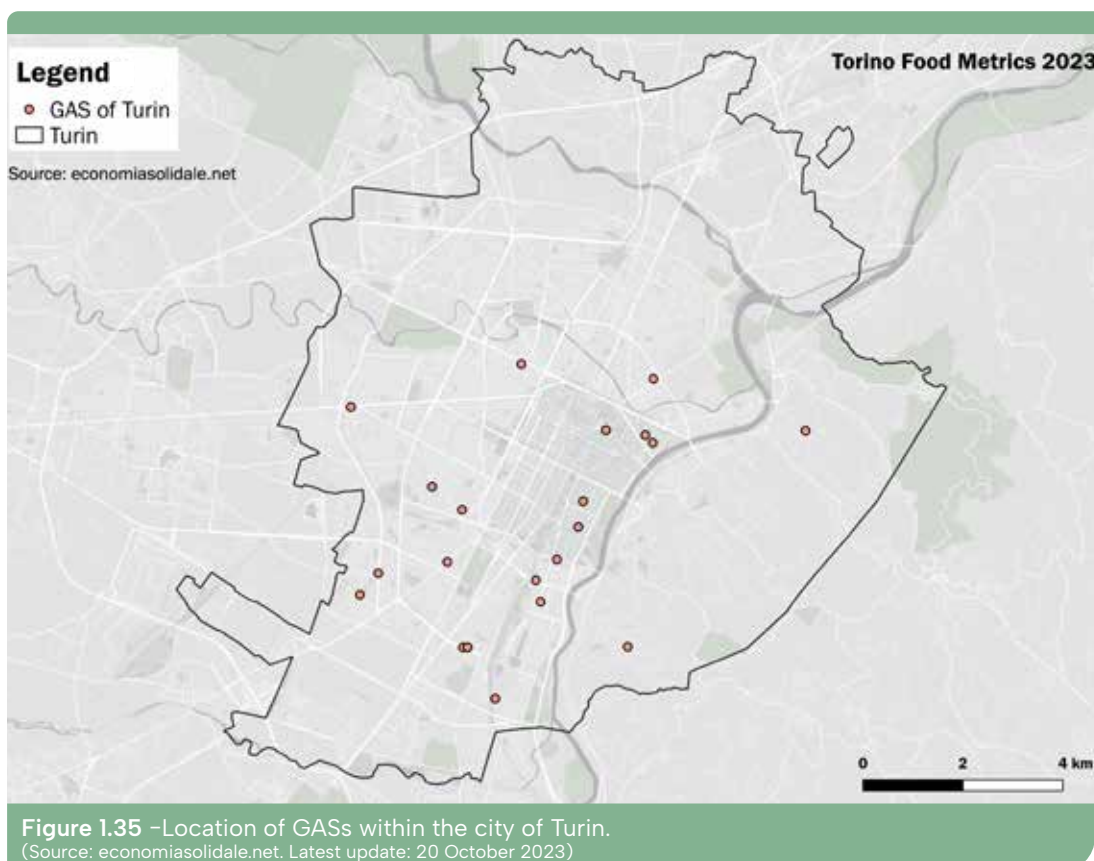
Nevertheless, the number of the most active GASs, as approximate as it may be, can be derived from self-censuses and participatory mapping initiatives carried out by actors such as the national tEconomia Solidale (Solidarity Economy) network.

The reference portal [economiasolidale.net](http://economiasolidale.net) allows to make inquiries at metropolitan scale within Turin area. Its database includes:

- 1 GAS network in Ivrea and 1 GAS network in Buttigliera;
- 42 GASs, 26 of which within the municipality of Turin;
- 1 Distretto di Economia Solidale – DES (Solidarity Economy District).

Because we are dealing with entries either by portal users or by members of the concerned networks/associations, however, the number and listing of GASs is likely to differ from site to site. For instance, [e-circles.org](http://e-circles.org) displays at least four additional entries. A further GAS mapping effort should be considered in the future, despite it being such a bustling phenomenon that it can be hardly captured.

The georeferenced points in the following images represent the GASs listed on [economiasolidale.net](http://economiasolidale.net), both in Turin (Figure 1.35) and in its Metropolitan Area (Figure 1.36).



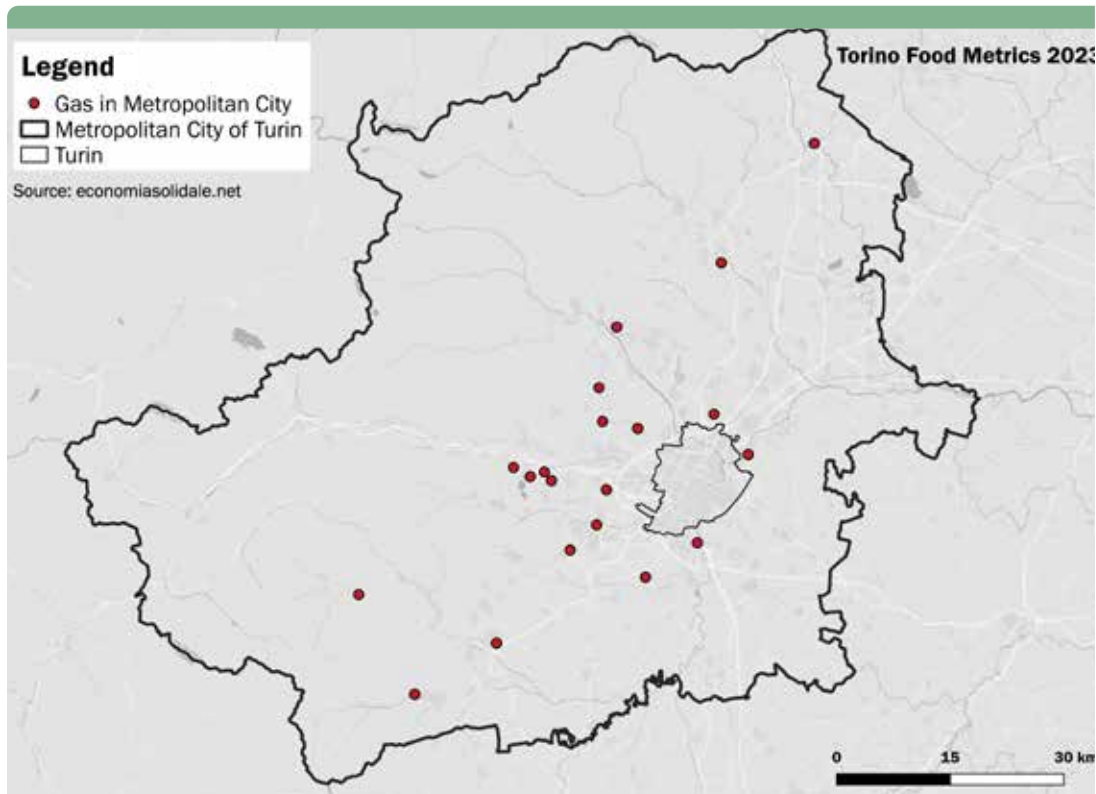
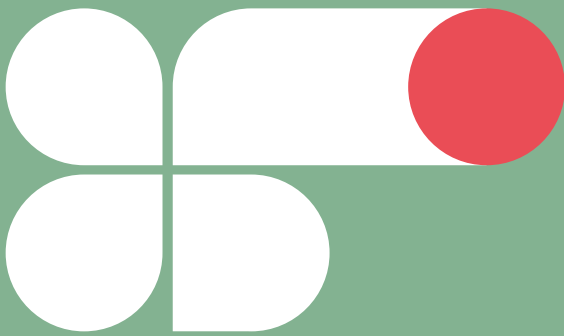


Figure 1.36 – Location of GASs within the Metropolitan Area of Turin  
(Source: economiasolidale.net. Latest update: 20 October 2023)







# FOOD PROCESSING INDUSTRY

Considering Turin from its industrial perspective means coming to terms with its past. For almost the entire 20th century, its name stood for manufacturing, thus reflecting the opportunities and limitations of the industrial model itself. Indeed, "a single-sector economic model" ruled over the city, "which developed an impressive supply chain, dragging it into an impressive growth, but also dooming into a wax-and-wane fate" (Peano, 2007). As a consequence, and in parallel, Turin would experience substantial demographic boom, boosting to 1,200,000 inhabitants in the 1970s, while also causing "a massive, frenzied urban sprawl characterised by its haphazard expansion into neighbouring municipalities" (ibid.). Nonetheless, as of that same decade, Turin industrial sector was swept by such a deep crisis that led to reverse previously observed phenomena, leaving the city in a situation of sharp population decline, loss of essential services / assets, and mushrooming terrainvague, i.e., neglected, abandoned urban spots in a state of disrepair to be found within a developed area.

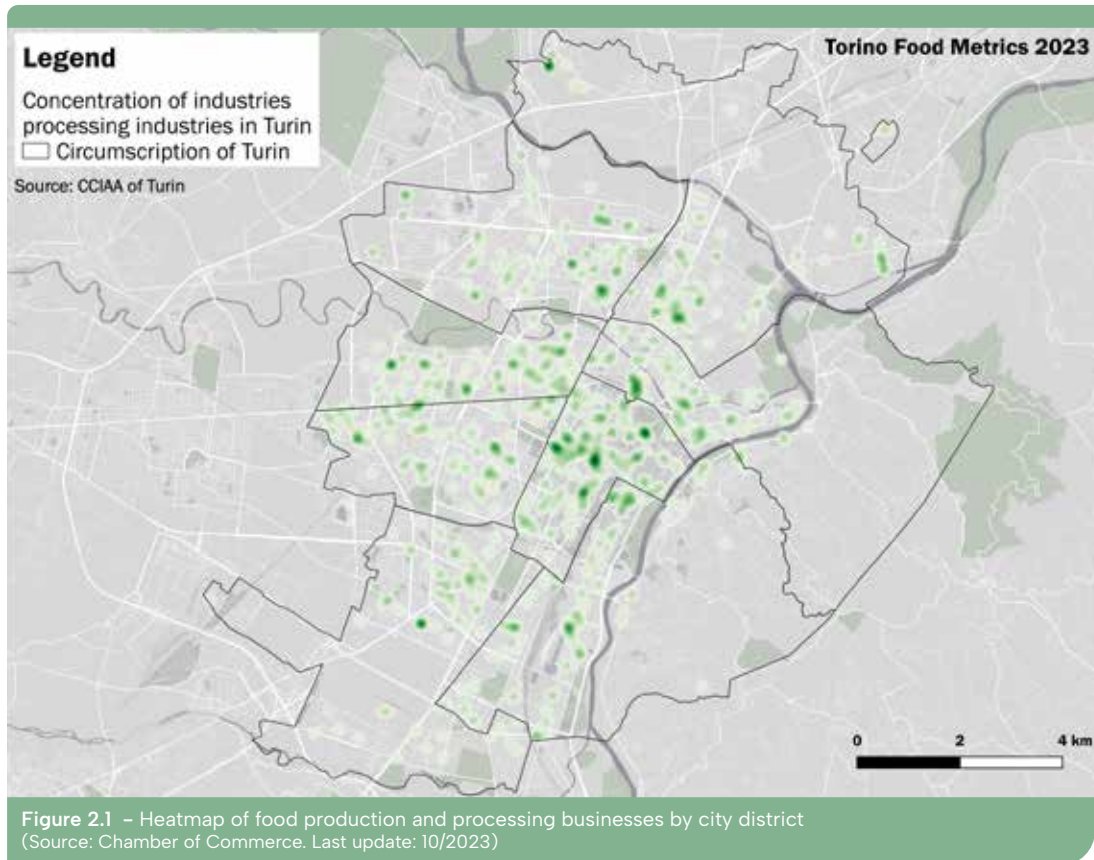
The transformation of the metropolitan fabric around the turn of the century and throughout the early 2000s was marked by two major milestones – the approval of the 1995 Master Plan (Piano Regolatore Generale – PRG) and the award of the 2006 Winter Olympics, the latter playing a particularly crucial role in reshaping the city life and face. The process of radical renovation of the city spaces and infrastructures was triggered by 1995 Master Plan and pursued by the 1st and 2nd Strategic Plan for Torino Internazionale in 2000 and 2006, respectively, with a view to enhancing urban/metropolitan governance in the latest phase of the city transformation. (Dansero et al., 2010).

To-date, the effects of these efforts are still so much manifest across the city that Turin can be perceived as an ever-changing territorial unit "part of a group of cities that, in varying degrees, have recently been questioning how to emerge from a stale industrial past". Turin's response stems, first and foremost, from a combination of its industrial history and the Olympic heritage, bringing with it the chance for rapidly-evolving, mutually-interacting production/service sectors and models to coexist (ibidem).

For this reason, and in the light of the process of defining the new city Master Plan, an in-depth mapping of Turin's food industry had made it possible to understand its food production-related propensity, with a focus on the management and planning of both resilient, sustainable food systems – which involves shortening supply chains wherever possible and desirable – and the urban spaces and their fruition.

It can be observed that the local food industry registered an increase by +4.8% in the production sector in 2022 compared to 2021, exceeding even a stationary general average of +3.7%. On one hand, industrial new orders for the domestic market increased by +4.5% on average, with a slightly lower increase for food industry, equal to +4.0%. On the other hand, foreign orders for food businesses recorded an average growth of +3.9%, which remains indisputably positive, although lower than the overall average figure (+21.6%). Yet, employment in the industrial sector as a whole suffered a minor average decline (-0.2%), slightly more noticeable in the food industry (-0.38%).

Overall, however, a vibrant growth in industrial production was recorded in the year 2022. As a manufacturing city par excellence, Turin boasts deep-rooted food production and processing businesses, with 807 companies active in this field, considering both headquarters and local units.



Upon a deeper insight into both the industrial density (businesses per square kilometre) and the number of inhabitants per business, it is worth noting that among the different districts surveyed, District 1 stands out for its highest density figure, with some 23 businesses per square kilometre. In contrast, District 2 shows the lowest levels of industrial density, with only 4 businesses per square kilometre. If we look at the ratio between number of inhabitants and number of businesses, District 2 displays the highest ratio, with about 1,869 inhabitants per business, while District 1 boasts the lowest ratio, i.e., 500 inhabitants per industry. Hence, remarkable variations in business and population distribution across the different districts are to be found, with the highest concentration in District 1 standing out among the other figures.



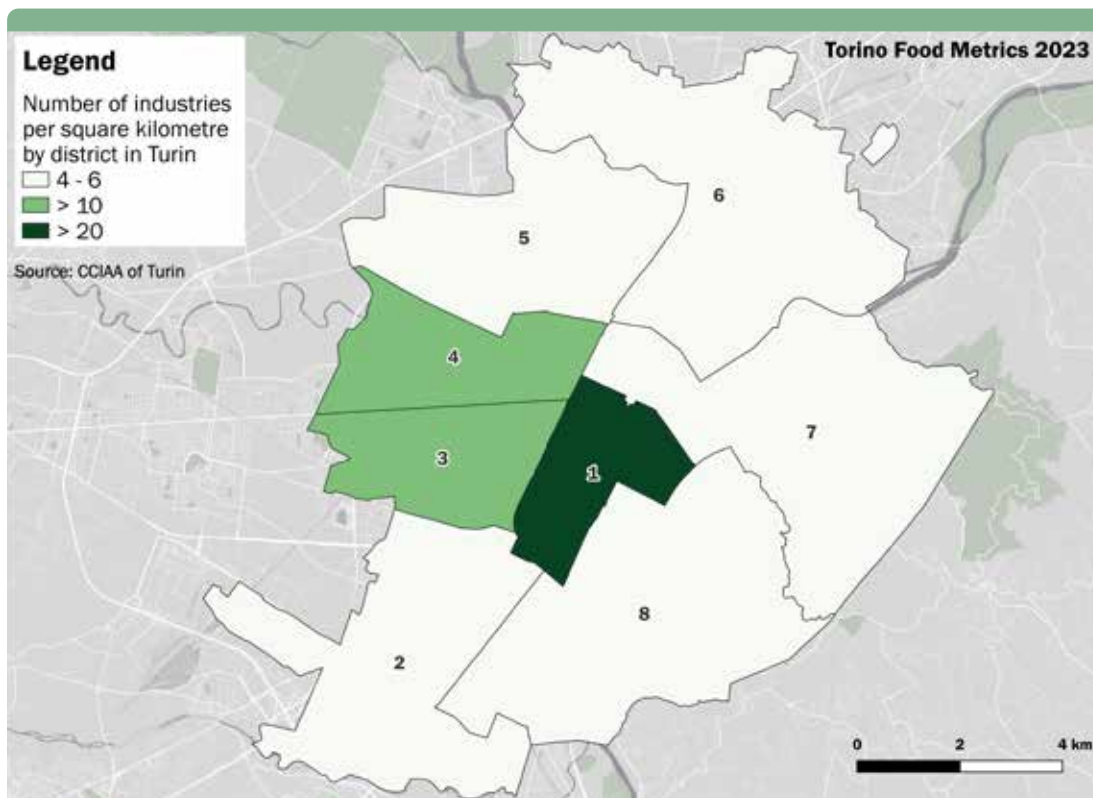


Figure 2.2 – Number of businesses per sq. km per district  
 (Source: Chamber of Commerce. Latest update: 10/2023)

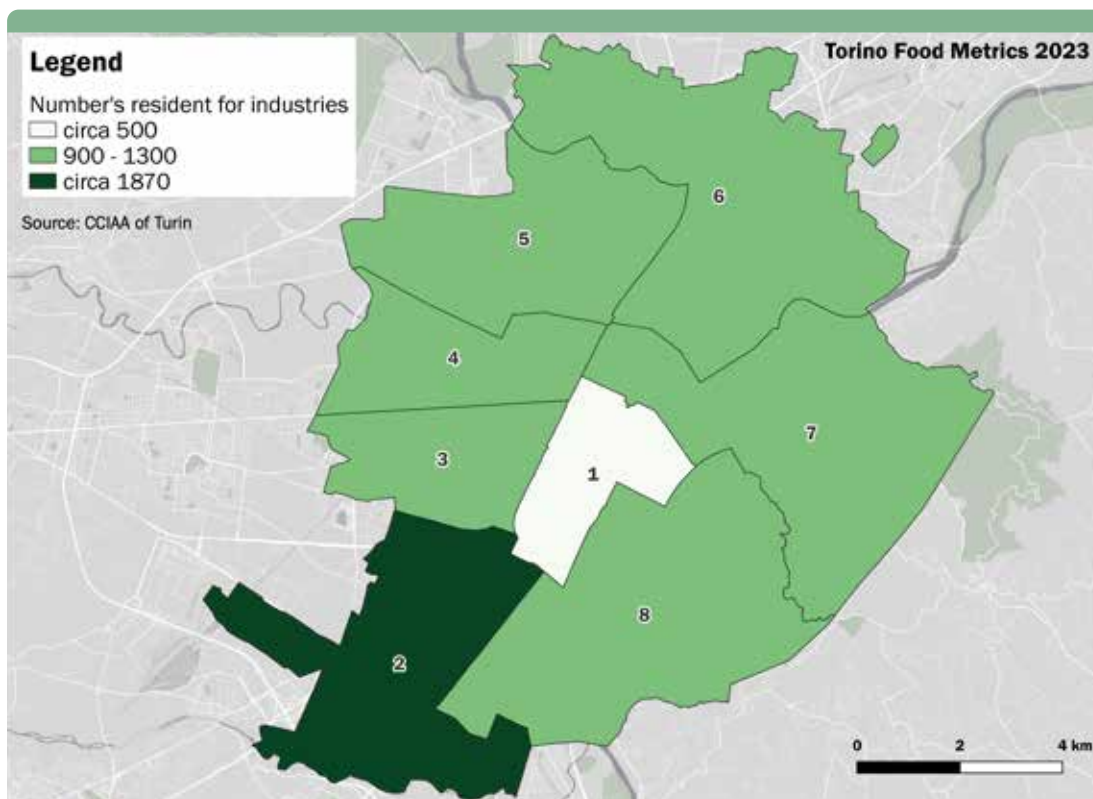


Figure 2.3 – Number of inhabitants per business  
 (Source: Chamber of Commerce. Latest update: 0/2023)

With regard to the subsector, it is noticeable that, compared to October 2022, the main food industry in Turin (reference is made to Atecol 2007 code), is still bakery products and the like. At the same time, significant decrease is recorded for meat and meat products as well as for coffee and tea producers.

FOOD SUBSECTOR	N° OF BUSINESSES 10/2022	N° OF BUSINESSES 10/2023
Brewery	9	7
Meat & meat products	86	27
Liqueurs & spirits	9	9
Fruits & vegetables	3	11
Animal and vegetable oils and fats	3	3
Soft drinks & mineral waters	9	8
Bakery products	564	551
Dairy products	33	32
Flours and grains	5	5
Animal Feeding	-	4
Chocolate, cocoa and confectionery	38	38
Fish & seafood	4	4
Coffee & tea	84	25
Wines	6	6
Other foodstuffs	60	77

Table 2.1 - Number of food production and processing businesses in Turin by category, based on the main ATECO 2007 reference code. (Source, Chamber of Commerce. Latest update: 10/2022 and 10/2023)



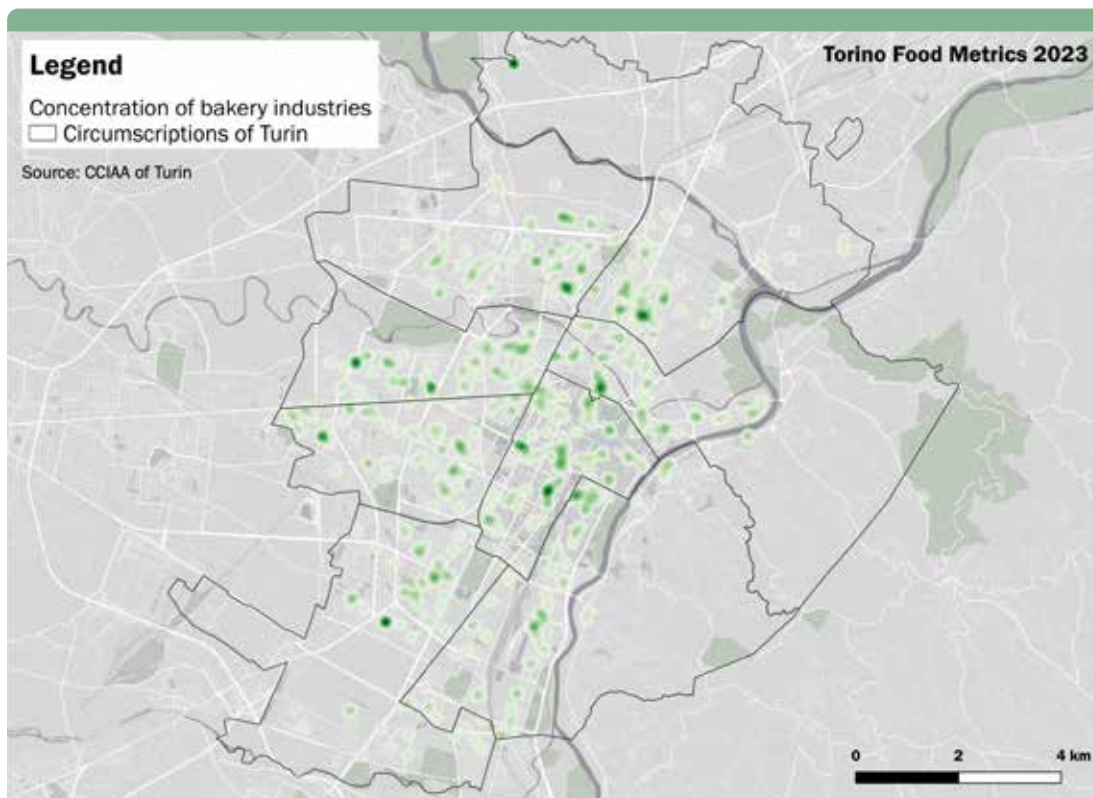


Figure 2.4 - Heatmap of bakery businesses  
(Source: Chamber of Commerce. Latest update: 10/2023)



Figure 2.5 - Distribution of meat & meat products businesses  
(Source: Chamber of Commerce. Latest update: 10/2023)

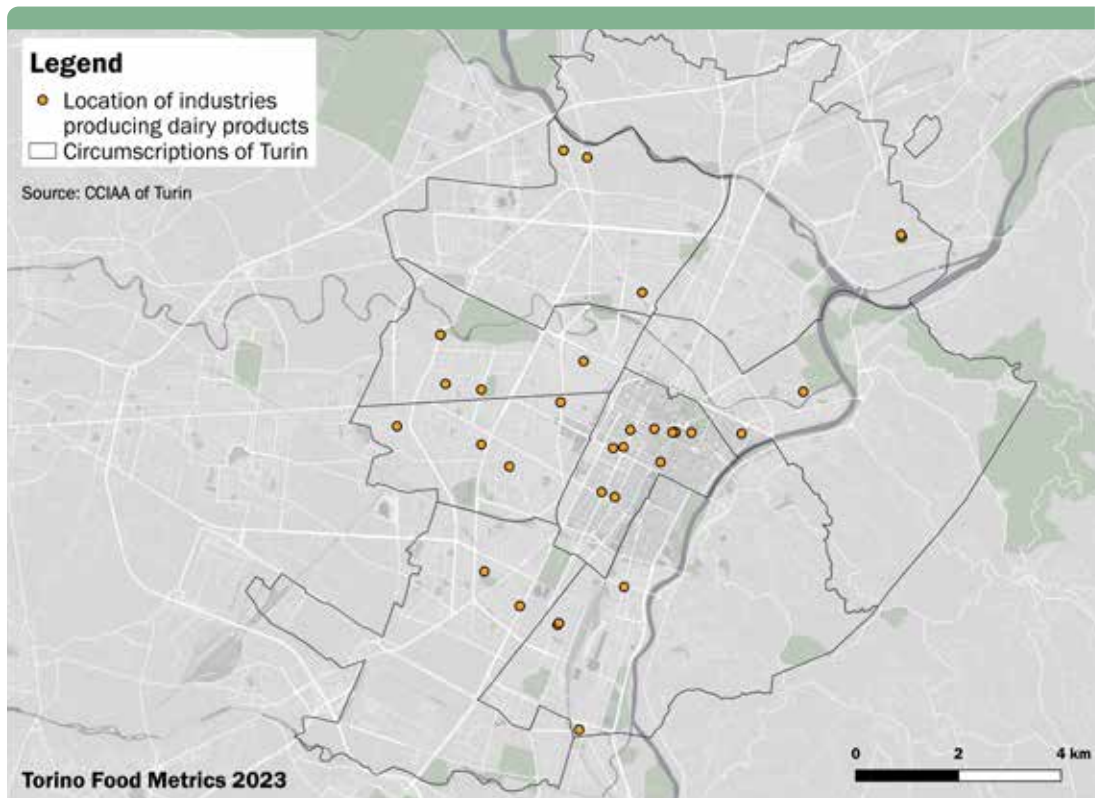


Figure 2.6 - Distribution of dairy products businesses  
(Source: Chamber of Commerce. Latest update: 10/2023)

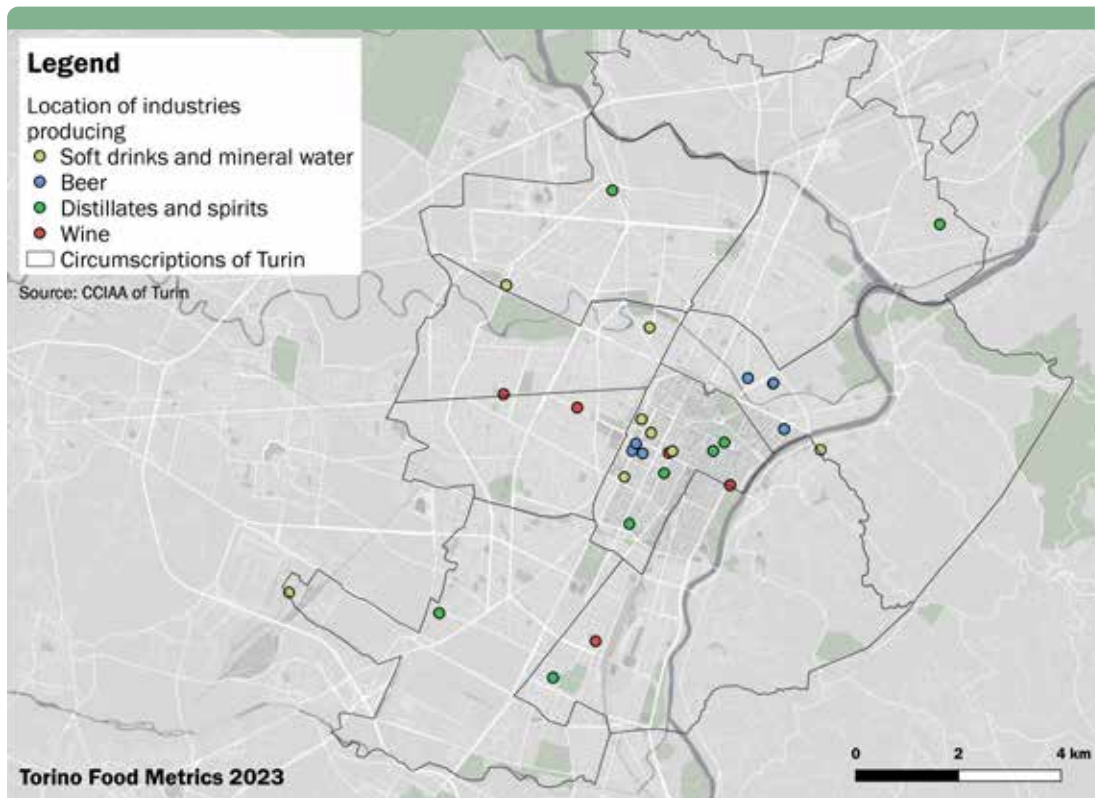


Figura 2.7 - Distribution of beverage businesses  
(Source: Chamber of Commerce. Latest update: 10/2023)

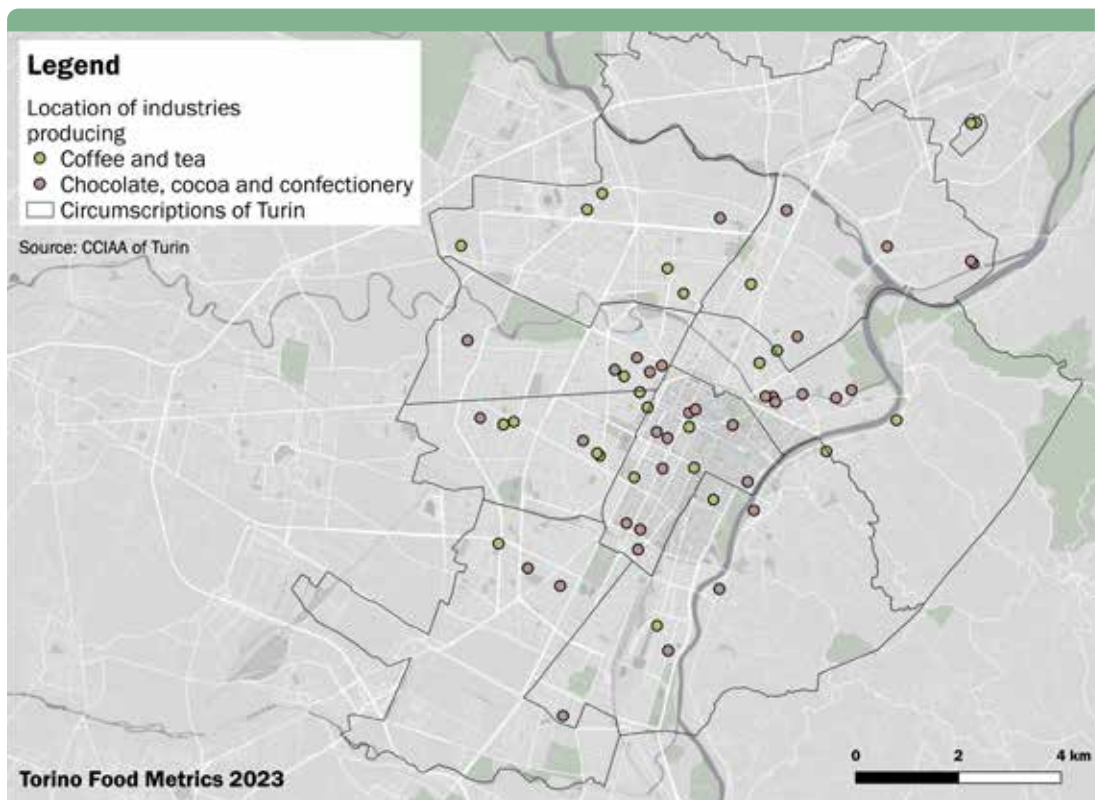


Figure 2.8 - Distribution of confectionery & coffee businesses  
 (Source: Chamber of Commerce. Latest update: 10/2023)

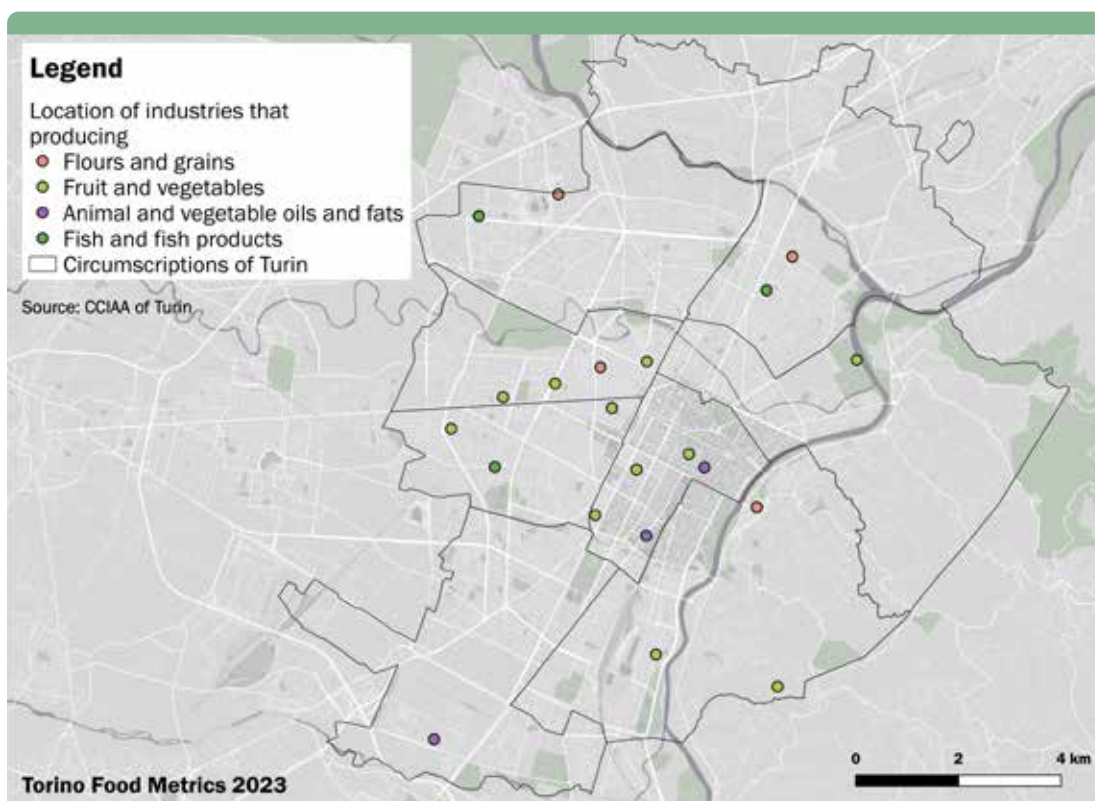
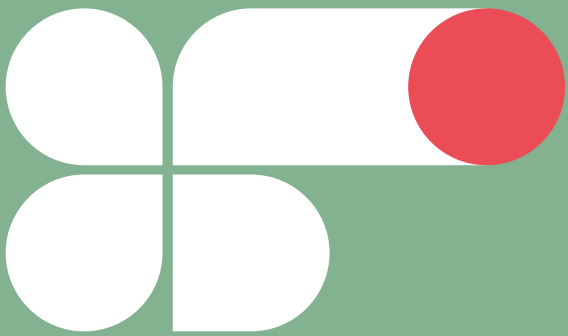


Figure 2.9 - Distribution of businesses producing various foodstuffs  
 (Source: Chamber of Commerce. Latest update: 10/2023)





# URBAN FARMING

This section suggests a perspective for reading and interpreting urban farming. As already seen in previous reports, among the numerous definitions and interpretations of urban farming, we find it useful to use the definition provided by "Cities Farming for the Future: Urban Agriculture for Green and Productive Cities" as a common frame of reference for reading this report and subsequent updates: "The growing of plants and the raising of animals for food and other uses within and around cities and towns, and related activities such as the production and delivery of inputs, and the processing and marketing of products. Urban Agriculture is located within or on the fringe of a city and comprises of a variety of production systems, ranging from subsistence production and processing at household level to fully commercialised agriculture" (RUAFA, 2006).

Through this definition, several non-marginal aspects of urban agriculture are grasped, i.e. its capacity to become an instrument of suburban regeneration, remodeling our urban as well as human and social landscape profoundly and thereby giving a positive contribution to the social life of the communities.

Among the various forms of urban agriculture, the report draws particular attention to urban horticulture as one of the most tangible and accessible forms of urban farming. Besides producing healthy, fresh food, namely vegetables and fruit in the fields or by soil-free farming, thereby strengthening food security, urban horticulture is de facto a handy instrument suitable to face the multifaceted challenges of contemporary times. First and foremost, urban horticulture is perceived as a significant lever in the hands of policy maker and governance officers to promote environmental sustainability. Food production in the city mitigates the necessity of moving food over long distances, thereby curbing transport-related carbon emissions. Additionally, many urban farming practices are geared towards the efficient use of resources, organic waste recycling and a reduction in overall environmental impact.

An urban vegetable garden is a form of active citizenship. It promotes greater awareness of food provenance and sustainable agriculture issues by involving inhabitants in cultivation and food production activities. Moreover, it has the potential to foster social bonds, maintain an active lifestyle through exercise and ensure collective land management, not to mention its fundamental role in enhancing urban biodiversity as a habitat for insects and small animals.

### 3.1 Urban vegetable gardens

The implementation of new urban vegetable gardens is not a short-term task, just the opposite. It requires care and time. The situation in the area of Turin does not seem to be different from the previous report; it is characterised by the presence of:

- city gardens in public green areas assigned under concession by each district through calls for tenders;
- Project-based gardens established as part of various projects with different aims – social inclusion, urban regeneration, horticultural therapy, environmental education, and so on.
- School gardens set up in the courtyards of city schools.
- Private gardens in private houses or on other privately owned land.
- Spontaneous gardens informally grown in interstitial green spaces, e.g., on the banks of rivers.

As a whole, there are 22 project-based gardens (one of which is under construction and one in the process of expanding its cultivated area) and 7 areas dedicated to vegetable gardens managed by the reference districts. The overall area devoted to vegetable gardens in Turin is 148.594 m<sup>2</sup>, comprising 1093 single plots and crates and 78 community-managed gardens and crates. Special attention should be drawn to second-level associations for their social relevance – they bring together network of vegetable gardens, farmsteads, third sector associations and numerous other players supporting horticulture and urban agriculture in Turin and the Metropolitan Area, including the Or.Me (Orti Metropolitan) network. With reference to 2022 data, Or.Me network is



made up of 11 members and involves an average of 3,000 horticultural enthusiasts who handle more than 50,000 sqm of vegetable garden area.

Currently, on average 15 people attend Or.Me meetings, each one representing a different stakeholder – in addition to the member organisations, Or.Me assemblies can be attended by all organisations in the area with a view to building opportunities for extensive exchange. In addition to urban horticulture activities, it is also interesting to investigate the presence of pollinating insects and thus urban beekeeping activities.

According to Turin ASLs (Local Health Units), 2022 Apiary Census reports the presence of 232 facilities including (i) apiaries falling within the territorial competence of Turin ASL (58 facilities) and (ii) apiaries holding a company code issued by Turin ASL although located outside said area (174 facilities):

- apiaries falling within the territorial competence of Turin ASL: 58 facilities and 323 hives.
- apiaries holding a company code issued by Turin ASL although located outside said area: 174 facilities and 1770 hives.

Pursuant to EU Reg. 2017/429, each facility or premises of any kind or, in the case of open-air farming, any environment or place where animals are kept holds an identification code assigned to the beekeeper (Owner or Legal Representative in the case of a legal entity) by the local Veterinary Service competent for the territory where it has its registered office. It serves as an unambiguous identifier of a beekeeping activity throughout the country, irrespective of the location of the different apiaries (which could therefore be located within the jurisdiction of several Veterinary Services). Indeed, in the case of beekeeping only the identification code is linked to the registered office or residence of the owner of the hives rather than to the location where the animals (insects) are found

**In the area under Turin ASL competence, the current beekeeping facilities are differentiated by:**

- breeding methods (conventional and organic beekeeping).
- classification of apiaries in place (sedentary or nomadic beekeeping).
- species and subspecies bred (honeybees: *ligustica*, *sicula*, *carnica*).

**It should be recalled that ASL is responsible for:**

- matching each beekeepers with an identification code when they apply for it in its area of competence.
- carrying out registry and health checks by annual audits in a given percentage of “beekeeping facilities” located in the area of competence, as selected on the basis of risk analysis. The official health checks are established by National and Regional Plans.
- recording/updating information on beekeepers and type of breeding.

On the other hand, the distribution of apiaries in the districts is not available as this is no surveyed figure. Some beekeepers are members of private associations whose purpose is to spread passion and knowledge of beekeeping. For example, the Associazione/Comunità Impollinatori Metropolitan (Metropolitan Community/Association of Pollinators), is an important player in Turin. Its 19 members also operate in fields other than yet related to beekeeping activities. The Association spurs reinvigorated attention to the management of urban greenery by various institutional players involved in the area.

Many **school gardens** play an important role in environmental education paths and programmes. Thanks to 2022 Food Metrics Report, the City of Turin, in collaboration with the University of Turin, has designed and disseminated a simple questionnaire to survey school gardens and learn about their nature and exact number, which had never been done before. As compared to last year report, 97 public schools are found within the city boundaries, 36 of which have established school gardens in open field covering 1400 m<sup>2</sup>, while 54 schools cultivate their foodstuffs in 340 crates. Therefore, there is a high level of interest from schools in the practice of horticulture, as it is viewed as a powerful tool for environmental education and support to sustainable development. One school expressed interest in setting up a hydroponic cultivation facility and 5 schools have already or are planning to establish their own school gardens thanks to PON EDU GREEN funding.

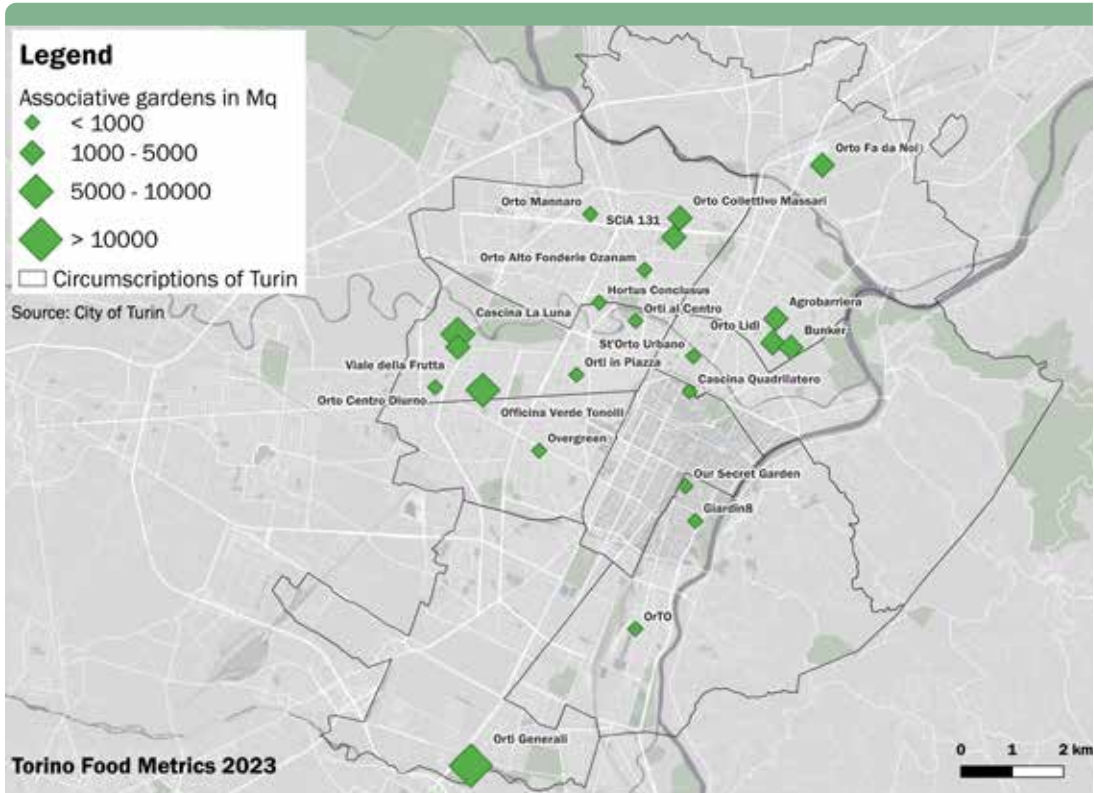


Figure 3.1 –Location and surface area of project-based gardens  
(Source: City of Turin, 2022)

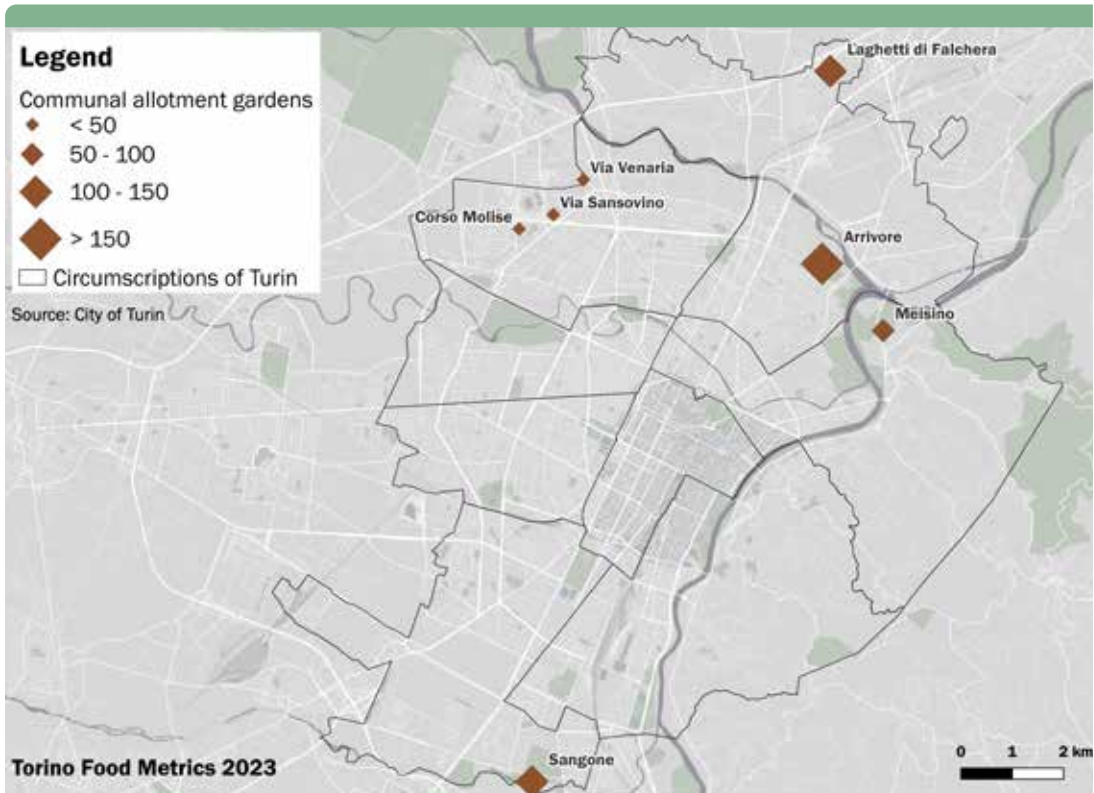


Figure 3.2 – Location and number of plots of urban vegetable gardens  
(Source: City of Turin, 2022)

In March 2021, by resolution of the City Council, the City of Turin approved the Strategic Plan for Green Infrastructure<sup>1</sup>, designed to guide investments and management policies related to the city's public green space system in the next decades. In addition to acting as an integrative urban planning tool, the Plan contains a series of analyses and proposals related to urban agriculture, namely to horticulture.

The Plan is composed of ten chapters and seven annexes that explore the urban green space system of Turin. Long-term strategies to enhance and develop this major urban heritage are outlined in the Plan. The recognition of urban agriculture as an integral component of the urban green space system makes this venture even more interesting

Precisely, Annex 2 provides a comprehensive census of project-based and district vegetable gardens, known as the Atlas of Urban Vegetable Gardens.<sup>2</sup> Along with the review and proposals presented in Chapter 3 of the Plan, the census serves as a necessary basis for designing strategies aimed at the development of urban horticulture in Turin. Not only does this inclusion stress the relevance of horticulture as an integral part of the urban environment, but it also highlights the City's commitment to promoting sustainability and an efficient use of resources within the urban fabric.

## 3.2 Urban Professional Agriculture

The data of the Anagrafe Agricola Unica (Single Farm Register), contained in the previous report, are available in this paragraph, updated to 2022.

According to the Anagrafe Agricola Unica (Single Farm Register), 307 farms are based within Turin area. The agricultural land (AL) on the municipal territory totals 5,200 hectares. There are 36 livestock farms with a total of 9,092 cattle. Arable crops occupy an area of approximately 380 hectares, mostly with grain cereals, including maize (main crop), soft wheat, triticale and barley.

Of particular importance is the area of arable meadows and pastures, amounting in total to about 110 hectares. The area covered in woodland, mainly concentrated on the hillside, accounts for 77.50 hectares.

Fruit varieties include actinidia or kiwifruits (1.74 ha), apple trees (0.60 ha), cherry trees (0.37 ha) and wine grapes (0.81 ha). Nurseries occupy an area of approximately 2.40 ha.

The areas for non-agricultural use, with particular reference to buildings, yards and roads, amount to approximately 73 hectares.

The cultivated land owned by the City of Turin covers an area of approximately 1,893,776 sq.m., while the agricultural land owned by third parties amounts to approximately 3,977,361 sq.m. Over the past years, the City leased approximately 167 ha of its land to agricultural tenants. The currently cultivated public areas are subject to lease agreements concluded by the city administration with private individuals and farms, with a three-year term.

<sup>1</sup> - [https://comune.torino.it/torinosostenibile/documenti/piano\\_strategico\\_infrastruttura\\_verde\\_2021.pdf](https://comune.torino.it/torinosostenibile/documenti/piano_strategico_infrastruttura_verde_2021.pdf)

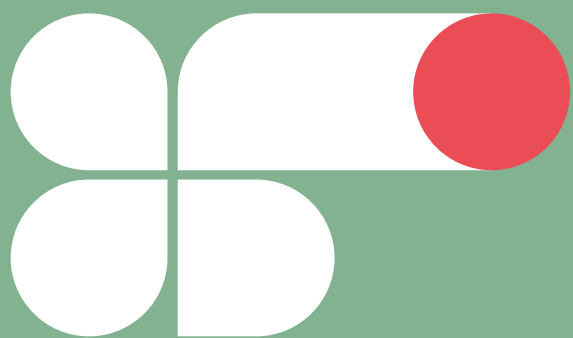
<sup>2</sup> - [https://servizi.comune.torino.it/consiglio/prg/documenti/atti/allegati/202002957\\_1\\_2bis.pdf](https://servizi.comune.torino.it/consiglio/prg/documenti/atti/allegati/202002957_1_2bis.pdf)



SPECIAL AREAS	EXTENSION (sqm)
City-owned surface identified as cultivated land	1.967.321
City-owned surface identified as non-cultivated land	42.421
Third party-owned surface identified as cultivated land	4.124.516
Third party-owned surface identified as non-cultivated land	256.111

Table 3.1 – Cultivated land surface (Source: City of Turin, 2022)





# POVERTÀ ALIMENTARE



Unlike the previous editions of the Report where the title of section 4 read "Food Security", we hereby provide an overview of the complex, multifaceted phenomenon most appropriately defined as food poverty, according to the conceptualisation presented in box 4.1.

#### Box 4.1 – Food poverty and its workability

According to Dowler (2003), food poverty is the inability to consume an adequate quality or sufficient quantity of food that is useful for health in socially acceptable ways, or the uncertainty that one will be able to do so, thus being one of the most severe and comprehensive manifestations of material deprivation.

As O'Connell and Brannen (2021) argued, food poverty is in fact seen as the sum of the following:

- material dimension – the inability to consume an adequate quality or sufficient quantity of food and higher percentage of income on food;
- social dimension – the inability to maintain food social acceptability and habitual food practices;
- psycho-social and emotional dimension – concern, stress, and stigma related to a lack of resources to access food

It is worth mentioning, though, that a number of studies to which this report also refers allude to the concept of food security, whose best-known definition by FAO (1996)<sup>1</sup> is reported in box 4.2.

#### Box 4.2 – Food safety

The best-known definition of food security is "when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 1996).

According to FAO, food security is a multidimensional concept based on 4 pillars:

- Availability relates to the 'supply side' of food security and is determined by food production, stocks, markets, and food aid. It implies that there is sufficient healthy and nutritious food in reasonable proximity or at easy reach to meet people's needs;
- Access refers to the presence of sufficient resources within households and among individuals to obtain the food necessary for a nutritious diet;
- Utilisation is commonly understood as the way in which the body makes the best use of the various nutrients in food, a condition that is determined by a variety of factors, including distribution within households, presence of drinking water, sanitation;
- SStability corresponds to the regularity under which the three previous conditions should be fulfilled. Even if food intakes were adequate at the time food security is assessed, you would still be considered food insecure in the event of inadequate access on a regular basis, leading to the risk of a deterioration of your nutritional status.

<sup>1</sup> - <https://www.fao.org/3/w3613e/w3613e00.htm>

The picture of food poverty in the city of Turin is pieced together, first, through various proxies, and second, through surveys.

The former include:

- information from Banco Alimentare del Piemonte Onlus database, a non-profit organisation delivering food aid of different kinds and from different sources to local bodies and associations, in direct contact with the actual beneficiaries;
- distribution of grocery coupons for people in food poverty;
- figures relating to Torino Solidale network, set up during the pandemic emergency by combining various local actors (Case del Quartiere, civil society associations, etc.).

Finally, qualitative research undertaken by the Food Atlas Group – University of Turin in 2021 to carry out a survey on food poverty in the city of Turin.

#### 4.1 Data from Banco Alimentare del Piemonte ONLUS

Banco Alimentare del Piemonte is a voluntary organisation (ODV) established in 1993 whose mission is to recover and distribute food products in Piedmont to people in need. Its headquarters are in Moncalieri, plus four decentralised branches in Asti, Cossato, Fossano and Novara. In 2022, foodstuffs recovered from production surpluses have been made available to 187 partner organisations in the city of Turin, plus a further 88 in the municipalities of the Metropolitan Area, not to mention a number of others scattered throughout the region<sup>2</sup>, for a total of 568. This is achieved through an agreement and recognition process managed partly with the support of local volunteers who collaborate on different aspects of operations.

update 2022

DESCRIPTION	TOTAL
Charitable organisations accredited by the BA in the area of Turin	187
Number of recipients	40,673
Kg of fruit and vegetables distributed	113.876
Kg from AGEA <sup>3</sup>	1.718.757
Kg from businesses + food collection	737.195
Kg restaurants + donors	4.257
Kg from Siticibo project + LSD	721.945
Kg per head	81
<b>TOTALE KG FOOD DISTRIBUTED</b>	<b>3.296.030</b>

**Table 4.1 – The actions of Banco Alimentare**  
(Source: Banco Alimentare, 2022)

<sup>2</sup> – The list of organisations is available at [https://www.bancoalimentare.it/organizzazioni-partner-territoriali?field\\_organizzazioni\\_locali=257](https://www.bancoalimentare.it/organizzazioni-partner-territoriali?field_organizzazioni_locali=257)  
(Latest update 15/10/2023)

<sup>3</sup> – Agenzia per le erogazioni in agricoltura: an Italian state body serving as Coordinator and Paying Agency within the framework of EU funds allocation to agricultural producers, T'sN

N° FACILITIES	CITY DISTRICT	N° RECIPIENTS
28	TO1 Centro Crocetta	6.835
21	TO2 Santa Rita – Mirafiori Nord Mirafiori Sud	3.741
18	TO3 San Paolo – Cenisia – Pozzo Strada Cit Turin – Borgata Lesna	3.021
22	TO4 San Donato – Campidoglio – Parella	3.584
26	TO5 Borgo Vittoria – Madonna di Campagna Lucento – Vallette	4.722
21	TO6 Barriera di Milano – Regio Parco –Barca Bertolla – Falchera – Rebaudengo – Villaretto	5.544
26	TO7 Aurora – Vanchiglia – Sassi Madonna del Pilone	8.199
25	TO8San Salvario – Cavoretto – Borgo Po Nizza Millefonti – Lingotto – Filadelfia	5.027
187	TOTAL CITY OF TURIN per district	40.673

**Table 4.2** – Recipients assisted across Turin districts.  
(Source: Banco Alimentare, 2022)

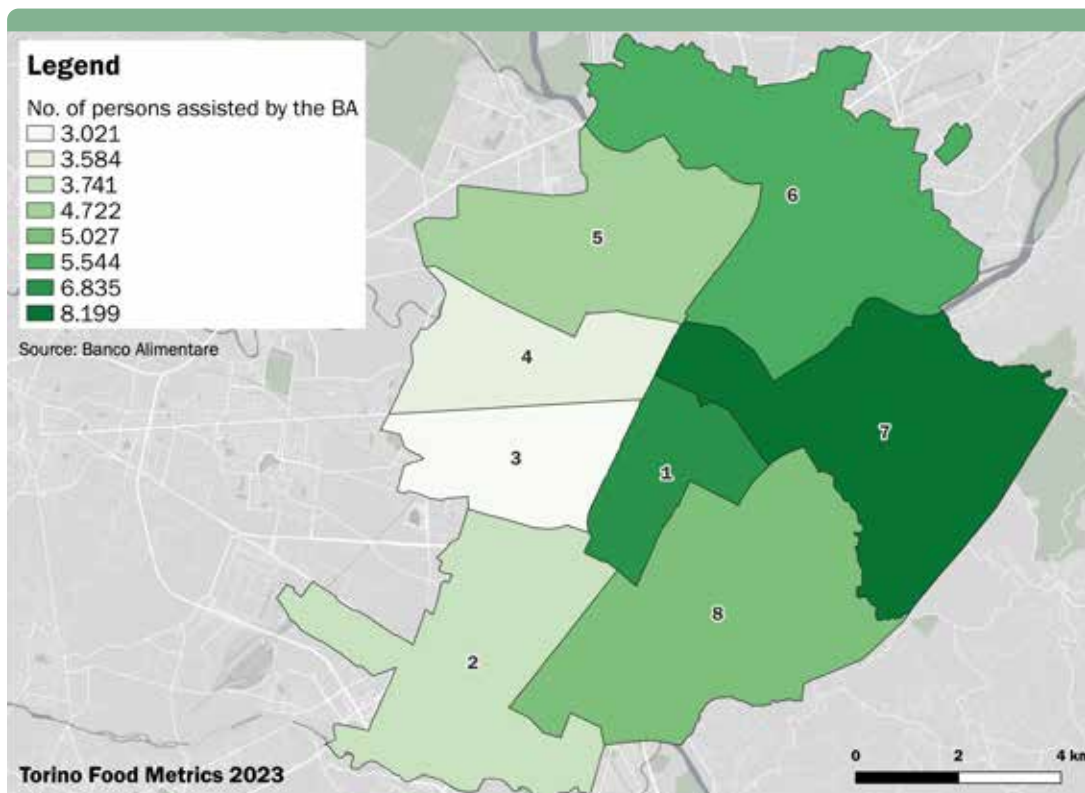


Figure 4.1 - Recipients of Banco Alimentare actions per district (Source: Banco Alimentare, 2022).

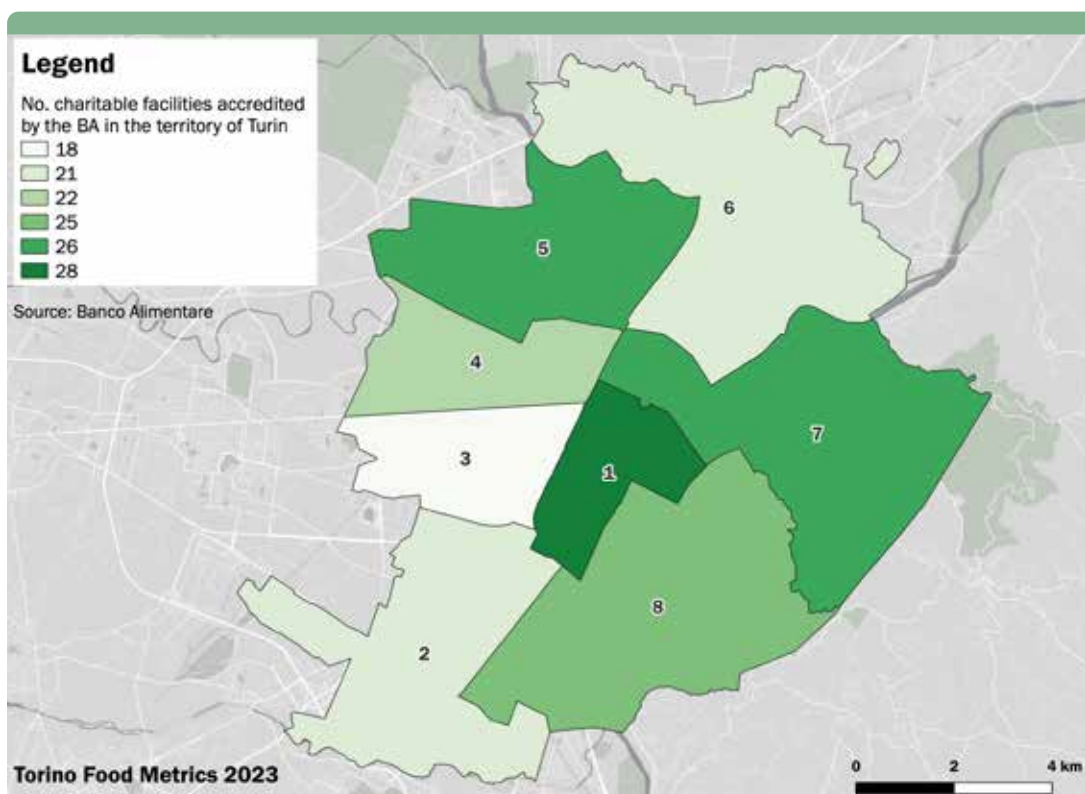


Figure 4.2 - Facilities accredited by Banco Alimentare per district. (Source: Banco Alimentare, 2022).



N° ORG.	CITY DISTRICTS	RECIPIENTS	Kg PER HEAD	Tot Kg FOOD DISTRIBUTED
28	TO1	6.835	61,7	421.479
21	TO2	3.741	96,5	361.061
18	TO3	3.021	109,9	331.868
22	TO4	3.584	77,8	278.723
26	TO5	4.722	75,8	357.917
21	TO6	5.544	103,1	571.358
26	TO7	8.199	63,9	524.191
25	TO8	5.027	89,4	449.433
187	TOTAL CITY OF TURIN per district	40.673	81,0	3.296.030

**Table 4.3** – Organisations, recipients, kg of food distributed per head and total quantity of food distributed by BA. (Source: Banco Alimentare, 2022)

N°	CITY OF TURIN		SUPPLY CHANNELS					KG/P	TOTAL
	TYPE OF ORGANISATION	N° RECIPIENTS	FRUITS & VEG PRODUCERS	AGEA	BUSINESS COLLECTION	RESTAURANTS DONORS	SITI CIBO LSD		
12	ALTRO	1.939	22.167	80.256	95.523	186	56.893	131,5	255.025
45	ASSOCIAZIONE	12.233	35.940	514.333	245.081	2.964	274.534	87,7	1.072.852
5	CAV - Centri assistenza alla Vita <sup>4</sup>	1.140	---	57.261	10.103	---	---	59,1	67.364
12	CHIESA EVANGELICA	1.298	5.876	42.500	22.908	---	45.664	89,5	116.138
7	CONGREGAZIONE	1.256	2.292	51.228	20.229	---	46.129	95,4	119.878
11	COOP. SOCIALE	763	461	26.621	27.394	---	48.241	134,6	102.717
87	PARROCCHIA	20.072	44.931	855.124	292.994	1.107	247.712	71,8	1.441.868
8	VOLONTARIATO <sup>5</sup> VINCENZIANO	1.972	2.209	91.434	23.773	---	2.772	60,9	120.188
187	TOTALI	40.673	113.876	1.718.757	737.195	4.257	721.945	81,0	3.296.030

**Table 4.4** – Actions of Banco Alimentare del Piemonte network divided by charitable organisation (Source: Banco Alimentare, 2022)

**4** – Voluntary, catholic-inspired, non-partisan associations aimed at helping women struggling with a difficult or unwanted pregnancy, as well as supporting young mothers who lack the means or capacity to provide care for their child, including food, T'sN

**5** – Volunteers who work in cooperation with the Church and civil society to promote the integration of the poorest and most deprived members of society, T'sN the framework of EU funds allocation to agricultural producers, T'sN

When compared to 2021, the number of recipients assisted by Banco Alimentare network in Turin has increased by about 1003 (+ 2,5%, from 39.670 to 40.670), although the trend is declining compared to the increase recorded in the 2020–2021 period (+1,500 recipients), possibly reflecting a slight recovery from the pandemic years. Like 2022, the increase in the number of people receiving food assistance is not evenly distributed throughout the city: while the number of recipients in District 1 remains somewhat steady (-9), it drops in District 2 (-78), in District 3 (-89) and, even more significantly, in District 4 (-124). On the other hand, the number of recipients assisted is growing in the remaining districts, i.e. district 6 (+ 446 - 8.7% more than last year), and district 8 (+70), with a particularly sharp rise in district 7 (+ 728 - almost 10% more than last year), likely to be concentrated in the area named "Aurora"

CITY DISTRICT	RECIPIENTS IN 2021	RECIPIENTS IN 2022	VARIATION (#RECIPIENTS)	VARIATION (%)
TO1	6.844	6.835	-9	-0.1
TO2	3.891	3.741	-78	-2.0
TO3	3.110	3.021	-89	-2.9
TO4	3.708	3.584	-124	-3.3
TO5	4.663	4.722	59	1.3
TO6	5.098	5.544	446	8.7
TO7	7.471	8.199	728	9.7
TO8	4.957	5.027	70	1.4
TOTAL CITY OF TURIN	39.670	40.673	1.003	2.5

**Table 4.5** – Comparison 2021/2022 of the recipients assisted by Banco Alimentare del Piemonte network in Turin divided by district. (Source: Banco Alimentare, 2022)

At the same time, the number of accredited charities has stayed unchanged (187) after the slight decrease recorded between 2020 and 2021 (-7) due to collaboration with recognised organisations in order to optimise resources, including through consolidation/merger, as indicated by the BA itself.

CITY DISTRICT	N° CHARITIES 2021	N° CHARITIES 2022	VARIATION (N°) 2021-2022
TO1	29	28	-1
TO2	24	21	-3
TO3	20	18	-2
TO4	22	22	0
TO5	24	26	2
TO6	18	21	3
TO7	26	26	0
TO8	24	25	1
TOTAL CITY OF TURIN	187	187	0

**Tabella 4.6** - Comparison 2021 / 2022 of the charities recognised by Banco Alimentare - Piedmont region divided by district (Source: Banco Alimentare, 2022)

Although the amount of food distributed has increased (table 4.7), the figure per head is the same as last year (81kg). Yet, all supply channels show declining values, except for AGEA, which keeps the per head figure stable and makes the total weight increase by 3%.

SUPPLY CHANNELS	KG OF FOOD DISTRIBUTED IN 2021	KG OF FOOD DISTRIBUTED IN 2022	VARIATION (N) 2021 - 2022	VARIATION % 2021 - 2022
FRUITS & VEG PRODUCERS	138.310	113.876	-24.434	-18
AGEA	1.433.819	1.718.757	284.938	20
BUSINESSES + FOOD COLLECTION	870.672	737.195	-133.477	-15
RESTAURANTS + DONORS	6.259	4.257	-2.002	-32
SITI CIBO LSD	763.058	721.945	-41.113	-5
KG PER HEAD	81	81	0	0
TOTAL	3.212.118	3.296.030	83.912	3

**Table 4.7** - Quantity of food distributed (Source: Banco Alimentare, 2022)

Having access to the information on the actions of Banco Alimentare del Piemonte Onlus over the last ten years (2013–2022) has been an essential precondition to outline the evolution of its activities over Turin's territory.

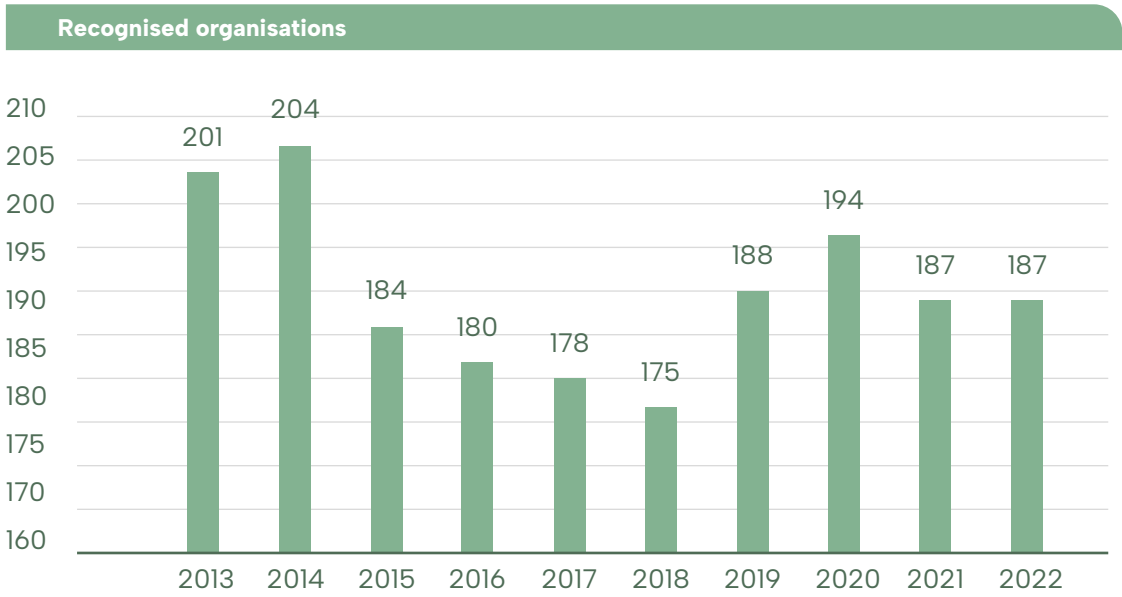
The table below shows three indicators illustrating a substantial part of the food distribution system to the most deprived: the number of organisations recognized by BA, the recipients assisted, and the quantity of food distributed. When approaching a comprehensive analysis, it is worth be mindful of the transition occurred from the 2007–2013 Community programming, whose food assistance action was based on the so called PEAD (Programme for European Aid to the Most Deprived), to the 2014–2020 Programming period, when the FEAD (Fund for European Aid to the Most Deprived) was activated. This resulted in additional funds available in 2015 but also in a number of critical bottlenecks in aid delivery and timing and in increased bureaucracy possibly leading to a drop in the number of recognised organisations, along with the need for a stronger involvement of people in (compulsory) social inclusion activities (e.g. counseling centres).

Furthermore, the figures from 2020 on are to be read against the background of the social and economic crisis triggered by COVID-19 pandemic

YEAR	RECOGNISED ORGANISATIONS	RECIPIENTS ASSISTED	KG OF FOOD DISTRIBUTED
2013	201	33.976	1.769.823
2014	204	34.042	1.918.230
2015	184	42.184	2.352.970
2016	180	41.962	2.267.380
2017	178	40.098	2.395.269
2018	175	37.149	2.412.174
2019	188	37.598	2.786.042
2020	194	38.081	2.760.796
2021	187	39.670	3.212.118
2022	187	40.673	3.296.030

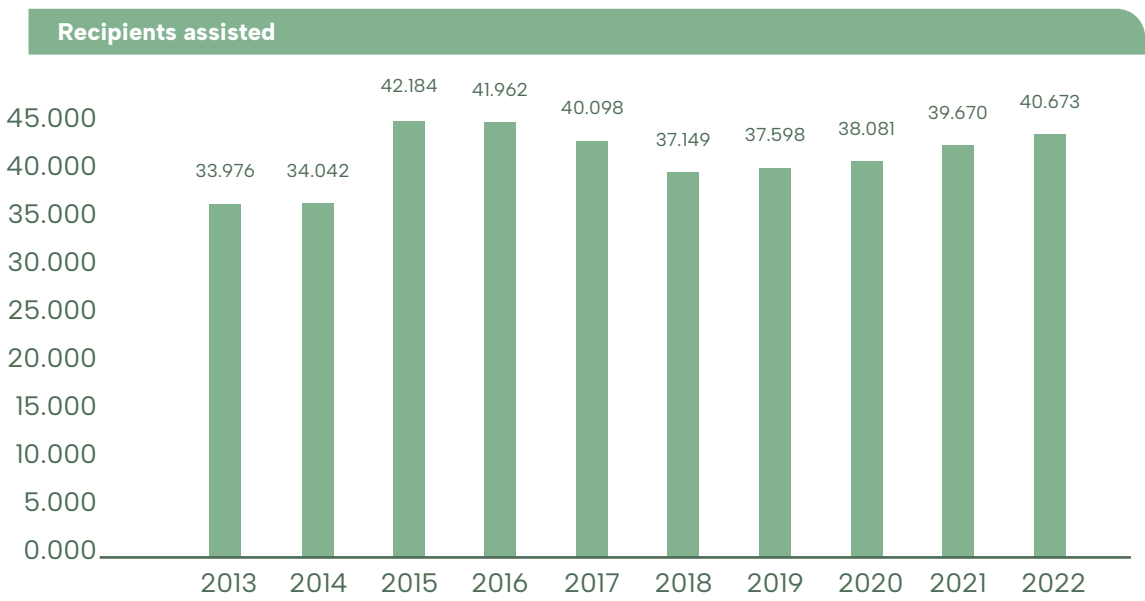
**Table 4.8 – Strutture e persone assistite dal 2013 al 2022**  
(Fonte: Banco Alimentare, 2022)





**Figure 4.3** – Recognised organisations from 2013 to 2022.  
 (Source: Banco Alimentare, 2022)

Figure 4.3 illustrates a downward trend in the number of organisations until 2018, followed by an upturn observable until 2020. The subsequent decline is due to the decision to streamline food distribution through mergers and consolidation of receiving organisations.



**Figure 4.4** – Recipients assisted from 2013 to 2022.  
 (Source: Banco Alimentare, 2022)

In contrast, the number of recipients (Figure 4.4) indicates a marked increase in 2015 – it should be noted that the shift from PEAD to FEAD in 2014–2020 European programming has posed considerable challenges to bodies and organisations supporting persons in food fragility through food distribution. Numbers dropped slightly until 2017 and then continued to rise in the following years, partly in relation to the economic and food crisis caused by the pandemic.

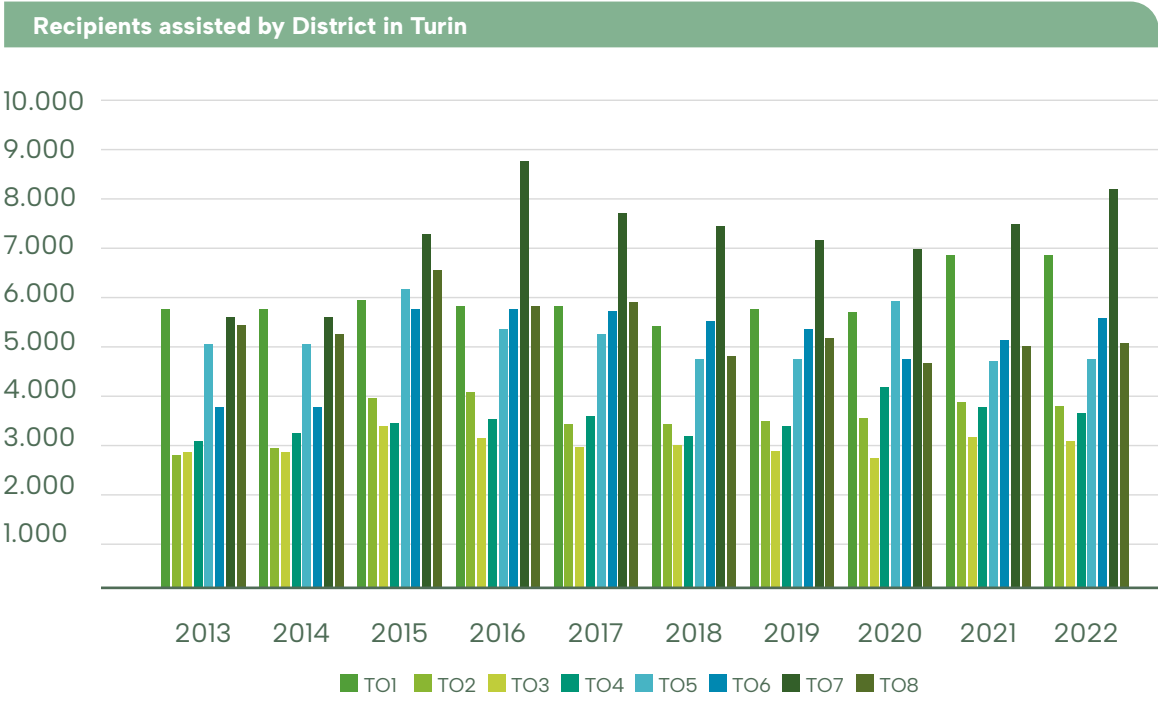
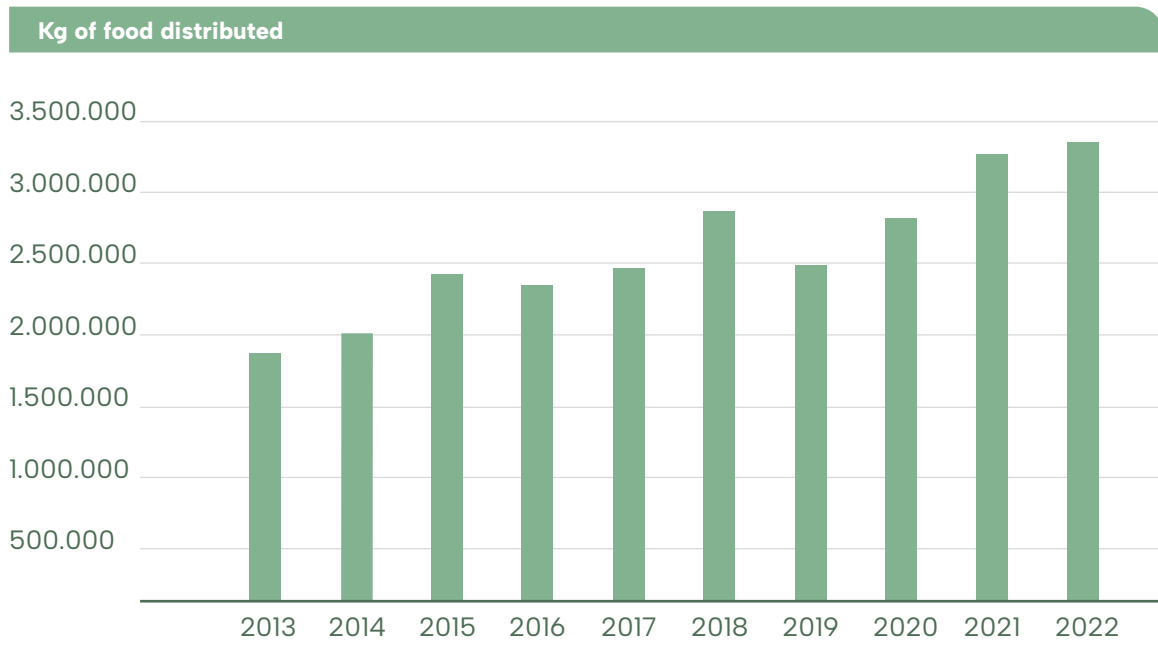


Figure 4.5 – Recipients assisted by District in Turin (Source: Banco Alimentare, 2022)

The focus on the distribution of assisted recipients in the city's various districts (Figure 4.5) reveals that, since 2015, aid has been converging mainly on District 7 (Aurora – Vanchiglia – Sassi – Madonna del Pilone), as well as on District 1 (Centro – Crocetta), especially following the pandemic.



**Figura 4.6** – Kg of food distributed from 2013 to 2022.  
 (Source: Banco Alimentare, 2022)

The volumes of distributed food (Figure 4.6) have been on a slightly fluctuating yet steadily growing trend from 2020 onwards.

Origin of distributed food

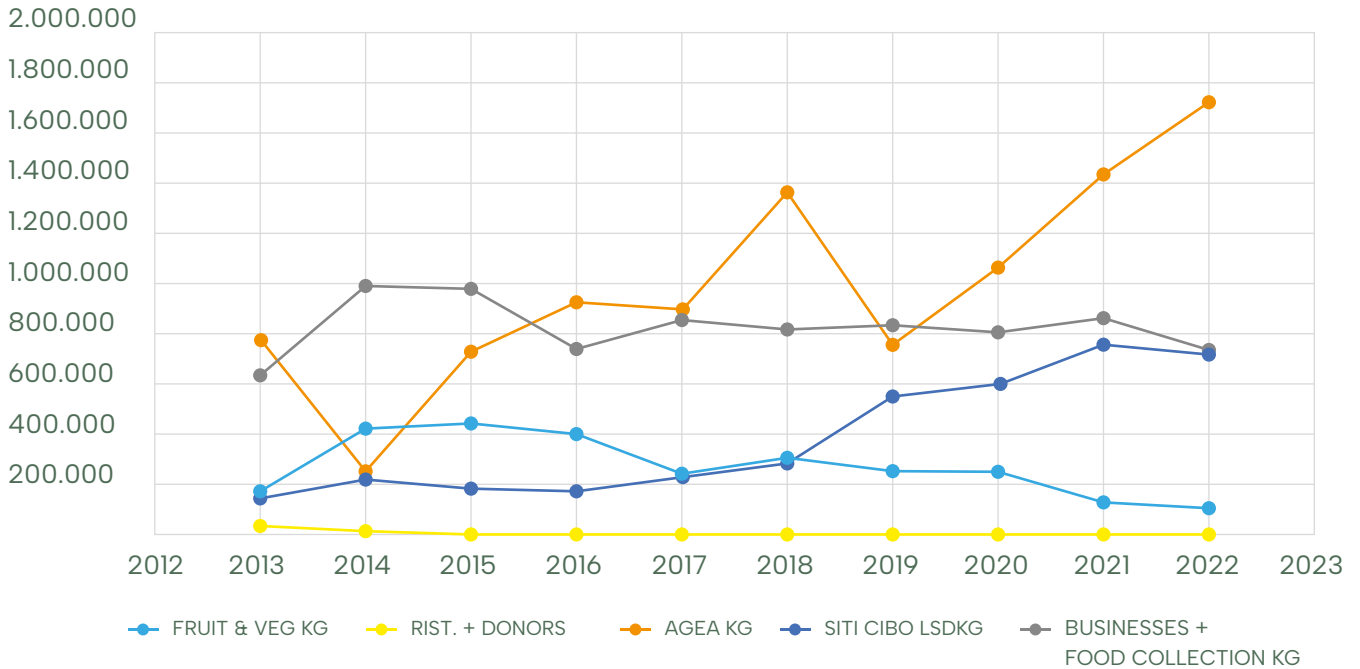


Figure 4.7 – Origin of distributed food (in kg) from 2013 to 2022.  
 (Source: Banco Alimentare, 2022)

The data on the origin of distributed food (Figure 4.7) indicate a sharp decline in AGEA products during the years of transition from PEAD to FEAD. The share coming from restaurants and donors has been stable, while the portion originating from Siticibo project and LSD is on the rise, even as a result of the incentives linked to recent measures, such as the so-called Legge Gadda (Gadda Law) and the close interaction between organisations such as BA and LSD. The contribution of businesses and food collections has dropped marginally, and the same is to be said for fruit and vegetables producers.



## 4.2 Grocery Coupons for people in Food Poverty

The provision of grocery coupons for people in food poverty was discontinued in 2021. The figures in Table 4.9 refer to the pandemic and post-pandemic years when the service was active.

GROCERY COUPONS			
YEAR	MONTH	N°	€
2022	APRIL	40.000	€ 990.000,00
	APRIL	104.960	€ 2.597.760,00
	APRIL	26.520	€ 656.370,00
	DECEMBER	1.262	€ 24.987,00
	DECEMBER	75.000	€ 1.485.000,00
	DECEMBER	50.000	€ 990.000,00
	<b>TOTAL 2020</b>	<b>297.742</b>	<b>€ 6.744.117,60</b>
2021	<b>TOTAL 2021</b>	<b>115.345</b>	<b>€ 2.283.831,00</b>
	<b>TOTAL COUPONS ISSUED SINCE PANDEMIC OUTBREAK</b>	<b>413.087</b>	<b>€ 9.027.948,60</b>

Table 4.9 – Grocery coupons issued by the City of Turin  
(Source: City of Turin, 2021)

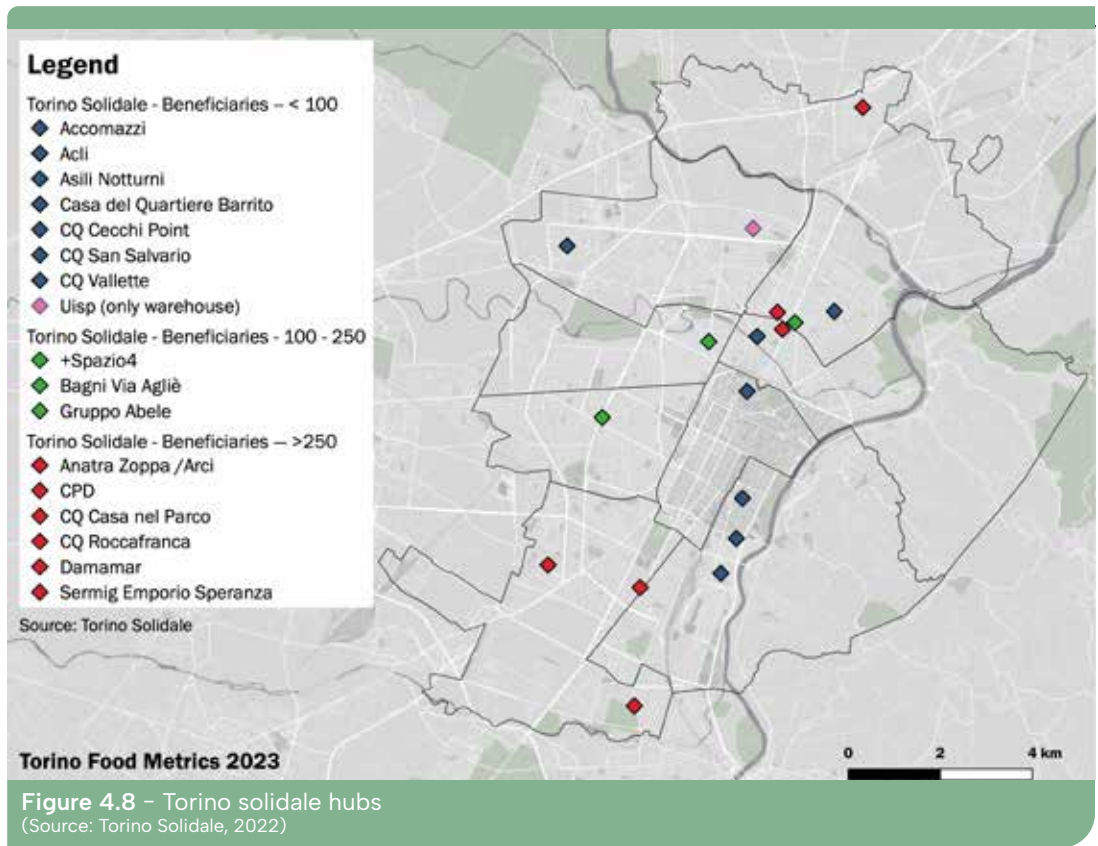
## 4.3 Torino Solidale Network

On 24 March 2020, to deal with the emergency resulting from the spread of the COVID-19 virus and the consequent restrictions on movement and contact with people, the City of Turin activated the Torino Solidale network, a city-wide system aimed at supporting people in a situation of personal, social and economic fragility as a result of loneliness and absence of family networks.

Thanks to the proactivity of its members – Case del Quartiere (Neighbourhood Houses), Arci Clubs and numerous Third Sector organisations – Torino Solidale network has set up a system to deliver food and staple commodities home or distribute it through its hubs scattered over the city since the first lockdown phase.

In the following months, the network grew with new partners, resources, project proposals and local facilities, in an attempt to respond not only to food needs, but also to reception, assistance and support needs.

The map shows the 17 Network hubs by number of households assisted monthly – all but one are involved in the distribution of foodstuffs. In total, the Network distributed foodstuffs every month for the whole year 2022 to about 3740 households (corresponding to about 11600 people), to which a few dozen homeless should be added. About 35 professional workers and as many volunteers involved in civic/community service were deployed to deliver foodstuffs and perform secretarial services, in turn supported by more than another 170 volunteers, for a total of about 240 people engaged in food recovery and redistribution every month.



#### 4.4 Qualitative survey on food poverty in Turin

Between 2021 and 2022, the Food Atlas research team conducted qualitative studies aimed at investigating the phenomenon of food poverty in Turin with a strong emphasis on its scale, forms, and patterns.

##### Quantitative information at the supra-local scale

Given the lack of quantitative measurements at urban scale, in order to better place Turin in a broader supra-local context, it is useful to observe that, according to the FAO, the incidence of food insecurity in Europe in 2021 rose for the first time since the beginning of FIES data collection (2014). In Southern Europe, 9.2 % of the population live in a state of moderate to severe food poverty, while 2.3 % are in severe food insecurity conditions; both the latter and the figure concerning people who cannot access nutritionally adequate food record an upward trend compared to the previous year.

According to Eurostat data, in 2021, 7.9% of Italian households claimed not to be able to consume a protein meal at least once every two days, a key indicator to measure material deprivation. 2023 Istat estimates indicate that, in 2022, about 7.2% of households and 8.3% of individuals dwelling in North-Western Italy were living in a condition of absolute poverty. In Piedmont, the incidence is equal to 8.5% of households and 12.5% of individuals.

According to Marchetti and Secondi (2022), the number of people at risk of food poverty in Italy is as high as 11.5 million, while a zoom in the Metropolitan Area of Turin would place it in an intermediate position, with a lower incidence than other large cities, such as Milan.

The survey was conducted using mixed methods as well as an interdisciplinary / action-research approach. The first quantitative phase from October to December 2021 was based on a sample survey jointly developed with Eufemia, an association active in the recovery and redistribution of food surpluses.

The survey involved more than 200 beneficiaries of the top 20 solidarity/food aid associations; questionnaire was administered under assisted filling in the venues where food aid is usually available. The questionnaire involves 5 dimensions of daily experience:

- eating habit
- shopping
- food use and practices
- physical health
- psycho-emotional stress and social-relational aspects

The final section included the FIES questionnaire, developed by FAO to measure the intensity of food insecurity.

As is evident from the analysis (Figure 4.9), 70 % of respondents, i.e. people interviewed upon collection of food parcels in the different hubs, are women, thus proving the feminisation of aid relationships. The average age of respondents is 44; half of them come from a non-EU country. As many as 20 % have a university degree and about 1/3 do have a job, but still cannot meet all the expenses essential for their survival. This figure neatly reflects a decline in the level of education and employment as traditionally protective factors against poverty. The average income, including income from employment and subsidies from public authorities, is 800€ for a sample of respondents whose average household size is equal to around 3 individuals. The share of homeless respondents accounts for 25% of the total. The average expenditure on food reaches 180€ per month, about half the average monthly expenditure of a three-person household according to ISTAT (2020).

The most frequently consumed foodstuffs – tea, coffee, olive oil, vegetables, pasta or rice and fruit as a staple of the daily diet for more than half of respondents – display a direct linkage with their cultural and geographical origins, mostly from Italy, North Africa, Sub Saharan Africa, Eastern Europe,.

**PROFILE**



Figure 4.9 – Sociodemographic profile of the sample

## Survey: well-being and health

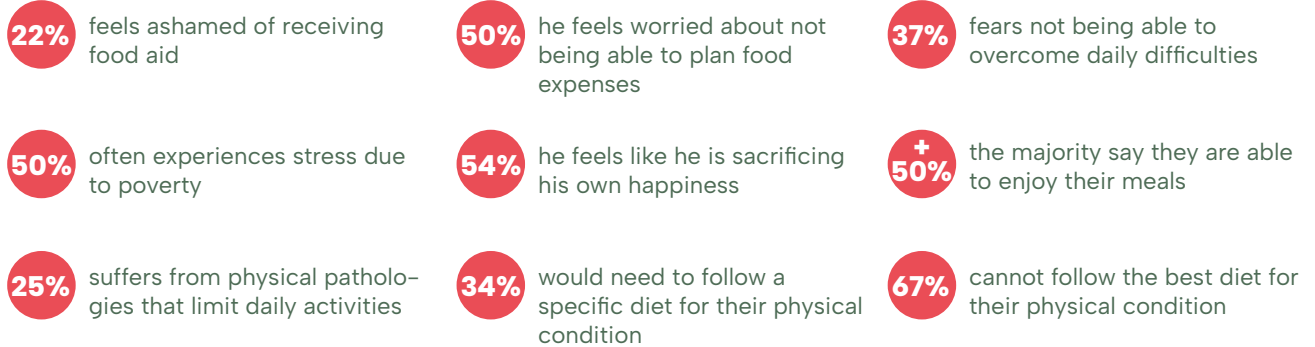
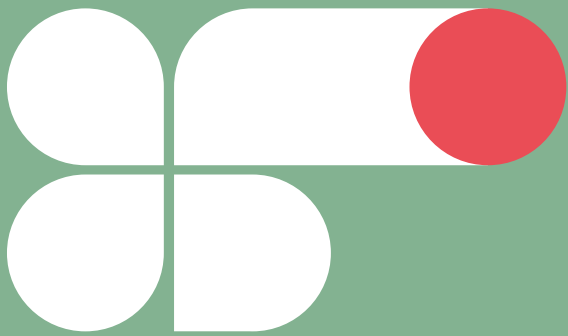


Figure 4.10 – Health conditions and psycho-socio-emotional dimension

About 25% of the sample suffer from illnesses that limit their daily activities, while 34% would need to have a special diet because of their physical condition. However, almost 70% find it difficult to do it due to limited economic, housing, and food resources (i.e. the quantity or quality of food from aids). The FIES questionnaire has the merit to reconstruct the concerns, stress, sense of shame and sacrifice experienced by the respondents on a daily basis. In spite of this, most people declare that they find a moment of satisfaction and tranquility when they eat their meals.

Finally, it provides an insight into the intensity of poverty, ranging for the most part from moderate to severe.





# PUBLIC PROCUREMENT

According to the latest available OECD data, public procurement expenditure as a percentage of GDP has increased slightly over the last decade in all countries of the region, from 11.8% of GDP in 2008, to 12.6% of GDP in 2019. In 2020, the COVID-19 pandemic led to a surge in public procurement as a share of GDP – among the 22 OECD-EU countries for which data are available, the value of public procurement reached an average of 14.9%. These figures should be read in relation both to the purchase of goods and services by governments to support their responses to COVID-19, and to the crisis-induced drop in GDP.

With specific regard to public food purchasing, given that an average of 85 million meals are served every day in Europe, more than 50% of which through contract catering, and that around 3.7 million vending machines are operated by some 10,000 different companies (mostly SMEs and family-run businesses directly employing more than 85,000 people and many others in the supply chain), this sector holds enormous potential to drive market demand towards healthier, environmentally friendly and fairer products.

## 5.1 Vending machines

Although the number of municipal offices, libraries, kindergartens, schools, and centres of various kinds (e.g. community centres, meeting and senior citizens' centres, social services, districts, and sports centres just to name a few) has dropped by 20 units, from 100 to 80 compared to the previous edition, the total value of sales has increased, from 270,000 to 427,118 euro. The total number of installed vending machines for hot and cold beverages and foodstuffs, state-of-the-art devices as for consumption and energy performance, have dropped from 250 to 173 (Table 5.1). Since 2019, they have also enriched their product range with natural water in bottles made of 50% (maximum permitted) regenerated plastic (rPET), which in turn can be regenerated, as well as organic, gluten-free and Fairtrade food products.

Description	UM	2019	2020	2021	2022
Vending machines installed within the City of Turin	n.	250	250	250	173
Bottles of water sold to customers within Turin area	n.	583.000	343.000	3.550.000	n.d
Organic sweet and savoury snacks sold to customers within Turin area	n.	7.140	4.200	n.d	n.d
	%	3	3	n.d	n.d
sweet and savoury snacks sold to customers within Turin area - ESTIMATES	n.	28.560	16.800	24.000	n.d
	%	97	97	//	n.d
Natural water bottles containing recycled plastic	%	50	50	50	n.d
% out of the total number of bottles of natural water				570	n.d
Drinking water fountains installed City of Turin	n.	1	1	1	n.d

Table 5.1 - Vending machines installed within the City of Turin  
(Source: City of Turin, 2022)

## 5.2 Collective catering

Public procurement of food and collective catering is an extremely interesting subject for several reasons. In the first place, managing a canteen, be it in a social/therapeutic, school, university, hospital, and prison context and the like, requires an integrated approach to all the stages of the food supply chain, and therefore taking into account a broad, varied set of subjects, resources, actions, spaces, relations, flows, opportunities and threats. Moreover, the so-called “public meal” brings together issues related to health, social justice, food security, economic development, environmental sustainability, culture and ethical-religious integration, etc.

Finally, the beneficiaries (the elderly, minors, adolescents, prisoners, people with disabilities) are in many cases vulnerable individuals, for whom the relationship with food takes on particular importance. Accordingly, collective catering can be understood to all intents and purposes as a true care system designed and managed by the city in collaboration with various partners in line with its competences and responsibilities.

### 5.2.1 Social catering

The city collective catering service managed by the Department of Finance and Supply of Goods and Services, is one of the services provided by the City within its residential and/or day care reception facilities for adults, elderly, disabled and minors in need of protection and appropriate interventions of various kinds – welfare, health, education. This is supplemented by the distribution of meals at home for non-self-sufficient persons.

#### Specifically, the data refer to:

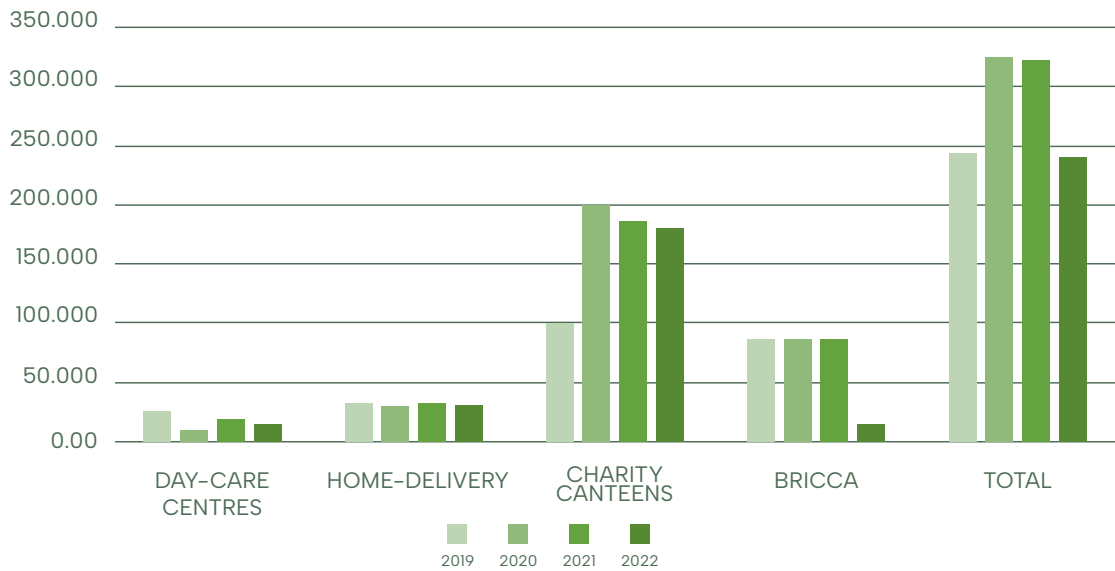
- Social-therapeutic Day-Care Centres in the city area (now called Day-Care Centres)
- Users assisted by the city Social Services
- Soup kitchens affiliated with the City

Compared to 2021, the number of meals served per service decreased in 2022 yet, at the same time, the expenditure incurred by the City was boosted. In 2022, the City of Turin provided some **240.344** meals for a total expenditure of **€1.128.295** (table 5.2).

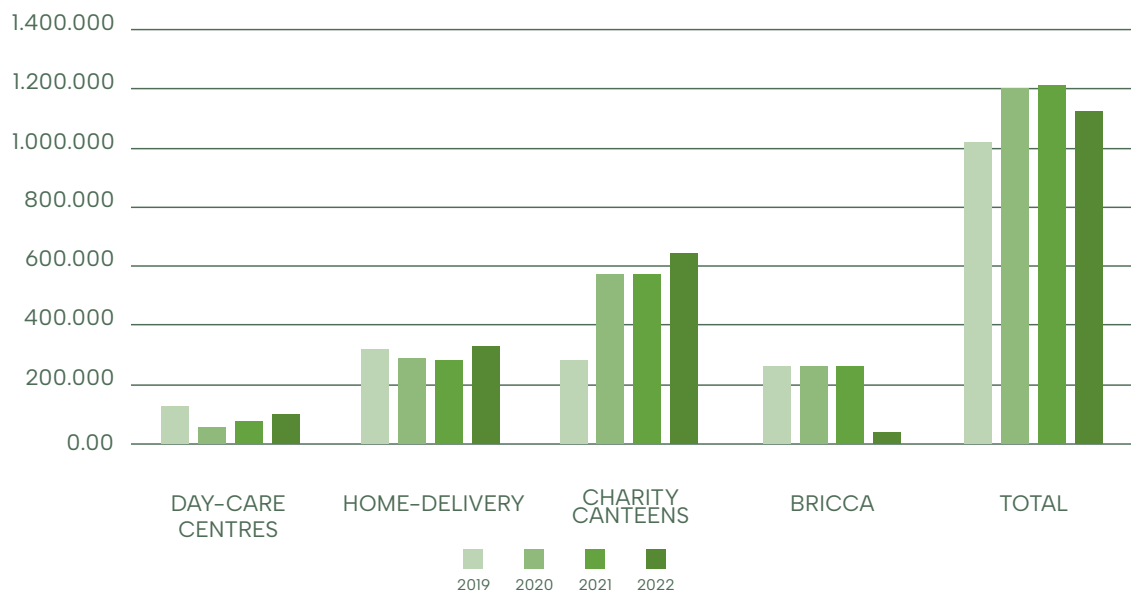
	2019		2020		2021		2022	
	Meals (n)	expenditure (€)	Meals (n)	expenditure (€)	Meals (n)	expenditure (€)	Meals (n)	expenditure (€)
DAY-CARE CENTRES	24.868	133.057,48	10.579	57.088,61	17.995	86.719,02	15.097	106.409,44
HOME-DELIVERY	33.568	325.917,74	30.299	294.627,48	31.793	291.341,14	30.173	332.414,07
CHARITY CANTEENS	101.280	291.176,59	199.945	583.857,77	186.206	567.478,31	181.268	646.340,86
BRICCA	84.966	266.102,98	85.644	267.767,87	85.380	265.490,77	13.806	431.30,59
<b>TOTAL</b>	<b>244.682</b>	<b>1.016,255</b>	<b>326.467</b>	<b>1.203,342</b>	<b>321.374</b>	<b>1.211,029</b>	<b>240.344</b>	<b>1.128,295</b>

**Table 5.2 – Social catering – City of Turin**  
(Source: City of Turin, 2022)

According to the following graphs, a drop in meal distributions in day care centres was recorded in the first year of Covid-19 pandemic due to containment measures, but the figure rebounded in 2021 and dropped again in 2022, while the number of home meals and RSA Bricca meals were almost stable. Conversely, Covid-19 health emergency, which soon resulted in greater social fragility, led to a twofold increase in meals distributed through soup kitchens in 2020, with a slight decrease in 2021 and 2022.

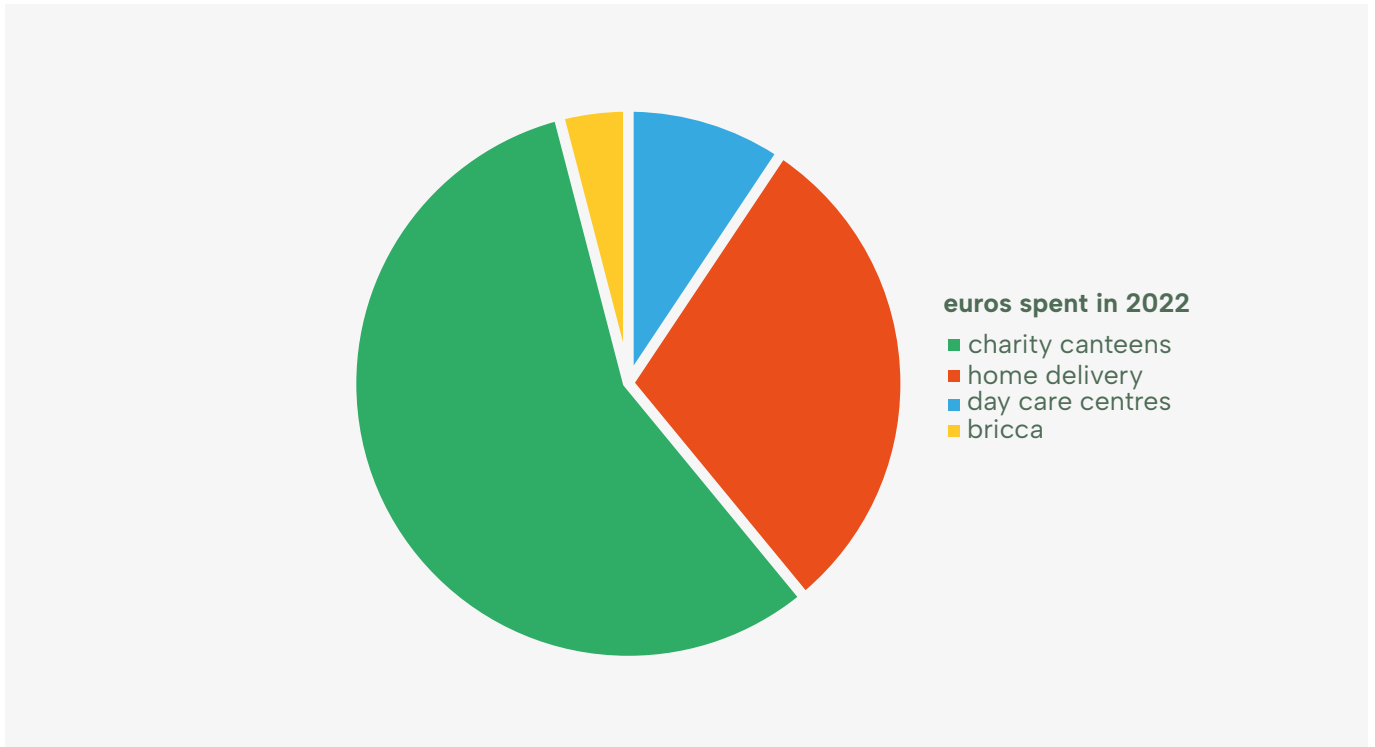


**Figure 5.1** – Number of meals distributed through social catering services  
(Source: City of Turin, 2022)



**Figure 5.2** – Expenditure in EUR for social catering services  
(Source: City of Turin, 2022)

Soup kitchens are the largest cost component within the total cost, accounting for more than half of the 2022 expenditure.



**Figure 5.3** – Expenditure composition for social catering services.  
(Source: City of Turin, 2022)

As part of the ongoing process of research and information extraction, a figure that would be essential to investigate is the one associated with the number of users assisted with food services in municipal facilities.

The food served met the contract criteria required by the MEC (Minimum environmental criteria) standards set for the service, including organic production. The rewarding criteria required a commitment to use more organically produced products (such as fruit, greens and vegetables, dairy products, oil, etc.) in the contractual period, in addition to products made through integrated production systems, products coming from the Italian supply chain or from organic crops from fair trade (e.g., bananas, pineapples, etc.), if need be. The new MEC standards (set in the Min. Dec. of 10 March 2020) has been included in the next call for tender 2022-2024.



### 5.2.2 School catering

The School Catering Service is managed by the Department for Educational Services, which is in charge of liaising with catering companies, school secretariats and school treasurers regarding the daily booking of meals and the day-to-day management of the catering service.

#### Number of meals delivered and related expenditure in EUR

The number of meals distributed and the related expenditure vary depending on whether we consider the calendar year (January 2022 to December 2022) or the school year (September 2022 to August 2023). The former accounted for about 6 million meals distributed for an expenditure of almost EUR 34.4 million, while the latter amounted to just over 6.3 million meals for an expenditure of just over EUR 36 million. (table 5.3)

2022/2023 school year (September 2022 – August 2023)	Total
meals distributed per year	6.371.212
expenditure (eur)	36.251.893,35
2022 Calendar year (January 2022 – December 2022)	Total
meals distributed per year	6.035.196
expenditure (eur)	34.398.825,54

**Table 5.3** – Number of meals in school catering and related EUR expenditure.  
(Source: City of Turin, 2022)

Year	2018	2019	2020*	2021*	2022
Meals distributed per year	6.728.493	6.653.883	4.478.623	5.936.210	6.035.196
Expenditure in EUR	30.331.039,28	30.470.676,69	19.274.598	33.169.032	34.398.825,54
Reusable tableware %	100	100	100	100	100

**Table 5.4** – Meals distributed per year, related expenditure and reusable tableware. (Source: City of Turin, 2022)

\* Figures biased by Covid-19 pandemic

number of meals and related expenditure 2018 / 2022

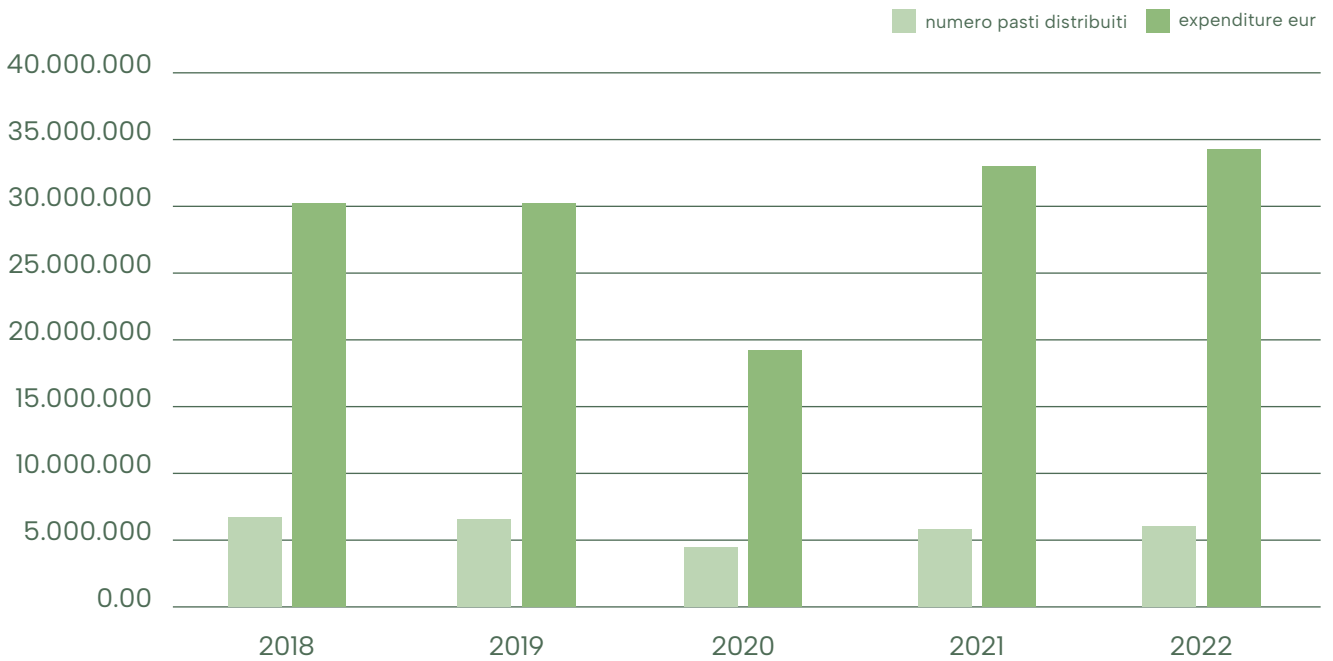


Figure 5.4 - Number of meals for school catering and related expenditure (Source: City of Turin, 2022)

According to the graph, the drop recorded in 2020 due to pandemic containment measures was reabsorbed in 2021, despite the persistence of the emergency and its impact on schools. By contrast, 2022 figures registered a rise of almost 99,000 and about EUR 1.3 million.

Top menu products

In 2022, organic food products accounted for 55% of the total, as compared to 71.52% in the previous year, i.e. more than 2.4 million kg (2 million kg in 2021). (table 5.5).

	2021	2022
Total organic food (kg)	2.087.456	2.433.895
% Weight of organic food in total food	71,52	55%
Number of products	1.616.192	nd

Table 5.5 - Organic Food items (kg) (Source: City of Turin, 2021)

When organic food items are cross-referenced with their origin, it is observed that most fruit and vegetables (potatoes, tomatoes, peppers, cauliflower, broccoli, cabbage, savoy cabbage, aubergines, onions, leeks, courgettes, lettuce, kiwifruit, apricots, prunes, plums, apples, pears, and peaches) are either from organic farming, integrated production, or from low-impact farming. They are grown, packaged, and distributed in Piedmont only. The use of locally sourced products, i.e., supplies close to the direct producers, favours forms of cooperation between the farmers themselves, thereby limiting intermediate stages for a better knowledge of local produce. Moreover, it allows to eat fresh and seasonal food that are high-quality and secure, ultimately reducing pollution levels to support the environment. The remaining share fruit and vegetables is acquired from organic supply chain, which means that they must be grown without using pesticides. In 2021, 25 different organic food items were administered (table 5.6).

N°	Quality	Food Item	Quantity	N°	Quality	Food Item	Quantity
1	ORGANIC	Pasta	Kg 152.388	14	ORGANIC	Flour(s)	Kg 14.513
2	ORGANIC	Fruits	kg 515.672	15	ORGANIC	Milk	kg 36.818
3	ORGANIC	Vegetables	kg 586.003	16	ORGANIC	Tomato pulp and/or puree/peeled tomatoes	kg 84.528
4	ORGANIC	Cereals	kg 37.374	17	ORGANIC	Miscellaneous	kg 7.885
5	ORGANIC	Red meat	kg 22.939	18	ORGANIC	Fresh eggs	N 202.773
6	ORGANIC	White meat	kg 48.186	19	ORGANIC	desserts, yoghurt, jam, juice, chocolate	N 619.411
7	ORGANIC	Pork meat	kg 11.290	20	ORGANIC	snacks (plum cakes, tarts, bars)	N 997
8	ORGANIC	Cheese	kg 384.788	21	ORGANIC	Chocolate	N 67.040
9	ORGANIC	fish and/or MSC	kg 87.886	22	ORGANIC	Mousse	N 161.840
10	ORGANIC	Salami	kg 22.543	23	ORGANIC	jam	N 23.229
11	ORGANIC	EVO olive oil	kg 30.760	24	ORGANIC	Yoghurt	N 260.144
12	ORGANIC	Beans	kg 41.898	25	ORGANIC	Fruit juices	N 134.552
13	ORGANIC	Pesto sauce	kg 1.088				

Table 5.6 – Organic Food items (kg and # products).  
(Source: City of Turin, 2021)

For 2022, the figure is not complete as it includes only two out of three catering companies and has different domains compared to the previous year.

N°	Quality	Food Item	Quantity (Kg)
1	ORGANIC	Pasta	117.138,2
2	ORGANIC	Fruits	665.322
3	ORGANIC	Vegetables	633.709,68
4	ORGANIC	Cereals	105.865,28
5	ORGANIC	Red meat	18.476,48
6	ORGANIC	White meat	104.799,04
7	ORGANIC	Pork meat	1.760
8	ORGANIC	Cheese	30.372
9	ORGANIC	fish and/or MSC	148212
10	ORGANIC	Salami	6.695
11	ORGANIC	EVO olive oil	28.914
12	ORGANIC	Beans	36.738
13	ORGANIC	Pesto sauce	6.110
14	ORGANIC	Flour	21.361
15	ORGANIC	Milk	65.609
16	ORGANIC	Tomato pulp puree/peeled tomatoes	158.270
17	ORGANIC	fresh eggs	297.064
18	ORGANIC	desserts, yoghurt, jam, juice, chocolate	1.092.248

Table 5.7 – Food items (kg and # products).  
(Source: City of Turin, 2022)

### Short chain foods

The number of products from short supply chains consumed in school canteens increased from 562,868 in 2021 to over 2 million in 2022, a 4-fold rise in weight from 24.26% in 2021 to 26% in 2022.

	2021	2022
Quantity of short-chain products in school menus (#)	562.868	2.017.770
% short-chain products in school menus (weight)	24.26%	26%

**Table 5.8** – Food items from short supply chain (kg and # products).  
(Source: City of Turin, 2021)

A share of the products supplied are expected to come from Piedmontese producers, i.e., the whole chain must occur within the regional territory, from the raw material to the finished product, including butter, poultry chicken meat, high quality fresh milk, and organic natural/fruit yogurt.

All the foodstuffs listed below (table 5.9), must be made in Italy: Cooked ham, Turkey, Corn flour, Extra virgin olive oil, for cooking food, Pork meat, Fresh and medium-ripened cheeses, Peeled tomatoes/Tomato pulp, Fruit juices, Organic fruit puree, Extra fruit jam/Organic jellies, Red/white vinegar, Aromatic herbs.

According to the latest available figures, as of 2021, the weight in kg of short supply chain food items was distributed as follows (table 5.9).

Quality	Food Item	Quantity 2021	Quantity 2022
SC	Fruits	kg 338.936	kg 780.475
SC	Vegetables	kg 109.002	kg 667.987
SC	Miscellaneous SC	kg 2.946	kg 83.364
SC	Red meat	kg 22.052	kg 148.3225
SC	White meat	kg 55.297	kg 525.283
SC	Cheese	kg 32.267	kg 451.985
SC	dessert	N°porzioni 25.000	nd
SC	<b>Total</b>	Kg 562.868 (excluding dessert)	Kg 780.475 (excluding dessert)

**Table 5.9** – Short-chain food items (kg).  
(Source: City of Turin, 2021 e 2022)

\* figures referring to the food items of two catering companies out of three.



Analogamente, il peso delle referenze convenzionali, nel 2021 e nel 2022 si distribuiva come in tabella 5.9.

Quality	Food Item	Quantity2021	Quantity2022
C	Fruits	kg 9.687	kg 780.475
C	Pork meat	kg 12.405	kg 667.987
C	Fish	kg 49.135	kg 83.364
C	Salami	kg 5.377	kg 148.3225
C	EVO olive oil	kg 25.488	kg 525.283
C	dessert	N°porzioni 158.503	kg 451.985
C	<b>Total</b>	Kg 102.092 (excluding dessert)	nd

Tabella 5.10 – Conventional food items (kg and # products).  
(Source: City of Turin, 2021)

\* figures referring to the food items of two catering companies out of three

### Organic and short-chain food items

Organic and short-chain food products account for 81% of the total weight in 2021, as compared to 95.77 % in the previous year (table 5.11)

	2021	2022
<b>% organic products + short-chain products in school canteens (weight)</b>	95.77	81

Tabella 5.11 – Weight (kg) share of organic and short-chain food products  
(Source: City of Turin, 2021)

### Other branded products served in school catering

- **PDO products**

Parmigiano Reggiano, Piedmontese Grana Padano, Extra virgin olive oil from north-central Italian regions to be used for raw dressing, Raw ham, Piedmontese Toma cheese, Bra cheese, Raschera cheese.

- **Fair-trade products**

We envisaged a supply of fair-trade produce, namely from markets in non-European countries, in order to support disadvantaged producers, who produce organic fruits such as bananas and pineapples, made-in-Italy biscuits from fair-trade raw materials, cocoa and milk chocolate.

- **Frozen vegetables using innovative methodologies**

Small quantities of green beans that are frozen after rapid steaming or quick freezing are employed in order to preserve their peculiar organoleptic qualities.

- **Smat mains water**

The mains water supplied in schools is absolutely safe. Every day Smat, the Metropolitan Water Company of the City of Turin, handles the entire water production cycle, from its facilities to urban buildings. The mains water quality is guaranteed by over 1,000 daily controls and analysis. To further guarantee safety to users, catering companies periodically carry out appropriate chemical/microbiological analysis of the water at a supply point (tap) in each school complex. The analysis are performed in accredited laboratories, on behalf of the City in order to check that the water quality complies with the legal parameters. Additional information on SMAT water is available on the SMAT website, [www.smaturin.it/qualita](http://www.smaturin.it/qualita), which provides mains water-related data within the urban area.

### Alternative menus for school catering

users of the school catering service in the City of Turin are about 42.800 in 2022/2023 school year. Of them, about 6.700 have requested one of the so-called alternative menus available, i.e., (i) no pork meat; (ii) no meat; (iii) no meat / fish; and (iv) no animal proteins. Approximately 1,000 more are on a special diet for eating disorders.

Type of meal	2021	2022
# meals served in school canteens (approximate figure)	43.000	42.800
# standard meals (approximate figure)	25.000	35.120
# special diets under medical prescription	1.040	1.150
# no-meat meals	2.381	3.974
# no-pork meat meals	1.412	2.557
# vegetarian meals	72	128
# vegan meals	21	41

**Table 5.12** - Alternative menus for school catering in the City of Turin  
(Source: City of Turin, 2022)

### 5.3 Meal vouchers to employees of the municipal administration

Every year, the City of Turin provides all employees of the municipal administration with meal vouchers (table 5.13) that are redeemable for a meal at cafeterias and restaurants and/or for commodities at affiliated businesses, usually food shops and large-scale distribution. The Meal voucher service is provided by Day Ristoservice SpA based on the CONSIP agreement. 7€ meal vouchers cost the City about € 6 each. Employees receive a meal voucher per working day. Meal vouchers are cumulative and can be only used for purchasing food, even in markets and supermarkets. As shown by the quantitative figures below, this policy is an item of high overall expenditure; on the other hand, though it supports both workers and food-related businesses on the territory, in particular the ones located near the administrative offices of the City (figure 5.5 and 5.6 show the spatial distribution of affiliated businesses).

	2019	2020	2021	2022
<b>Workers who are entitled to meal vouchers</b>	8.976	8.608	7.696	7.413
<b>Vouchers paid per year</b>	1.422.444	1.185.651	1.267.067	1.130.828
<b>Voucher-related expenditure</b>	8.486.230	7.262.823	7.765.747	6.938.760,61
<b>Affiliated businesses within the city of Turin/Metropolitan Area</b>	938	1.268	2.546	1.605
<b>Affiliated businesses within the city of Turin</b>	nd	nd	nd	962

**Table 5.13** – Meal vouchers to employees of Turin municipal administration  
(Source: City of Turin, 2022)

Affiliated businesses within Turin Metropolitan Area as of 31.12.2022			
FF	Fast food	#	45
GA	Delicatessens	#	90
GS	Delicatessens inside supermarkets	#	341
RI	Restaurants	#	223
RP	Restaurants- pizzerias	#	167
SS	Self service restaurants	#	38
TA	Take away	#	54
TC	Diners	#	465
TF	Lunch bars	#	133
TR	Trattorias	#	49
<b>TOTAL</b>		#	<b>1.605</b>

**Table 5.14** – Number and type of businesses affiliated to the voucher system in the City of Turin  
(Source: City of Turin, 2022)

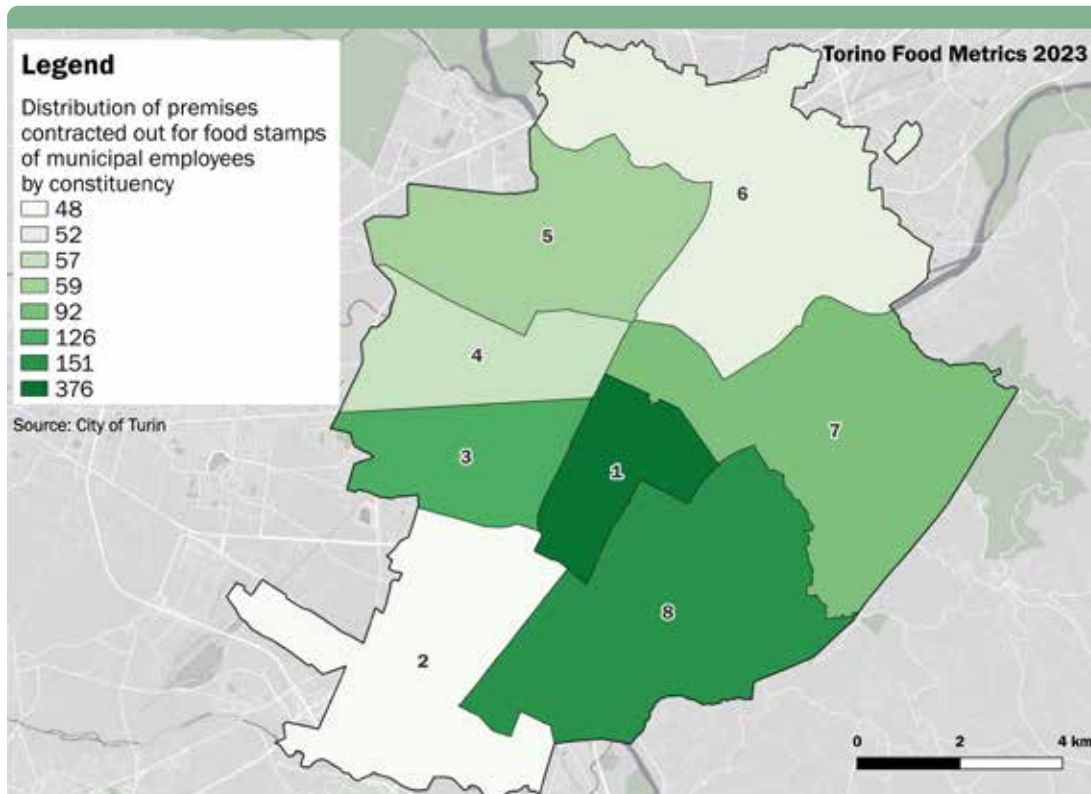


Figure 5.5 – Distribution of businesses affiliated to the meal voucher system of the City of Turin. (Source: City of Turin, 2022).

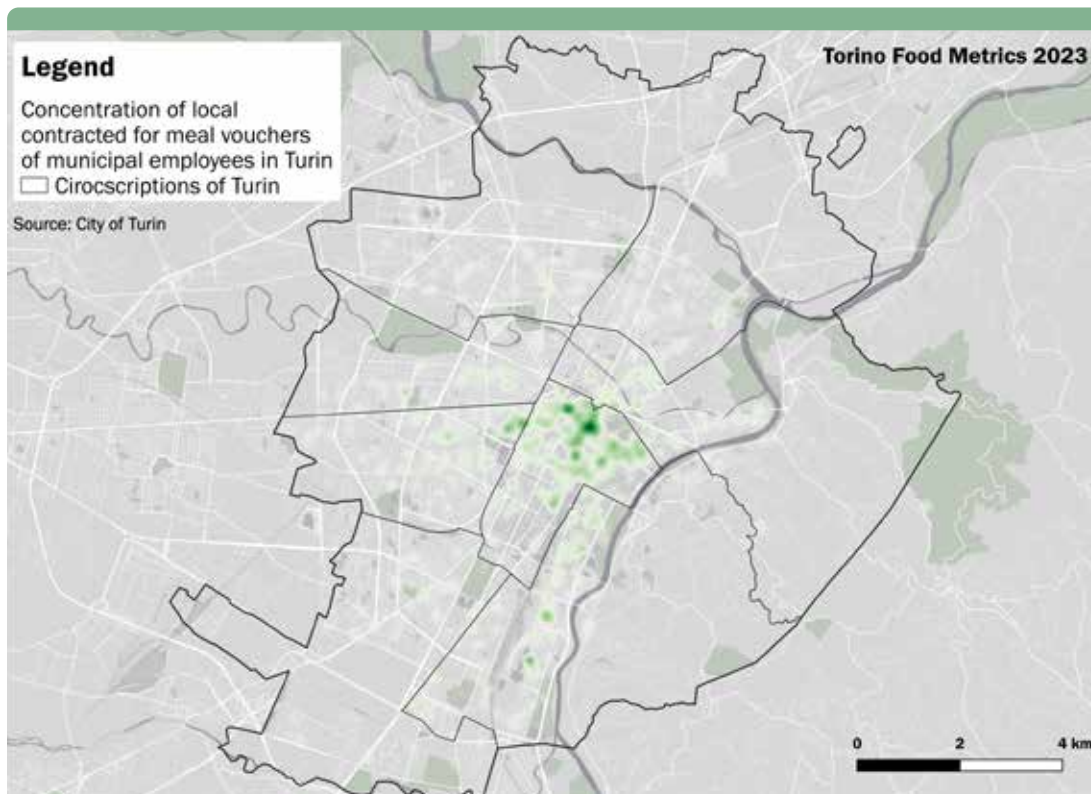
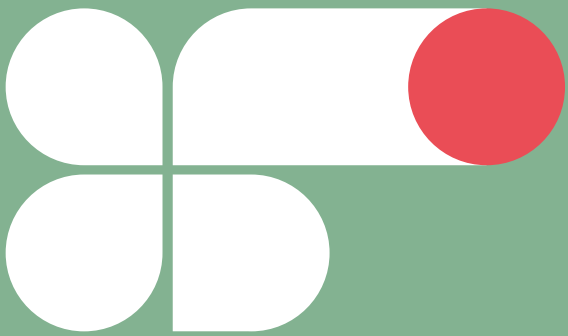


Figure 5.6 – Concentration of businesses affiliated to the meal voucher system of the City of Turin (Source: City of Turin, 2022).







# FOOD, NUTRITION & HEALTH

The relationship between components such as food, health, and (urban) territory has proven to be a complex, challenging, multidimensional, and cross-disciplinary topic of research, suitable to be dealt with through the most diverse approaches. The aim is to put and keep together said components within the wider, articulated system also known as city. They refer to concepts that may be veiled with ambiguity, that intertwine and reciprocally originate each other, that have repercussions and impacts, but also prove to express the competences needed to manage structures across different scales – from body scale to gradually larger scales as neighbourhoods, cities, supra-local territory.

All this determines many possible cross-references with different thematic areas and, consequently, a potentially wide range of phenomena to be surveyed and related data to be collected.

This section focuses on diabetes. We chose to illustrate the topic through accurate aggregated data supported by the reflections ignited within the framework of Cities Changing Diabetes (CCD)<sup>1</sup>, an outstanding international programme in which the City of Turin has been involved for a while. CCD addresses the impact of diabetes in large urban areas, with a view to studying individual and community vulnerabilities. The following information is taken from the Turin CGD Factsheets Atlas 2021.<sup>2</sup>

The Atlas explains that the project, launched in 2014 in Denmark<sup>3</sup>, is promoted by the Steno Diabetes Center (Denmark) and University College London (UK), with the support of Novo Nordisk (a Danish multinational pharmaceutical company), in partnership with several national stakeholders including institutions, metropolitan cities, diabetes/health communities, local governments, academic bodies and the representatives of the third sector<sup>4</sup>.

The correlation between urbanisation and the growth of diseases such as diabetes and obesity clearly emerge from the evidence shared by cities all over the world. In this light, the CCD programme is also intended to spur harmonised advocacy actions at a national and international scale targeting policy makers for them to prioritise diabetes in the urban context as a matter of urgency.

So far, 46 cities have joined the programme (Figure 6.1); by joining, not only did they accept to be the focus of international research on the relationship between urbanisation and type-2 diabetes for the next few years, but they also became symbols of the endless fight against this disease.

The opportunity for the city of Turin to join the programme as the second Italian city after Rome occurred in 2020, during the second “Sustainable cities promoting urban health” Forum organised by the Danish Embassy in cooperation with the City of Turin<sup>5</sup>.

---

<sup>1</sup> - <https://www.citieschangingdiabetes.com/>

<sup>2</sup> - [https://issuu.com/raffaelecreativagroupcom/docs/atlas\\_torino\\_ccd\\_web](https://issuu.com/raffaelecreativagroupcom/docs/atlas_torino_ccd_web)

<sup>3</sup> - In Italy, the project is coordinated by the Health City Institute in collaboration with the Ministry of Health, ANCI, Istituto Superiore di Sanità, ISTAT, CENSIS Foundation, CORESEARCH, IBDO Foundation, B-HAVE and all the Universities of the cities involved, the Scientific Societies of Diabetes and Obesity and the Patient and Citizens' Associations

<sup>4</sup> - For the City of Turin, the partnership network is composed of the City and the Metropolitan Area of Turin, IRES Piemonte, Parliamentary Intergroup on Obesity and Diabetes, Health City Institute, National Association of Italian Municipalities (ANCI), IBDO Foundation, University of Turin, CENSIS Foundation, ISTAT, Institute for Competitiveness (I-COM), Centre for Outcomes Research and Clinical Epidemiology (CORESEARCH), Medipragma, Italian Diabetes Society (SID), Italian Diabetologists' Association (AMD), Italian Society of General Medicine and Primary Care (SIMG) Caped Associations of people with diabetes in Piedmont, Diabetes Italy, C14+, Cittadinanzattiva, CONI, FIDAL, Italian Society of Paediatric Endocrinology and Diabetology (SIEDP), Italian Obesity Society (SIO), Italian Association of Dietetics and Clinical Nutrition (ADI), Fitwalking Association TO Walk LAB, ANIAD

<sup>5</sup> - With the sponsorship of various bodies such as Istituto Superiore di Sanità (ISS), SDU-National Institute of Public Health of Denmark, ANCI-National Association of Italian Municipalities, the homologue Danish association KL, Health City Institute, Danish Healthy Cities network, Municipality and University of Aalborg.



Figure 6.1 – Cities joined the programme Cities Changing Diabetes.  
 (Source: <https://www.citieschangingdiabetes.com/network.html>)

Firstly, diabetes-related data for the city should be read against the broader national and regional background. As stated in the Atlas, ISTAT annual surveys regarding "aspects of daily life" (AVQ) show the time trend of self-reported diabetes prevalence both in Italy (4.9% in 2010 - 5.8% in 2019) and in Piedmont (4.1% in 2010, 5.4% in 2019).

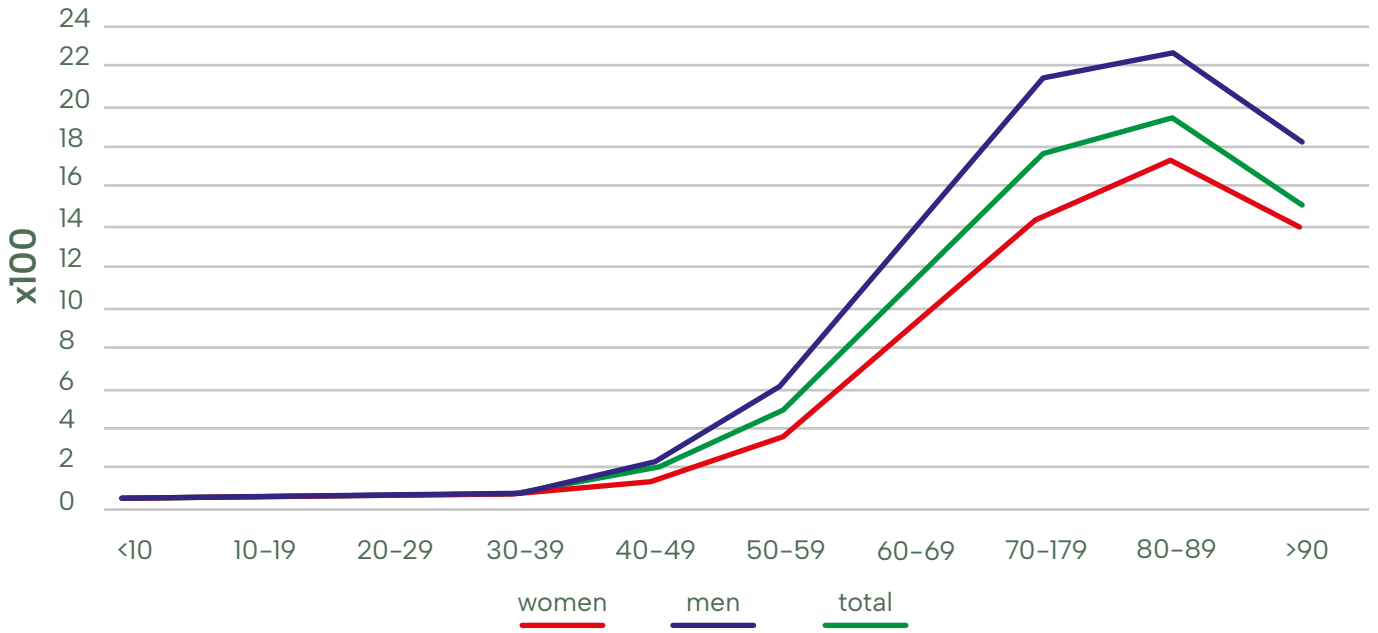
In 2020, the percentage of Piedmont inhabitants who were either overweight or obese was equal to 44.4%, i.e. 3% lower than the national average: more generally, one of the lowest region-wise. Despite the progressive ageing of the population, though, diabetes-associated mortality rate in Italy has not changed significantly, and this is all the truer in Piedmont (-15% as compared to the national rate).

Indicators (Figure 6.2) include incidence (number of new cases of a disease usually in one-year time interval); prevalence (share of population affected by a disease at a specific time); and mortality (number of deaths due to a disease in a given time interval).

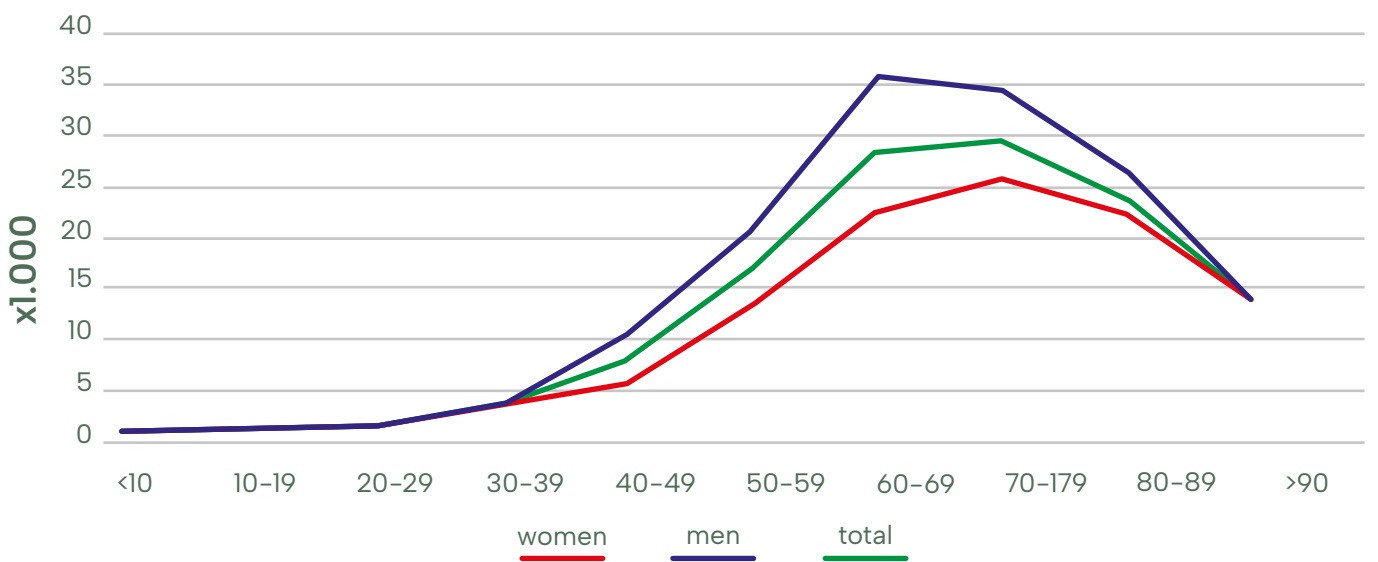
The latest available data show that, in 2018, 53% of the male population in Turin (around 55,000 individuals) suffered from either type-1 or type-2 diabetes.

The share grew with age, peaking at 22% in men and at 17% in women in the 80-89 age group. In the 2016-2018 period, 10,400 new cases of diabetes were recorded, i.e., 53% in men, with an incidence of 11.5 per thousand inhabitants. In the same period, the mortality rate for diabetic Turin inhabitants was 12.6% (just over 7100 deaths).

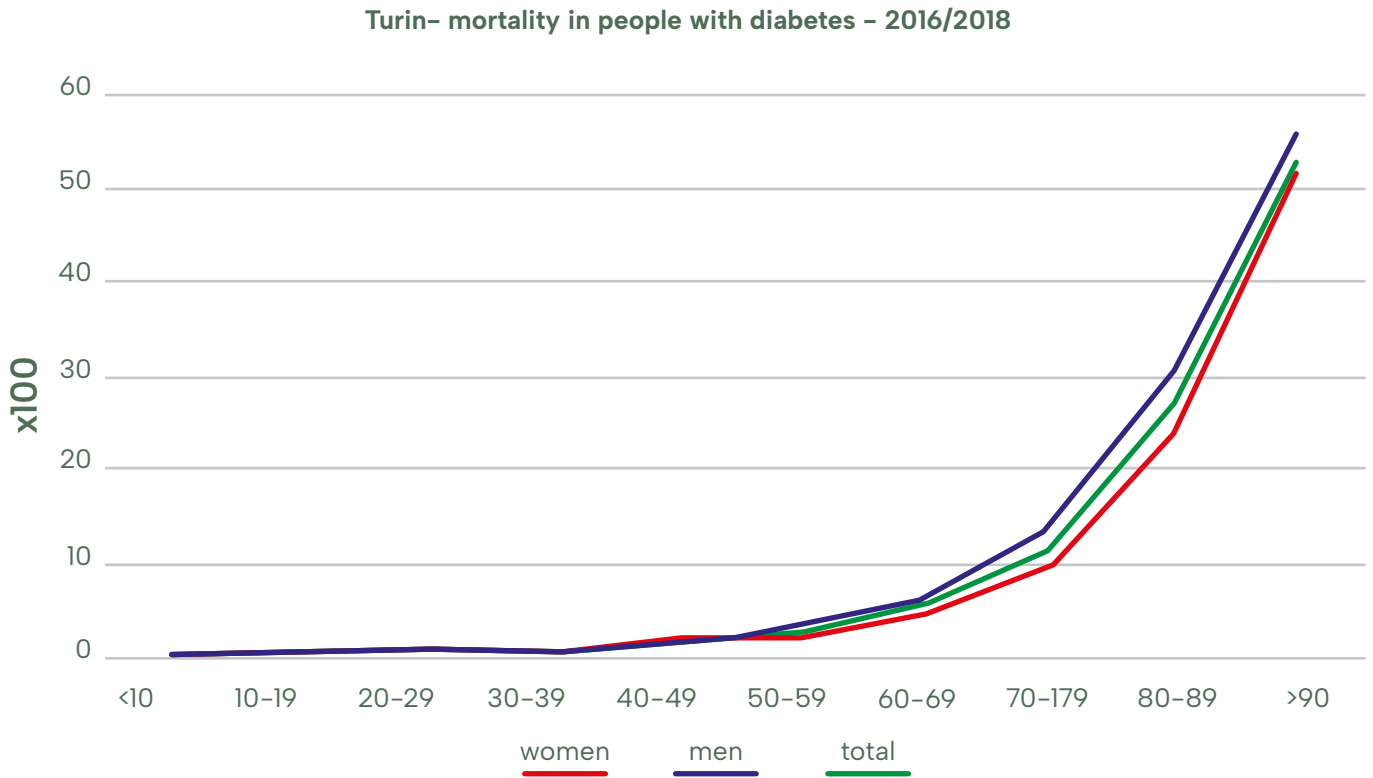
Turin- prevalence with diabetes - 2018



Turin - incidence of diabetes - 2016/2018





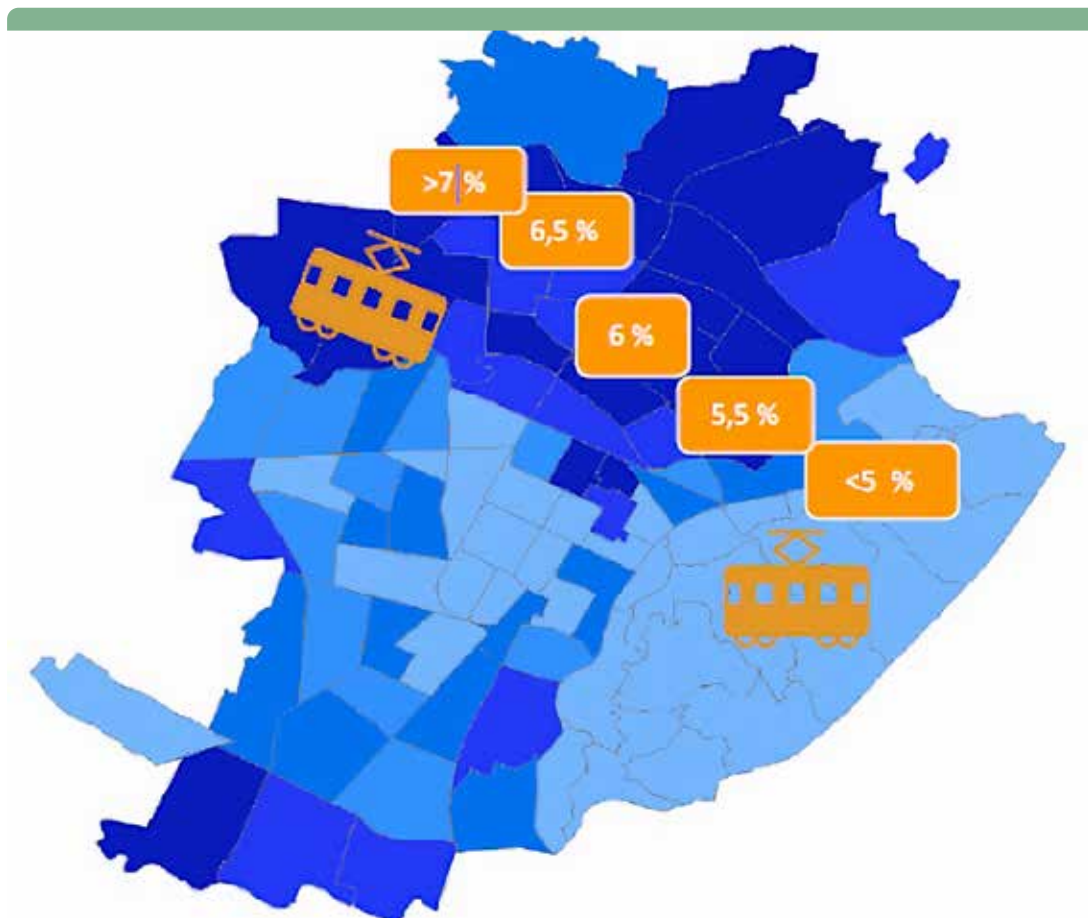


**Figure 6.2** – Prevalence, incidence e mortality for diabetes in men and women – Year 2018.  
 (Source: Cities Changing Diabetes, Factsheet Atlas 2021, pag. 57)

The data also highlight a huge prevalence gap between the various urban and suburban areas, which calls for serious reflection from a health, clinical, and social perspective. As explained in the Atlas (p. 58), in 2018 the prevalence of diabetes seemed to coincide with deprivation, geographically speaking. Except for the obvious age difference across the territory, diabetes prevalence varies from a minimum of 3% in the highest income areas to a maximum of 10% in the most socially and economically disadvantaged areas. These differences are in line with the geographical distribution of life expectancy at birth in Turin (data published in the report named “40 anni di salute a Torino” – 40 years of health in Turin), which changes by about 3.5 years between the richest neighbourhoods (in dark grey) and the most deprived ones (in light grey). We observe similar trends in diabetes incidence with reference to new cases developed in 2016–2018. The distributional differences in incidence shown in the figure below from the Atlas suggest that there are even substantial variations in the exposure to risk factors.



**Figure 6.3** - Differences in life expectancy at birth in different Turin districts (data 2017). (Source: Cities Changing Diabetes, Factsheet Atlas 2021, pag. 59)

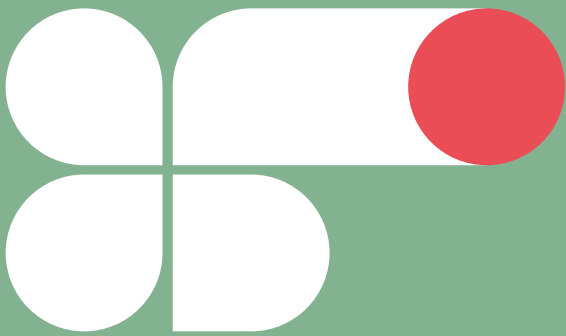


**Figure 6.4** – Differences in the standardised prevalence of type 2 diabetes in Turin (data 2017) (Sources: Cities Changing Diabetes, Factsheet Atlas 2021, pag. 59)

The risk factors for the development of diabetes are multiple and almost “inherent” to our lifestyle – diet and sedentariness are the best-known, the ones to which we are exposed from the cradle to the grave. On top of that, the level of education, socio-economic conditions and unemployment status appear to have a role to play as well. According to PASSI surveillance system, in 2008 diabetes prevalence was equal to 2.1% in people with a university degree compared to 14.1% in people without a degree. Finally, the Atlas (p. 77) stresses that pollution is another less known yet equally relevant risk factor.

Indeed, researchers at Washington University in St. Louis have found a close link between diabetes and pollution: as far as they could measure in their studies, about 21 % of individuals exposed to a level of smog between 5 and 10 micrograms per cubic metre developed the disease. Comparing these figures to new cases of diabetes worldwide, it appears that pollution and smog may contribute to at least 3.2 million of new cases of type-2 diabetes each year.





# FOOD & CIRCULAR ECONOMY

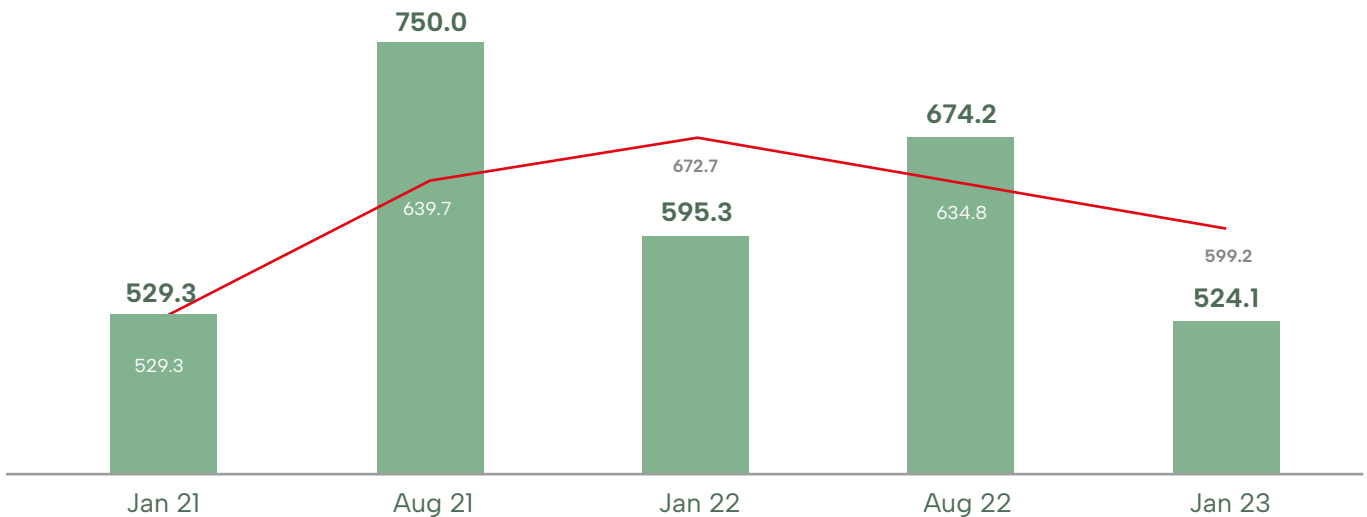


The circular economy model “involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible”.<sup>1</sup> In this light, given their major impact on both the society and the environment, we recognize food (eco)systems as the focus of policy priorities especially in urban settings, for they are definitely resource-intensive. Rethinking such ecosystems as flows rather than just stocks and spaces shall prove crucial in understanding how they can match the circular economy paradigm (Fassio et al., 2020).

In these regards, the circular economy journey begins in cities, the epicenter of food and local food policies that share founding principles and mutually influence each other (Fassio and Minotti, 2019), thus spawning political, social, and economic solutions apt to revive food value. According to recent IPSOS data (January 2023), 524.1 g/per head of edible food is wasted weekly in Italy, with an annual figure verging on 27.25 kg/per head.

**INDIVIDUAL FOOD WASTE**  
Italian historical series

individual waste (in gr) - moving average



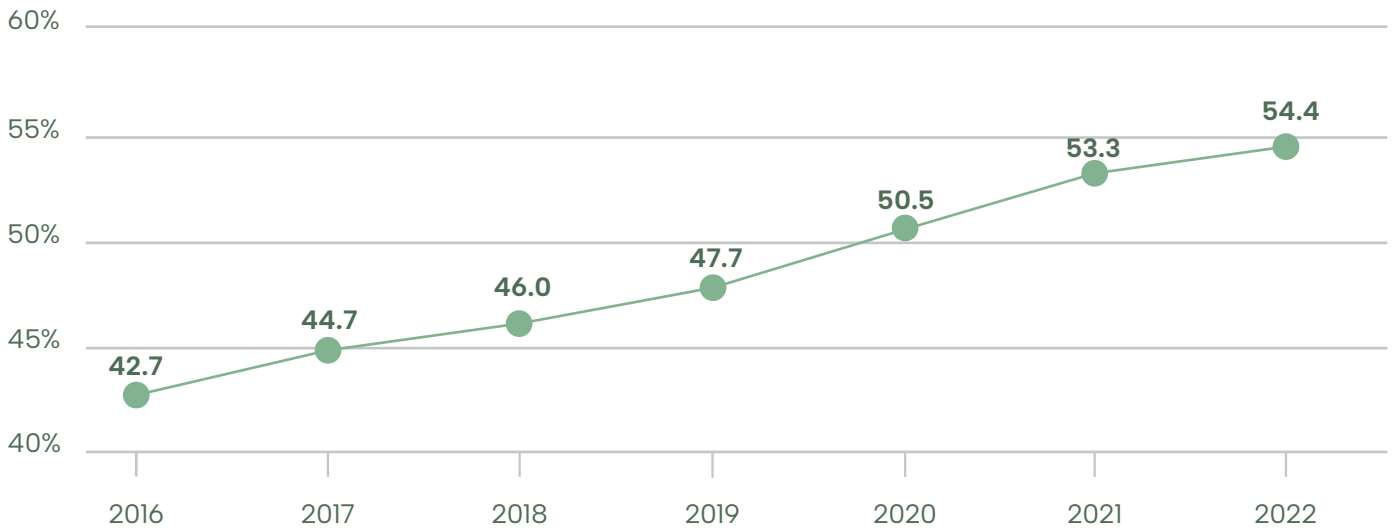
**Figure 7.1 – Food waste in Italy – time series**  
(Source: Ipsos report on Watcher Waste).

Specifically, fresh fruit (30.3 g), vegetables (21.0 g) and fresh bread (22,8 gr) are wasted on a weekly basis. In an attempt to reduce this massive food waste, since the signing of the Milan Urban Food Policy Pact in 2015, a number of Italian administrations, including the City of Turin, have committed to rethink their food systems. In this light, Turin has launched pilot initiatives and joined ongoing European projects which aim to recycle waste and reintroduce it into the city distribution and consumption process in line with the circular economy model. These projects have been coupled with a constant commitment to improve the system of organic waste collection, management, and processing thanks to a long-standing collaboration with AMIAT (Azienda Multiservizi Igiene Ambientale Turin), part of the IREN group, which has announced a five-year plan worth 3.7 billion EUR in 2020, 2 of which are intended for the so called “multicircle economy”. Secondly, the city of Turin has also demonstrated its ability to better apply the circular approach in the management and distribution of drinking water. Specifically, the city has chosen to work on the supply and provision of drinking water to citizens with a view to reducing packaging and transport emissions. This commitment has resulted in an increase in the number of “torèt”, the iconic fountains in the shape of a bull’s head, and in the spread of SMAT water kiosks.

<sup>1</sup> - [https://www.europarl.europa.eu/news/it/headlines/economy/20151201STO05603/economia-circolare-definizione-importanza-e-vantaggi?at\\_campaign=20234-Economy&at\\_medium=Google\\_Ads&at\\_platform=Search&at\\_creation=RSA&at\\_goal=TR\\_G&at\\_audience=economia%20circolare&at\\_topic=Circular\\_Economy&at\\_location=IT&gclid=CjwKCAiA9dGqBhAqEiwAmRpTC0U7gpOo2Yu7B1XeeplXIC98kuO3Dx5XFBaFcx8ulDZtNZgbEcuCBoC1e0QAvD\\_BwE](https://www.europarl.europa.eu/news/it/headlines/economy/20151201STO05603/economia-circolare-definizione-importanza-e-vantaggi?at_campaign=20234-Economy&at_medium=Google_Ads&at_platform=Search&at_creation=RSA&at_goal=TR_G&at_audience=economia%20circolare&at_topic=Circular_Economy&at_location=IT&gclid=CjwKCAiA9dGqBhAqEiwAmRpTC0U7gpOo2Yu7B1XeeplXIC98kuO3Dx5XFBaFcx8ulDZtNZgbEcuCBoC1e0QAvD_BwE)

**7.1 Waste sorting**

According to AMIAT figures, the percentage of separate waste collection improved steadily from 2016 to 2022, rising from 42.7% to 54.4%.



**Figure 7.2 – Trend of separate waste collection in Turin**  
(Source: AMIAT)

A constant, fairly widespread upward trends per statistical areas can be observed between 2020 and 2022, due to the analogies between the years (except for San Secondo neighbourhood in 2020). Specifically, some are very positive, while some others are slightly positive, with just a few downward trends for a few percentage points. More specifically, Madonna del Pilone shows a steady improvement from 63.40% in 2020 to 65.00% in 2021 and finally to 65.70% in 2022. In spite of a slight decrease in 2021 compared to 2020, Crocetta maintained a high rate of separate waste collection over the years (62.70% in 2020, 60.00% in 2021 and 61.60% in 2022), whereas San Donato performed very well across the board, increasing its rate from 32.50% in 2020 to 44.00% in 2021 and finally to 56.10% in 2022.

In contrast, Barriera di Milano maintained low percentages over the years, with 30.70% in 2020 and 28.00% in both 2021 and 2022. Vanchiglia followed a positive trend albeit below the city average, rising from 38.50% in 2020 to 38.00% in 2021 and finally to 42.20% in 2022.

NEIGHBOURHOOD	Separate waste collection rate 2022	Separate waste collection rate 2021	Separate waste collection rate 2020
CITY CENTRE	49,10%	49,10%	44,8 0%
CROCETTA	61,60%	61,60%	62,70%
SAN SECONDO	61,60%	61,60%	---
SANTA RITA	58,60%	58,60%	60,70%
MIRAFIORI NORD	55,7%	55,00%	56,50%
MIRAFIORI SUD	54,20%	51,00%	52,70%
SAN PAOLO	59,10%	58,00%	53,00%
CENISIA - CIT TURIN	59,10%	56,00%	39,70%
POZZO STRADA	58,70%	57,00%	60,00%
CAMPIDOGLIO	60,80%	62,00%	59,70%
SAN DONATO	56,10%	44,00%	32,50%
PARELLA	58,20%	60,00%	58,10%
LUCENTO/VALLETTE	50,70%	53,00%	52,50%
MADONNA CAMPAGNA	56,80%	56,00%	53,70%
BORGATA VITTORIA	56,60%	38,00%	31,60%
BARRIERA MILANO	28,00%	28,00%	30,70%
REBAUDENGO/FALCHERA	55,40%	54,00%	52,40%
REGIO PARCO BARCA BETTOLA	51,90%	56,00%	54,70%
AURORA, ROSSINI VALDOCCO	55,00%	55,00%	52,30%
VANCHIGLIA	42,20%	38,00%	38,50%
VANCHIGLIETTA	57,60%	56,00%	57,50%
MADONNA DEL PILONE	65,70%	65,00%	63,40%
QUADRILATERO SAN SALVARIO	54,90%	53,00%	34,60%
SAN SALVARIO PORTA A PORTA	59,20%	60,00%	61,00%
BORGO PO CAVORETTO	52,80%	63,00%	66,60%
NIZZA	50,90%	51,00%	52,00%
LINGOTTO	59,10%	59,00%	61,90%
TRAIANO	64,80%	67,00%	68,50%
SPINE	62,50%	64,00%	45,40%

**Table 7.1** – Percentage of separate collection by neighbourhood  
(source: AMIAT)

Since 2017 the City of Turin has been extending its door-to-door waste collection system to an increasingly higher number of neighbourhoods, that is Madonna del Pilone, Borgo Po e Cavoretto, Barca Bertolla and Regio Parco, Rebaudengo-Pietra Alta, Falchera, Villaretto, the outer edges of Borgo Vittoria and Madonna di Campagna, Lucento e Vallette, Parella, Borgo Campidoglio, Pozzo Strada, Mirafiori Nord, Mirafiori Sud, Nizza Millefonti, Crocetta, San Salvario, Santa Rita, Vanchiglietta/Borgo Rossini, Lingotto, Filadelfia, Aurora, San Paolo, Cenisia, Centro Aulico (in the process of being gradually activated).<sup>2</sup>

The system is regulated by special orders and operated through an ad hoc collection schedule. In 2019, a further step forward was done by implementing the so-called smart waste recycling points, allowing the inhabitants to dispose of glass and metal packaging, plastic packaging, organic waste, and non-recoverable waste using personal electronic cards. Each waste fraction is identified by the same colour code throughout the city, consistent with previous home and street collection practices. Most of the waste recycling points do not include paper and cardboard containers, for which the door-to-door method remains in place, with special bins usually placed in the internal courtyards of building blocks.<sup>3</sup>

It is yet a new dawn for the separate collection of municipal waste, with a view to raising citizens' awareness of the correct sorting of wastes, thereby encouraging proper disposal in dedicated bins.

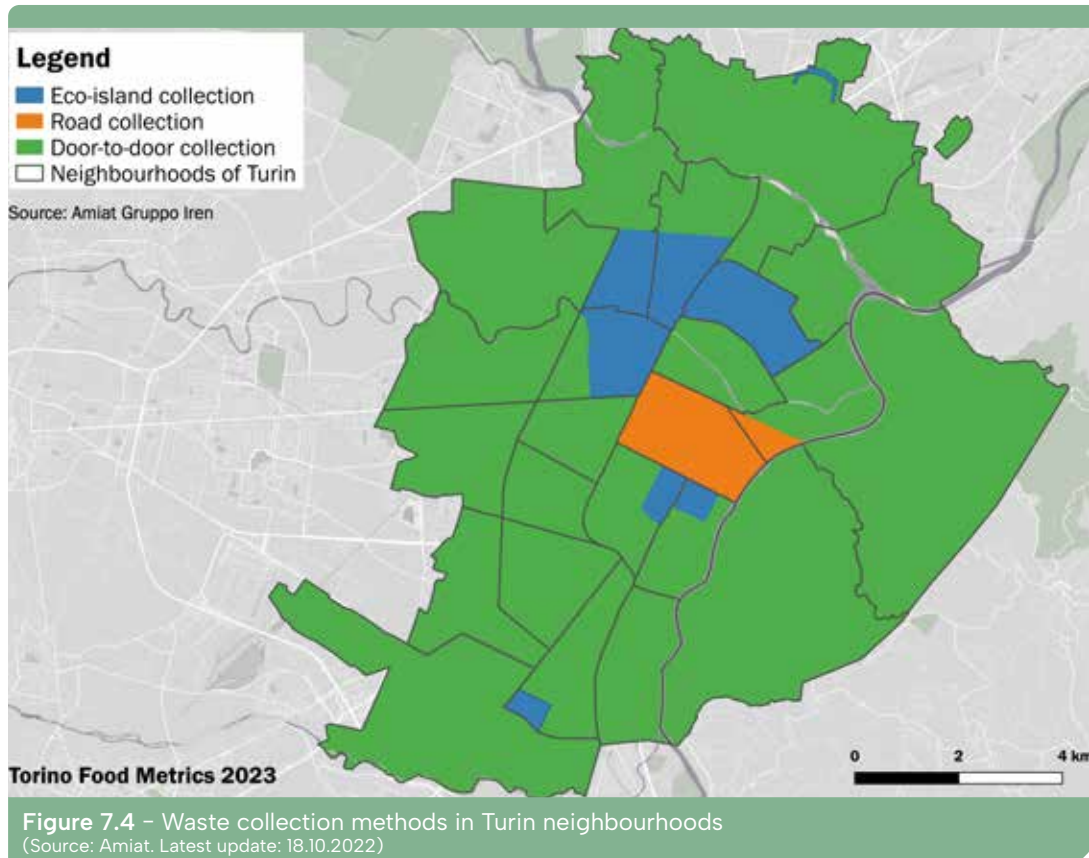


**Figure 7.3** - Smart waste recycling points for waste sorting in Turin  
(Source: Informambiente, City of Turin)

<sup>2</sup> - [www.amiat.it/servizi/raccolta-domiciliare/porta-a-porta](http://www.amiat.it/servizi/raccolta-domiciliare/porta-a-porta)

<sup>3</sup> - [www.amiat.it/servizi/raccolta-domiciliare/ecoisole](http://www.amiat.it/servizi/raccolta-domiciliare/ecoisole)

Excellent results have been achieved in separate collection (57%) in the districts where the two systems were introduced (Figure 7.4), far above the percentage achieved in districts where traditional street collection is still in place (39%).

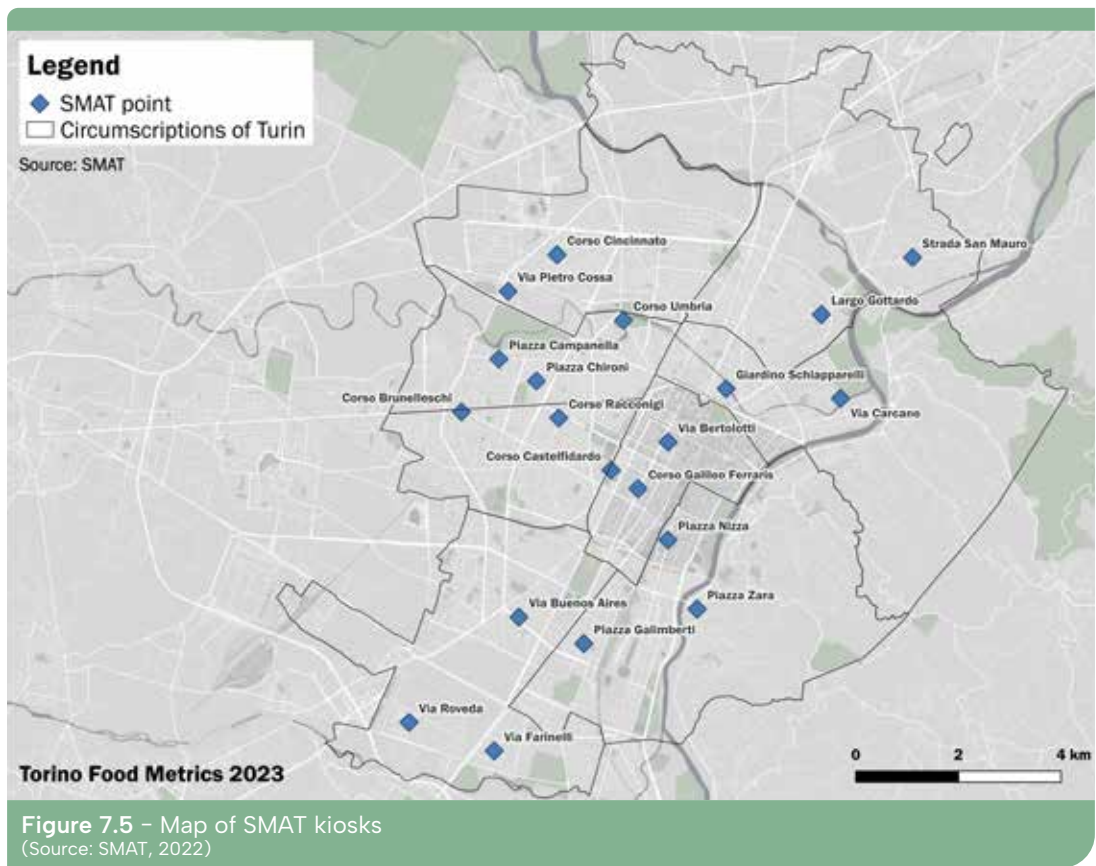


In 2022, the door-to-door collection systems and Smart waste recycling points served about 86% of the resident population, allowing about 54.000 tons of organic waste to be effectively sorted. Approximately 10% (average plant destination) of this amount was transformed into compost, valuable for fertilisation in agriculture.



7.2 Water Dispensing Kiosks

SMAT water kiosks scattered throughout the city in public gardens and green areas are precious for the supply of high-quality still and sparkling drinking water. The water is filtered and sanitised by state-of-the-art ultraviolet systems inside the kiosks under constant monitoring and control by SMAT Research Centre laboratories. Each kiosk can dispense an average of 180 litres of chilled water per hour. According to SMAT estimates, this can virtually prevent the purchase of approximately one million plastic bottles per year. From 2021 to 2023, the number of SMAT kiosks within the city administrative boundaries increased from 18 to 20, confirming their role as a major driver of circular economy for the administration as well as a particularly appreciated public service.

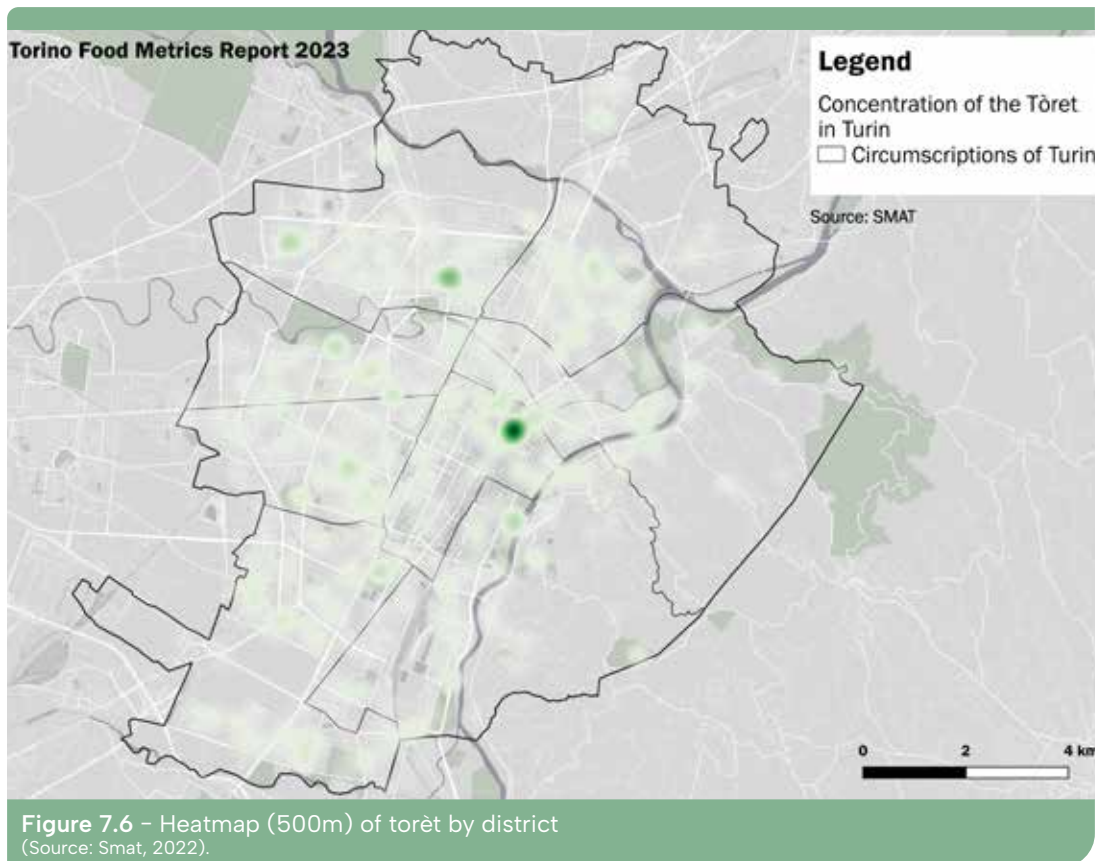


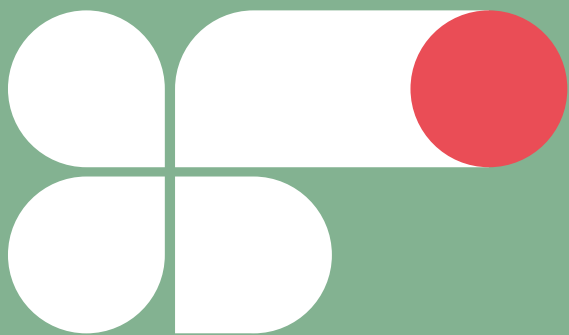
### 7.3 Turin's Torèt

Designed during the Italian Risorgimento (1859), the torèt are bottle-green cast-iron fountains with a dispensing spout in the shape of a bull's head. Today, torèt are a distinctive feature of Turin's street furniture.

In addition to having a historical-architectural value for the city, torèt are particularly valuable for their efficient water supply and recovery system. Thanks to a continuous water flow, they guarantee a constant water exchange, preventing stagnation and consequent bacterial proliferation. Furthermore, unconsumed water is collected, filtered, and sanitised in the groundwater to be then brought back to the surface and reintroduced into the public distribution system.

According to data provided by SMAT (2021), there are 800 torèt evenly distributed across the city in all 8 administrative districts (figure 7.6).





# TRAINING & RESEARCH



**8.1 Food training paths: training institutions and higher secondary schools**

The City of Turin is home to a growing number of training organisations and educational institutions related to food and food production chains. Together, they ensure a valuable educational offer thanks to rich training contents and experiences. Notably, no less than 3 professional institutes and 16 training agencies are present in the Turin area with numerous branches located in different city districts.

Vocational high school<sup>1</sup> curricula encompass typical higher education subject along with numerous specific competences for working in various sectors, including catering and food production chains. Students graduating from these institutes thus possess the technical skills needed to design, organize, and handle food and wine related experiences that enhance the territory and its products. These topics are also the hallmark of courses offered by training agencies. With an eye on placing their participants in the world of work, the courses equip them with the necessary tools to operate in the various stages of food and wine production chains.

By choosing shorter yet markedly work-oriented educational pathways, trainees acquire extremely practical and immediately marketable skills.

The training offer includes State Vocational High School “J.B. Beccari”, State Vocational High School “G. Colombaro” and Higher Education Institute “Giovanni Giolitti”. The figures from 2022/2023<sup>2</sup> school year show that as many as 563 students enrolled in “Giolitti”, but definitely “Colombaro” ranks first with about 1132 in the same year.

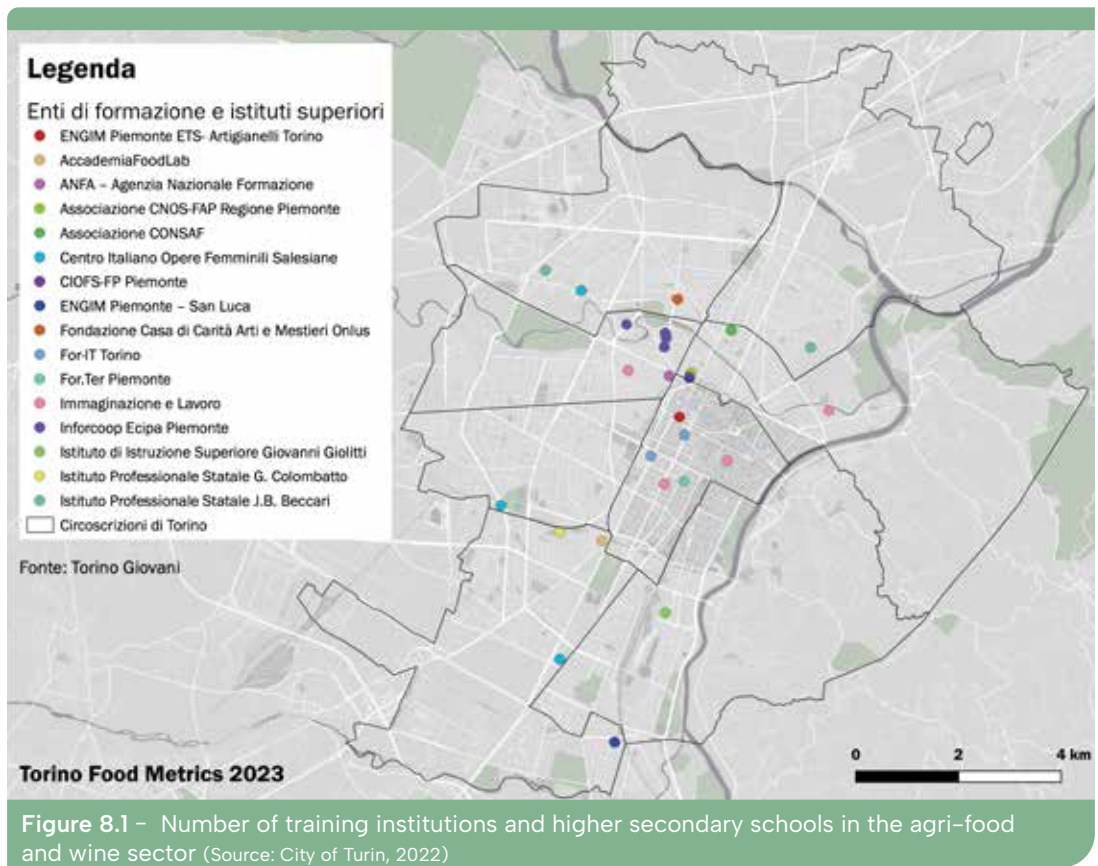


Figure 8.1 – Number of training institutions and higher secondary schools in the agri-food and wine sector (Source: City of Turin, 2022)

1 - Vocational high school courses have a duration of five years. Their aim is to provide students with the skills they need to fill technical operational roles in the production and service sectors, in accordance with the needs of the territory and the world of work. All paths are characterised by a core of general culture subject for all courses combined with a professional training specific to the sector chosen, T'sN

2 - <https://cercalatuascuola.istruzione.it/cercalatuascuola/>

### Training centres

- 1 – AccademiaFoodLab Via Tirreno, 95/A
- 2 – CNOS-FAP Torino Valdocco Via Maria Ausiliatrice, 36
- 3 – Agenzia Orionis Via Luigi Palma di Cesnola, 22
- 4 – ANFA – Agenzia Nazionale Formazione Via Principessa Clotilde, 3
- 5 – Fondazione Casa di Carità Arti e Mestieri Onlus Corso Benedetto Brin, 26
- 6 – CIOFS P.zza Maria Ausiliatrice, 27
- 7 – CONSAF – Consorzio Servizi Addestramento e Formazione Via Pinerolo, 12/16
- 8 – ENGIM Torino Corso Palestro, 14
- 9 – ENGIM San Luca Via Torrazza Piemonte, 12
- 10 – forIT Torino C.so Galileo Ferraris, 2/Piano 1, Scala C
- 11 – Forter Piemonte via Massena 20
- 12 – Immaginazione e Lavoro piazza mestieri Via Carlo Alberto, 22/A
- 13 – InforcoopEcipa Piemonte Corso Svizzera, 161

### Higher secondary school institutes

- 1 – Istituto Beccari Via Niccolò Paganini, 22
- 2 – Istituto Colombatto succursale Via Gorizia, 7
- 3 – Istituto Giolitti Via Alassio, 20, 10126

## 8.2 Food training paths: university training

The major universities in the City of Turin offer excellent food-related training opportunities at all levels of university education. Both the University of Turin and Politecnico di Torino (Engineering University) run both bachelor's and master's degree courses related to food issues – 17 and 1, respectively. Namely, bachelor's degree courses at the University of Turin include Food science and human nutrition, Sustainable animal husbandry systems, Agricultural science and technology, Mountain science and technology, Forestry and environmental science, Food technology, Viticulture and oenology, Plant biotechnology, Agricultural science, Animal science, Forestry and environmental science, Food science and technology, Wine-growing and oenological science. In addition, several master's degree courses exist on Marketing & digital management in the food industry, Law of agri-food markets, Sustainable Health and Socio-environmental sustainability of agri-food supply chains. The courses centred around food and wine, including food production, distribution, and management at different levels, are particularly popular; in the 2021/2022 academic year, they were chosen by approximately 2,785 male and female students, accounting for almost 4% of the total number of the students enrolled at the University of Turin, i.e. about 81,000.

Politecnico holds a bachelor's degree course in 'Sustainable Design for Food', developed in collaboration with the University of Parma with a view to providing graphic and design tools in the field of sustainable food production.

## 8.3 Food and innovation: the Start Ups' experience

The City of Turin is also a centre of innovation and experience for numerous enterprises and start-ups both related to the academic world, such as several university-derived incubators (2i3t and i3p) and completely detached from it, such as the initiative named Social Fare. These are spaces providing room for individual and group development as they bring ideas to a successful stage. Through technical know-how and economic



resources, the incubators support the establishment of numerous start-ups, which then leads them to become well-known players with a leading role among the best-known companies in the sector. Turin maintains a Startup and SME Register detailing the number of companies in the sector. With reference to 2023 updates, they number 671, of which 478 are startups and 150 are innovative SMEs. It should be noted that the agritech & food sector is worth about 5,96% of them, i.e., more than 40 start-ups and SMEs are now up and running in the food and wine sector.<sup>3</sup>

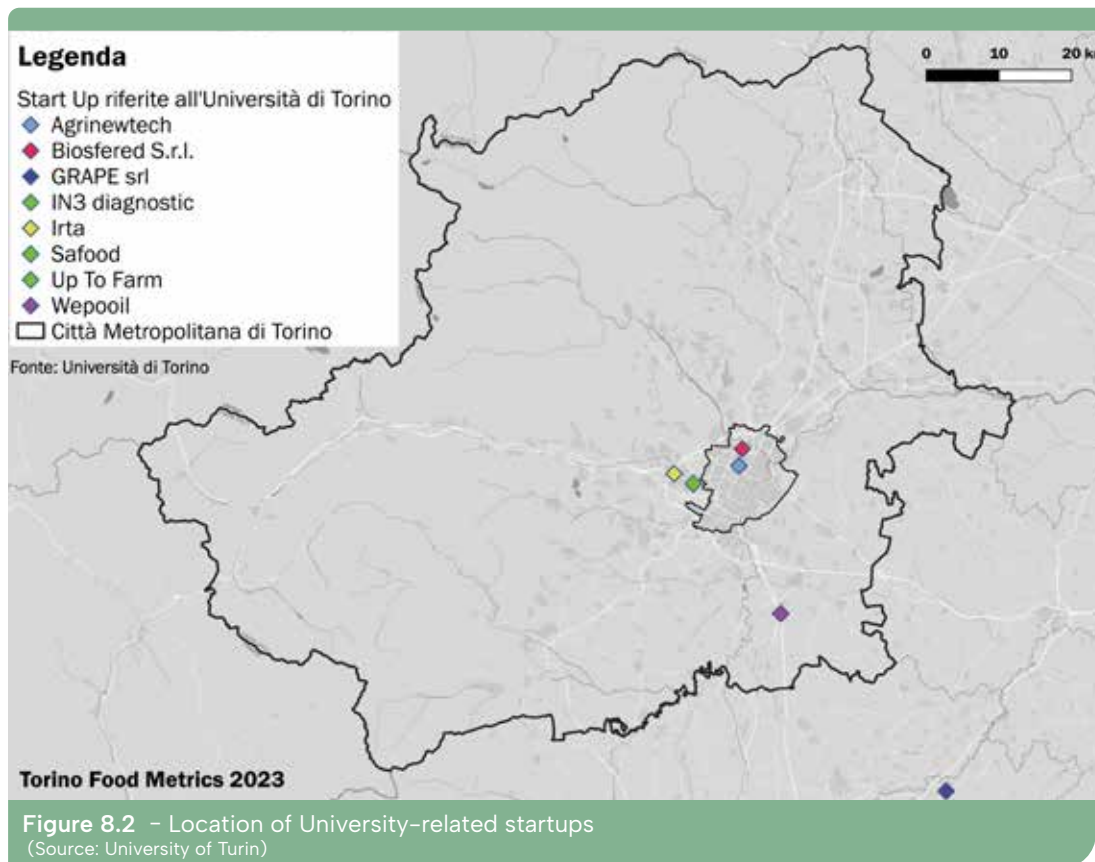
Specifically, Incubator 2i3t has been instrumental in creating 8 startups:<sup>4</sup>

Name	Registered office	Purpose
<b>Biosfered srl</b>	via Paolo Veronese 202 10148 Torino	It produces liquid or powder extracts from plant matrices using patented Green Chemistry techniques without the use of toxic solvents
<b>Agrinewtech</b>	Via Livorno 60 c/o Environment Park, 10144 Torino	It contributes to the improvement of agricultural sustainability and food security through applied biotechnology and the enhancement of compost, biomass, and waste.
<b>IN3 diagnostic</b>	Via B.S. Valfrè, 18, 10121 Torino (Sede Legale).  Largo P.Braccini, 2, 10095 Grugliasco (Sede Operativa)	It develops advanced diagnostic kits and supplies the Eradikit® platform for infection control in livestock.
<b>Irta</b>	Via Mompantero, 23, 10093 Collegno (TO)	It deals with research and development for small and medium-sized agribusinesses, providing R&D expertise.
<b>Safood</b>	Largo Braccini 2, Grugliasco 10095	It provides food safety services with screening tests for beef, ensuring hormone-free meat.
<b>Up To Farm</b>	Largo Braccini 2, Grugliasco 10095	It is active in agriculture and agribusiness, offering tools to reduce wastes and pollutant emissions and improve resource efficiency.
<b>Wepool</b>	Via G. Quarello 15/a, 10135 Torino (Sede Legale)  C.so Savona 47, 10029 Villastellone TO (Sede Operativa)	It applies cold mechanical extraction with a variable geometry screw press to produce high quality vegetable oils.
<b>Grape srl</b>	Corso Enotria 2C, 12051 Alba (CN)	It combines expertise in microbiology, biotechnology and winegrowing, offering innovative analysis services for grapes and wine.

**Table 8.1** – University-related startups  
(Source: University of Turin)

<sup>3</sup> - <https://www.clubdegliinvestitori.it/content/uploads/2023/03/RicercaStartup2023.pdf>

<sup>4</sup> - <https://www.2i3t.it/aziende/>



Over the past two years, Incubator 2i3t has been instrumental in creating 20 innovative start-ups in the agrifood sector, out of a total of 108 start-ups. Incubator 2i3t was to serve as a "bridge" to connect academic research and local industrial partners. In particular, the Knowledge Transfer Office and the Industrial Liason Office of Unito interface in order to exploit research findings and external growth opportunities in the area.

At the same time, incubator i3p has come across numerous (8) agritech & food-related initiatives<sup>5</sup>, both as Alumni, Incubators and Early Ideas with different fields and roles.

4 – <https://www.i3p.it/startup>

Nome	Località	Ruolo
<b>Nova Stark</b>	C.so Castelfidardo, 30/A, 10129 Torino	It offers an IoT solution to monitor, predict and automate wine production, with the objective of saving energy and improving wine quality.
<b>NOT A DISTILLERY</b>	Via Maria Vittoria 23, 10123 Torino	It employs an artificial intelligence algorithm to produce spirits, including the recipe for the world's first and only gin created by an algorithm, LADY POPE.
<b>Wavision</b>	Corso Castelfidardo 30/A, 10129	It has developed a microwave-based device for food quality control able to detect invisible contaminants, thus ensuring product integrity and improving safety at work.
<b>Nabu</b>	Corso Re Umberto 84, 10128 Torino	It pioneers a holistic approach to IoT in agriculture, specialising in data analysis and refinement of agricultural processes and water management.
<b>Superbilders</b>	Non specificata	It provides a mobile AI app to help people adjust their eating habits for weight loss.
<b>L'alveare che dice sì</b>	Più sedi	It brings together local producers and conscious consumers through an online portal and pick-up points called 'Beehives' for healthy, sustainable and km0 shopping.
<b>Ecothea Srl</b>	Corso Castelfidardo, 30/A, 10129	It develops a mechatronic component kit for hybridisation and electrification of agricultural vehicles, guaranteeing a 30-40% reduction in fuel costs.
<b>PBK Srl</b>	I3P, Corso Castelfidardo 30/A, Torino	It offers precision plant protection spraying services with drones, specialising in mosquito control for rice plants and vineyards.

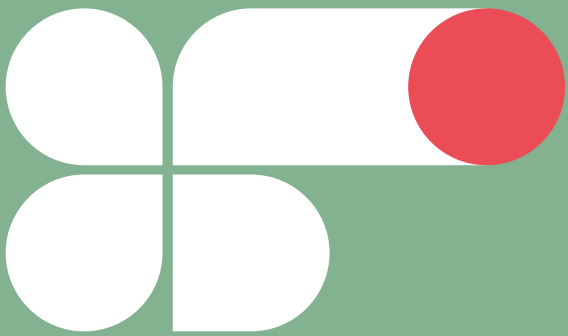
**Table 8.2** – Politecnico-related Alumni, Incubators and Early Ideas startups  
(Source: Politecnico)



Figure 8.3 - Distribution of Politecnico-related startups







# TOURISM & FOOD-AND-WINE TRADITION

For several decades, the discovery and consumption of food and wine produce has been one of the main factors of attraction for international tourist flows (Miani, 2015). According to this rationale, tackling food and wine tourism means dealing with both the local products and the geographical space where said products originate. Consequently, undertaking such a tourist practice involves interacting with physical-agronomic conditions, collective identities, human organisations, and specific landscapes. This no longer refers only to the products themselves, but rather to all the cultural, social, artistic, and landscape-related aspects associated with them. Accordingly, an attractive food and wine product requires a narrative that encompasses all these facets while exploiting the special characteristics of its territory to the utmost. As a result, food and wine produce can be a collective placebo as well as an effective means of bridging the innovation gap between tourists and local growth, provided it is experienced as ancillary to the overall discovery journey. (Anelli, 2008)

The territory itself adds value to any food and wine tourist experience, going beyond the mere consumption of delicacies, but rather fostering a widespread narrative of the environment where said produce is born and consumed. Indeed, the products of this kind of tourist experience "are embedded in the local culture and foster its identity, growth and a proactive preservation of their homeland and its landscape"(Dallen e Boyd, 2007).

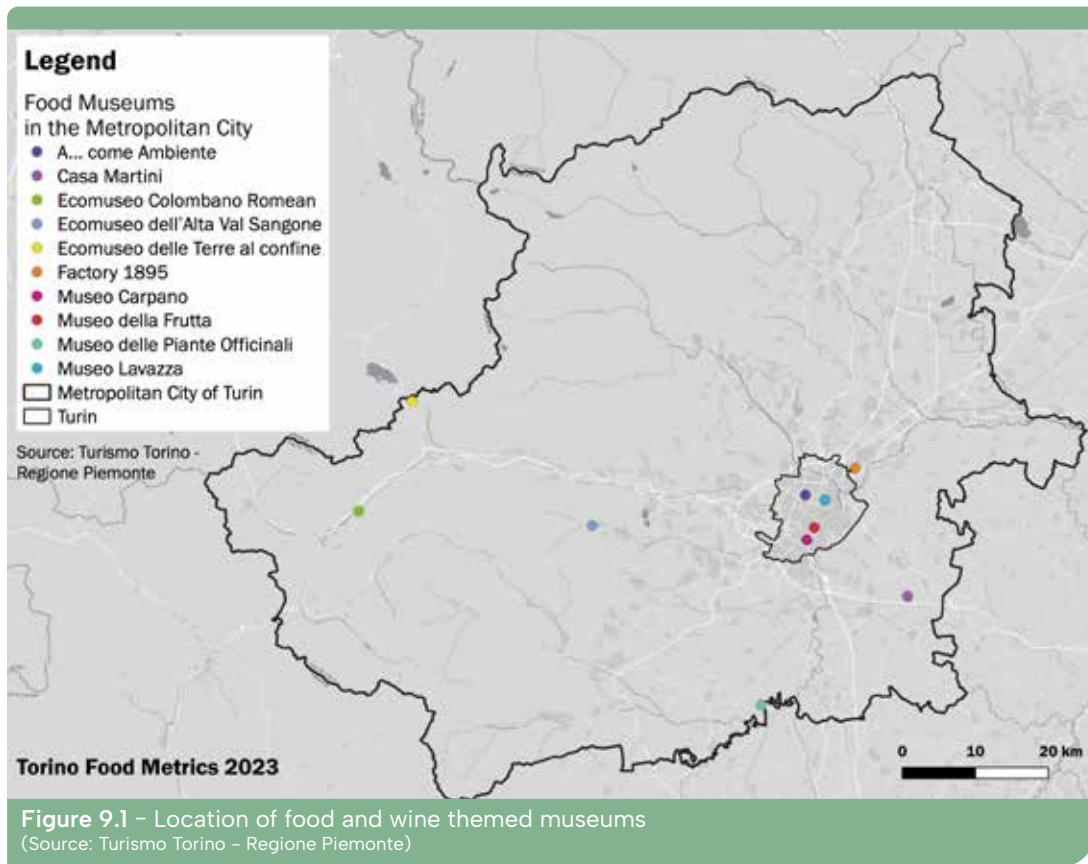
Turin is no exception; for at least fifteen years, local cuisine and food culture have played a key role in building strategies to construct a new image for Turin and wipe away the dusty look of post-industrial city (Vanolo, 2015), as well as in promoting urban competition and constructing local food policies (Danseroet al., 2019).

The previous sections have largely dealt with the commercial value of Turin's food and wine scene, through the massive presence of restaurants and bars, especially in certain areas of the city centre, in addition to an extensive network of shops and retail outlets marketing food and wine delicacies.

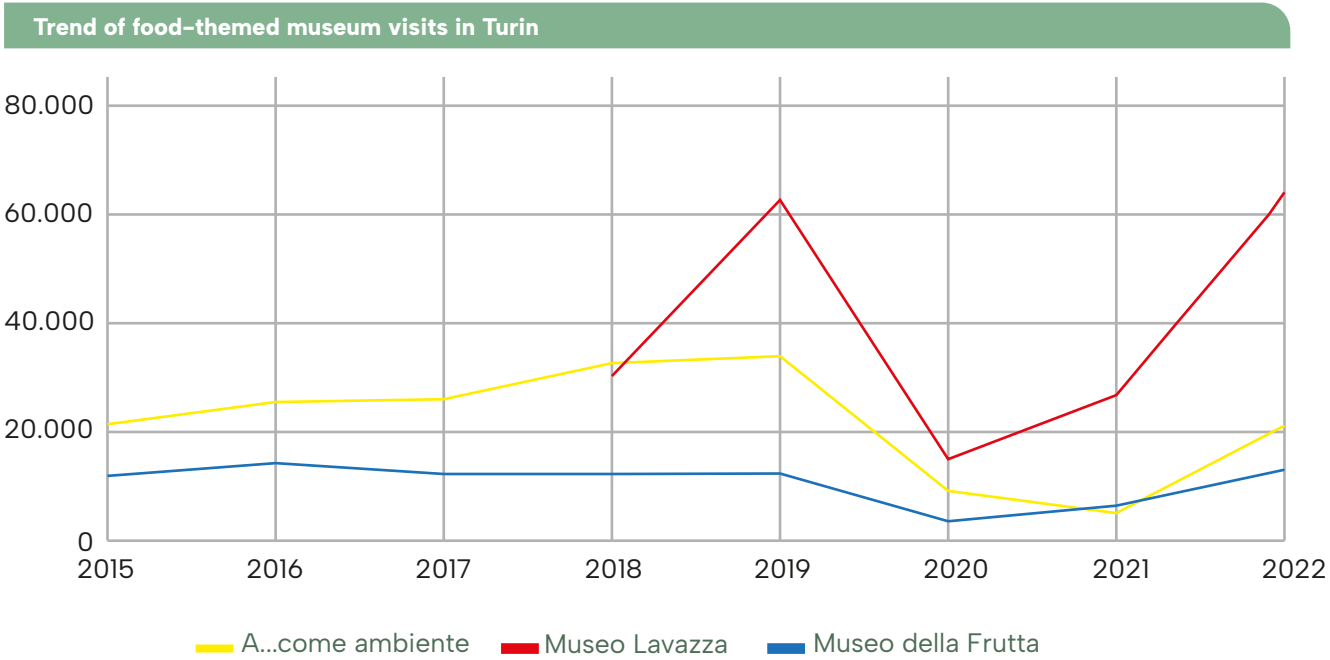
By contrast, this section is explicitly dedicated to the enhancement of Turin's food and wine heritage through (i) the cultural and tourist offer, (ii) the formal recognition of the quality of local produce by means of specially-designed brands and (iii) the acknowledgement of said produce through national and international publications. Here, the area under consideration transcends the municipal administrative boundaries while encompassing a wider relevant area, which includes the entire Metropolitan Area, where as many as 6 museums display food or wine-related collections, three of them within the municipal borders. There are also 3 eco-museums that describe food-related practices, such as the ecomuseum of Upper Sangone Valley, Terre al confine and Colombano Roman (Table 9.1 and Figure 9.1).

MUSEUM	ADDRESS	MAIN THEME
A...come ambiente	Corso Umbria 90, Torino	environment
Factory 1895	Via S.Daniele, Settimo Torinese	Coffee
Museo Lavazza	Via Bologna 32A, Torino	Coffee
Casa martini - Martini & Rossi	P.zza Luigi Rossi 2, Chieri	Vermouth wine
Museo Carpano	Via Nizza 230, Torino	Vermouth wine
Museo della Frutta	Via Pietro Giuria 15, Torino	Agricultural Biodiversity
Museo della menta e delle piante officinali	Via S.Nicolao 18, Pancalieri	Mint and Medicinal Herbs
Ecomuseo Colombaon Roman	Via Fransuà Fortan, Salbertrand	Ecomuseum
Ecomuseo dell'Alta Val Sangone	Viale Italia 3, Coazze	Ecomuseum
Ecomuseo delle terre al confinet	Via Trento - Moncenisio	Ecomuseo

**Table 9.1** – Food-themed museums in the Metropolitan Area  
(Source Turismo Torino e Regione Piemonte)



A review of the visits of the three museums within the city boundaries having a visitor counting in place – the Carpano Museum inside Eataly-Lingotto has none – highlights a drop in 2020 due to the COVID-19 pandemic with a return to pre-pandemic levels in the year 2022 only for the Lavazza Museum, the most attractive in the category.



**Figura 9.2** – Trend of food-themed museum visits in Turin  
 (Source: Osservatorio culturale del Piemonte – Cultural Observatory of the Piedmont Region)

Turin food and wine cultural heritage is also an integral part of the articulated offer of food-themed tourist packages and experiences organised by various players and promoted by Turismo Torino e Provincia. A total of 25 packages focusing on food or wine themes are organised and promoted by Turismo Torino across the Metropolitan area, three more as compared to 2022 Report (Table 9.2).

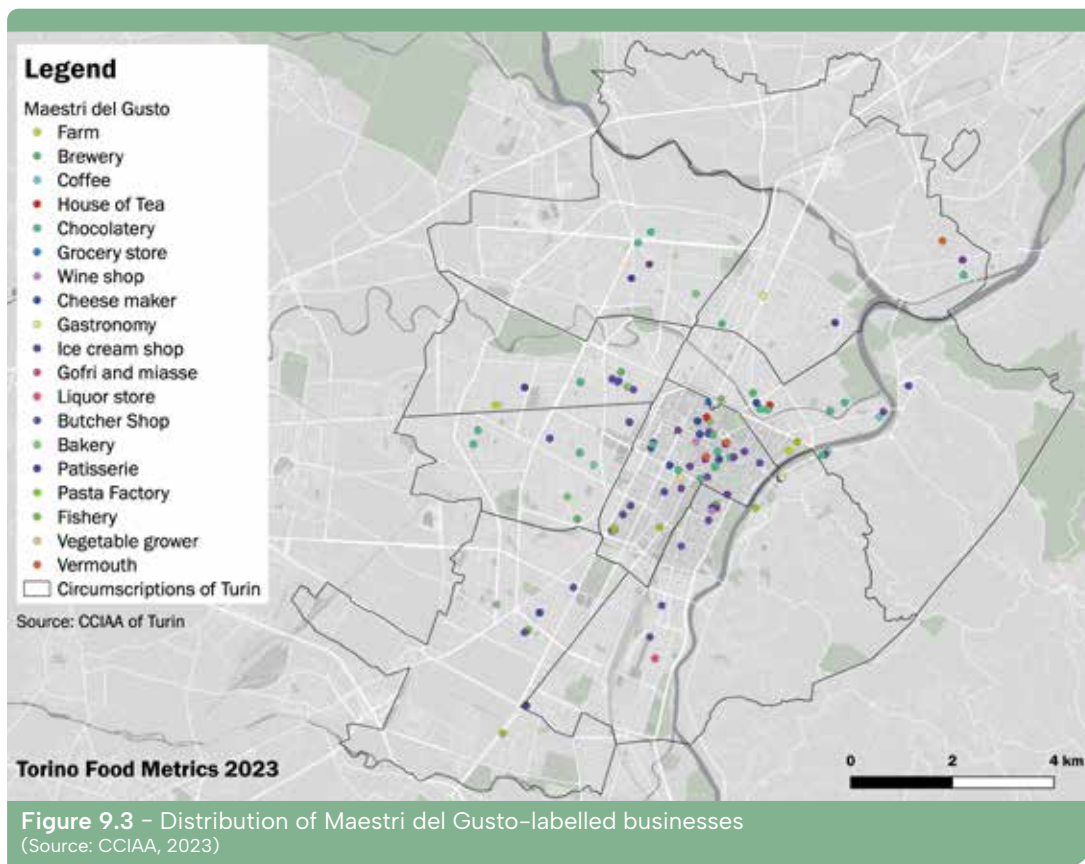
PACKAGE NAME	ORGANISER(S)
Merenda reale	Turismo Torino. in collaboration with Castello di Rivoli Museo d'Arte Contemporanea; The Tea - Torrefazione Moderna; Pepino 1884; Caffetteria Orangerie Gerla 1927; Caffè Reale Torino; Caffè Platti 1875; Caffè Elena; Caffè Fiorio; Caffè degli Argenti
Extra Vermouth	Turismo Torino. in collaboration with 23 bars and restaurants
Made in Torino - Tour the excellent	Turismo Torino
Aperitour	Guida Turistica Torino (tourist guides' network)
Guarini Experience ®	Incoming Experience (tourist operator)
Eatintour	Guida Turistica Torino (tourist guides' network)
Esperienza Giandujotto	Esperienza (tourist operator)
Esperienza Gin	Esperienza (tourist operator)
Esperienza Vermouth	Esperienza (tourist operator)
Miscela futurista	Esperienza (tourist operator)
Indovino	Esperienza (tourist operator)
I caffè storici di Torino	CulturalWay (tourist operator)
L'arte dell'aperitivo a Torino	CulturalWay (tourist operator)
Esperienza Gelato	Esperienza (tourist operator)
Scopri il cioccolato di Torino Tour Accessibile	City Friend (tourist operator)
Tour Accessibile Vermouth	City Friend (tourist operator)
Cena in movimento	Linea verde viaggi (tourist operator)
Taste a bike	Anemos (tourist operator)
Aperitivo in Basilica	Il mondo in valigia
Un giorno in e-bike sulle colline dell'Erbaluce	Giroola (tourist operator)
Birrificio Soralamà Experience	Birrificio Soralamà
Casa Martini Experience	Martini & Rossi
Eataly Experience	Eataly
Torino Golosa	Somewhere
Tour Lavazza (ogni domenica)	Somewhere

**Table 9.2** - Food-themed tourist packages  
(Source: Turismo Torino, 2023)

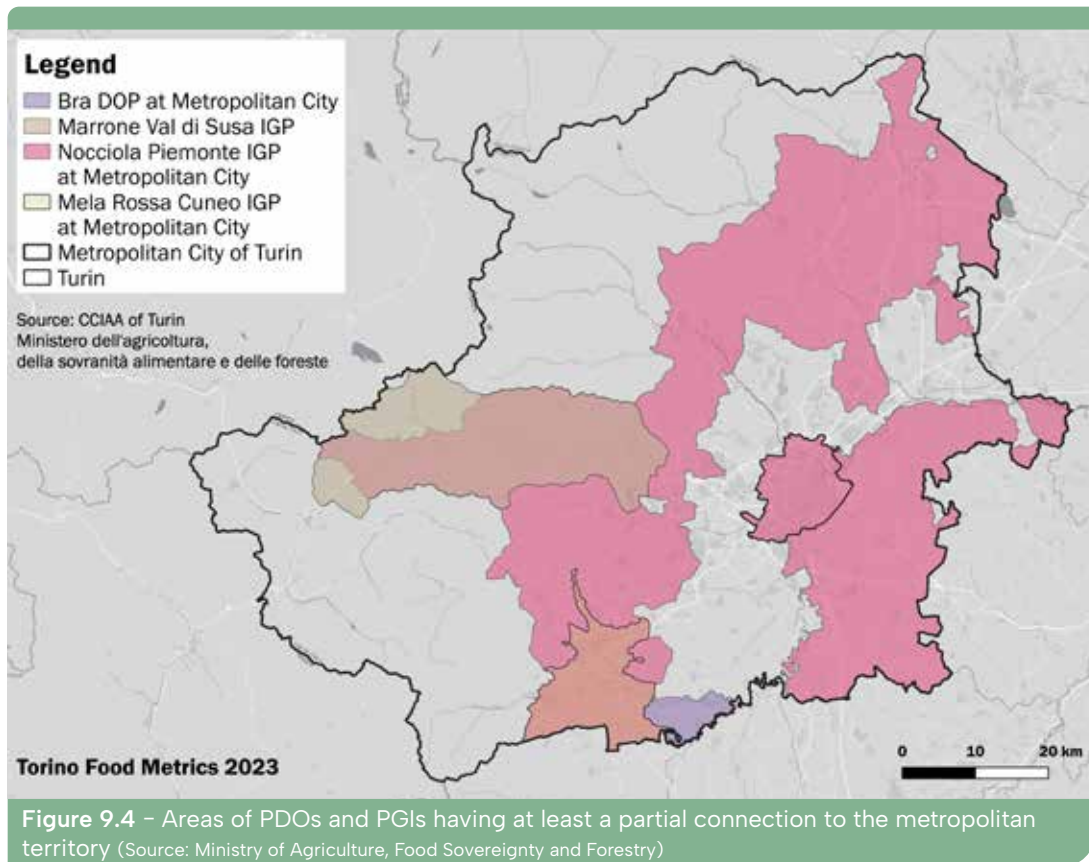


The great quality of Turin's food and wine offer is also widely recognised by national and international specialised guidebooks. The number of Turin restaurants listed in three of the most important guides are 42 (Gambero Rosso); 29 (Michelin Guide) and 12 (Osterie d'Italia Slow Food), respectively. Finally, 11 restaurants have been awarded at least 1 Michelin star.

One of the main awards for the quality of artisanal food and wine production in the Piedmont region is 'Maestri del Gusto' label, awarded by the Turin Chamber of Commerce, Industry, Agriculture and Craftsmanship. A total of 82 businesses based within the city have been awarded this recognition (9 more as compared to 2022 Report).

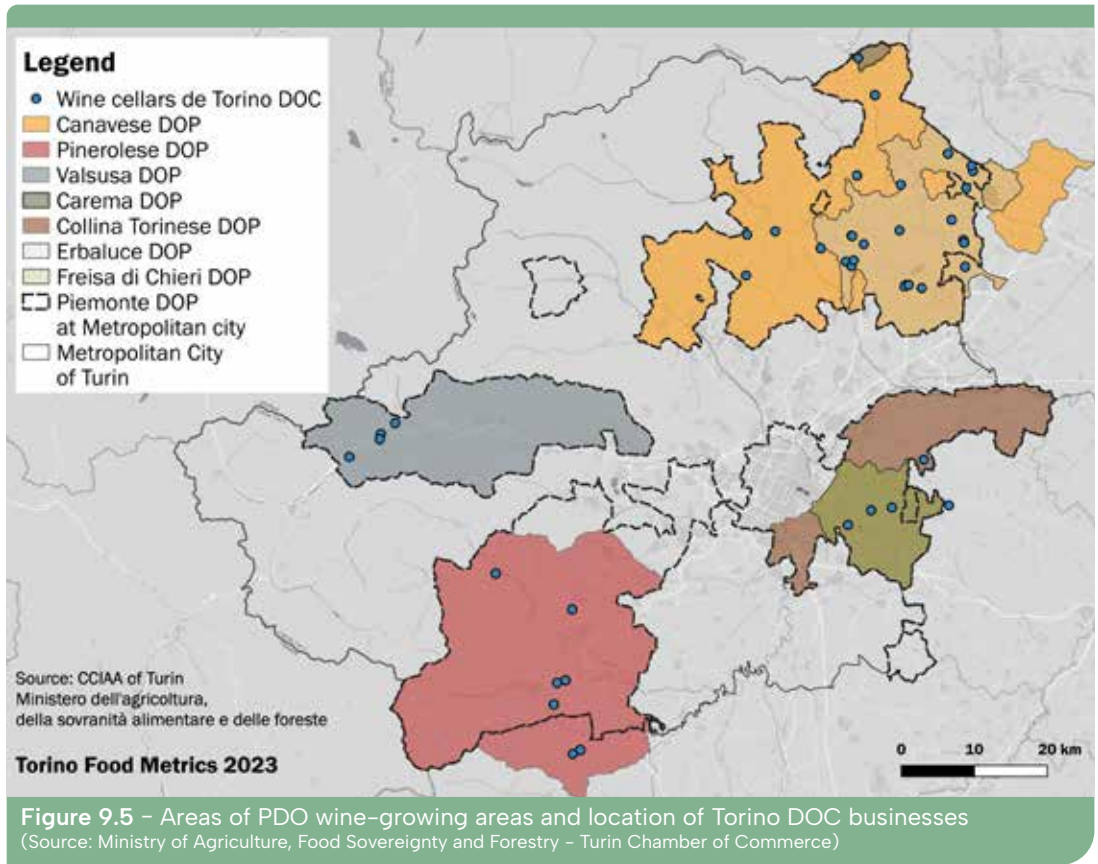


With regard to the formal identification of the relationship between agrifood production and Turin city/province, 24 products have been recognised as having a PDO (Protected Designation of Origin), a PGI (Protected Geographical Indication) or as being a TSG (Traditional Speciality Guaranteed). Specifically, four wines (Carema, Freisa di Chieri, Collina Torinese e Valsusa) and one foodstuff (Val di Susa Chestnut) produced entirely within the Turin Metropolitan City borders, while others (Bra, Piemonte Hazelnut and Cuneo Red Apple) have at least a partial connection with its territory (no variation as compared to 2022 Report).

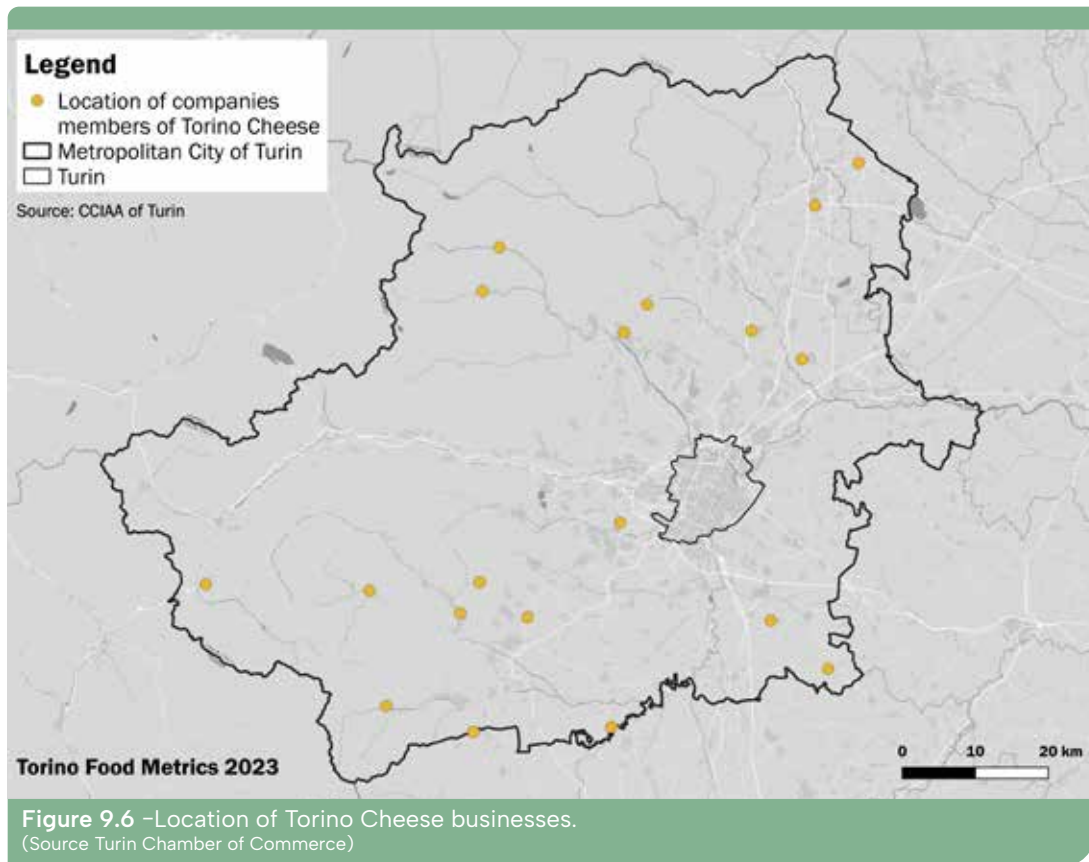


Wine PDOs are also associated with the Torino DOC project, an initiative established in 2005 with a view to supporting and promoting high-quality wine growing in the province of Turin. The wine selection process is held once every two years by an expert commission that assesses wines from different growing areas on an anonymous basis. TORINO DOC features a wide selection of 34 wines, including Erbaluce di Caluso DOCG and the 6 Turin DOC wines (Carema, Canavese, Freisa di Chieri, Collina Torinese, Pinerolese and Valsusa).<sup>1</sup>

<sup>1</sup> – [www.to.camcom.it/torino-doc](http://www.to.camcom.it/torino-doc)  
(Latest update: 29 October 2023).



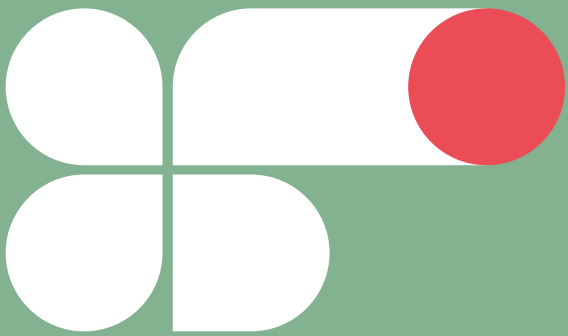
Notably, it is worth mentioning PDO wines such as Piemonte, and foodstuffs such as Toma Piemontese, Bra, Crudo Di Cuneo, Salamini italiani alla cacciatora, Salame Brianza and Grana Padano. PGI include Tinca Gobba Dorata del Pianalto di Poirino, Marrone Della Valle Di Susa, Salame Piemonte, Vitelloni Piemontesi della coscia, Nocciola Del Piemonte or Nocciola Piemonte, Mela Rossa Cuneo, Mortadella Bologna and Salame Cremona. Finally, TSGs are Pizza Napoletana and Mozzarella.



To round things off, here is a further feather in the cap of the city tourist offer. Torino Cheese is "a cheese selection project promoted by the local Chamber of Commerce". It involves the production of a guide helping the enthusiasts and the curious to learn more about the history and characteristics of the dairy products of excellence in the Turin area, whose flavours and traditions are reflected in the delicious produce of the terroir. The guide mentions 21 farms located throughout the metropolitan area.<sup>2</sup>





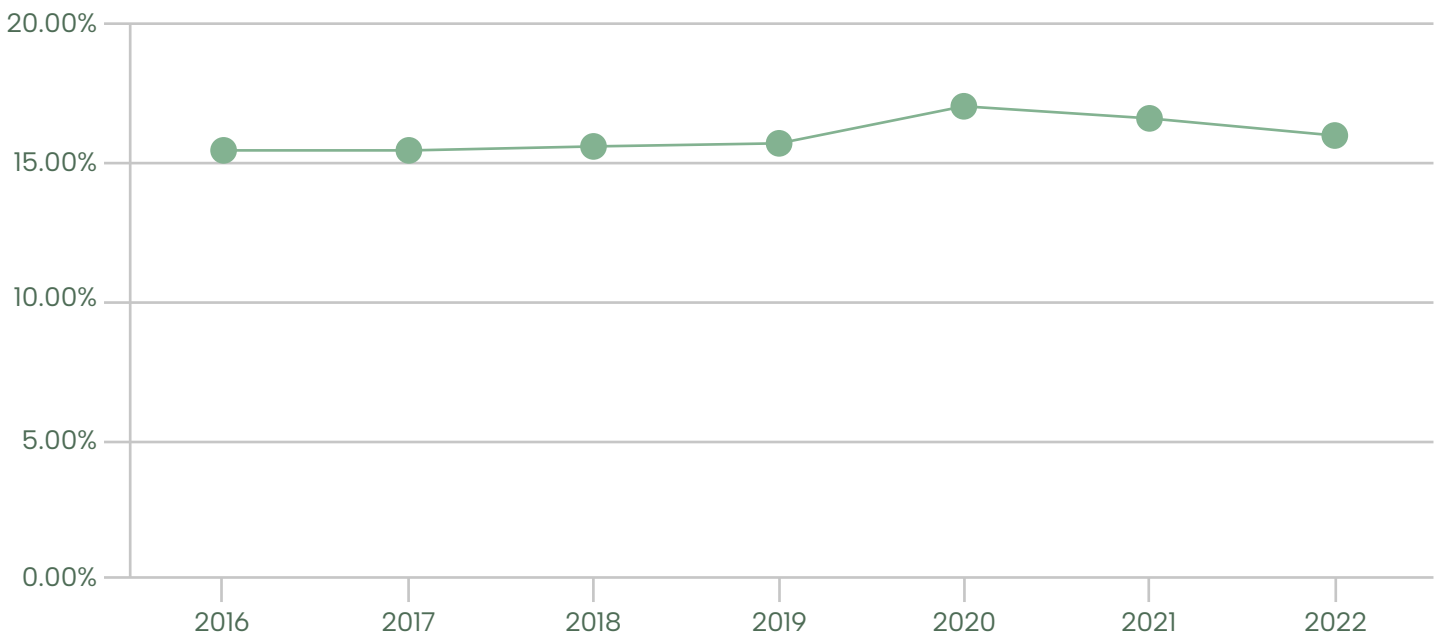


# FOOD CONSUMPTION

Food consumption is a crucial factor of the food system, being the other side of the coin of the food offer. A general section on the demand and consumption of food has so far been absent from the Turin Food Metrics Report, also due to the limited availability of data, particularly at the city scale. This edition wants to cover this important dimension, relying mainly on two data sets new to the report:

- data from the national survey *Aspetti della Vita Quotidiana* (Aspects of Daily Life) conducted annually by the National Institute of Statistics, ISTAT, on a representative sample of 25000 families at the national scale. So far, we have limited the analysis to the regional scale, for which data is freely available – the weight of the municipality of Turin (20% of the population of the Region Piedmont) and the metropolitan city of Turin (52%) about this data is considerable. For the following report, we plan to access the data at least at the scale of the metropolitan city.
- data set from the Chamber of Commerce of Turin, which does a yearly survey on the expenses of families in Turin and neighbouring municipalities, which in 2022 regarded a sample of 240 families.<sup>2</sup>

**Family expensive dedicated to food as a percentage of total expenses**

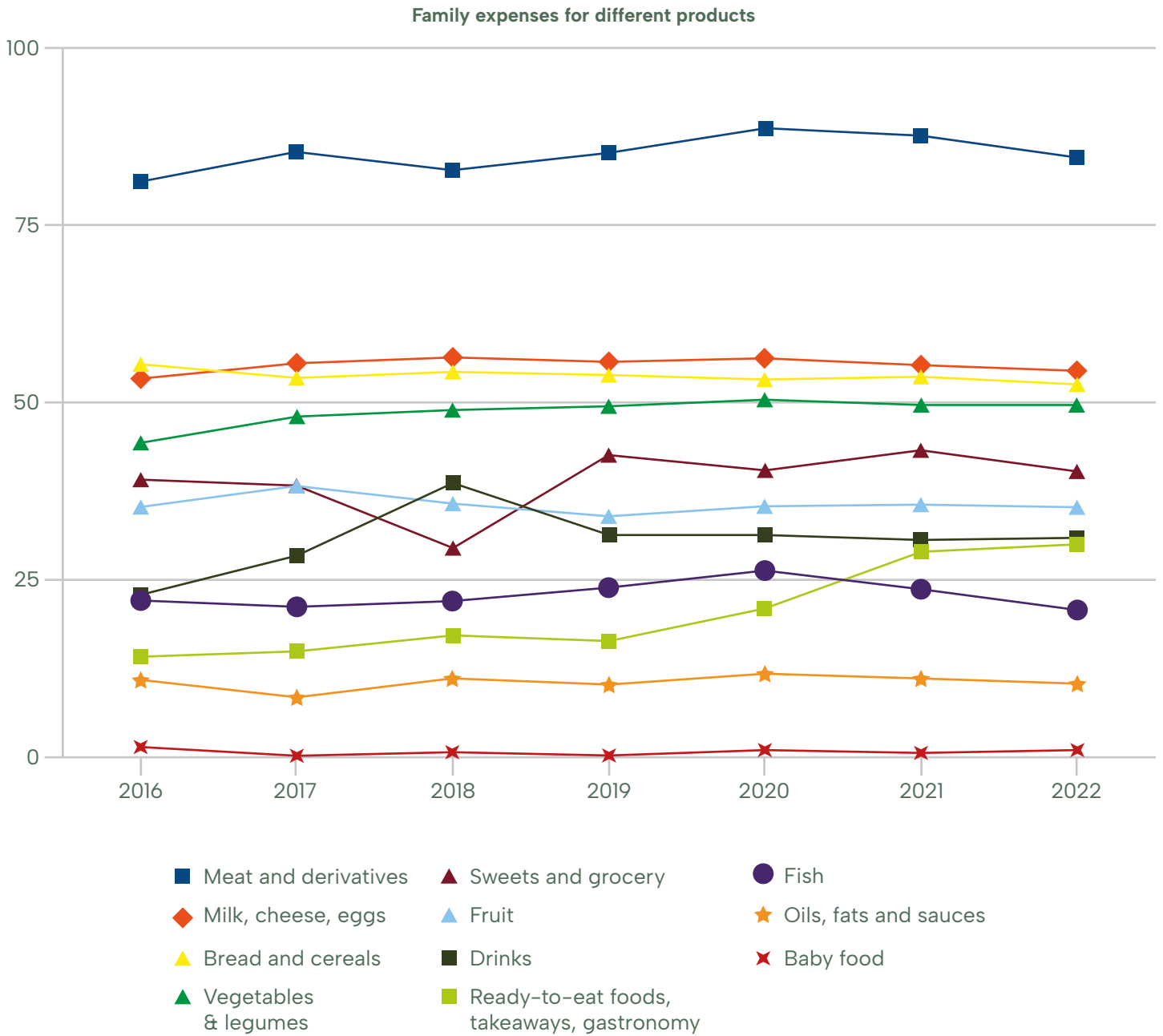


**Figure 10.1** – Percentage of household expenditure allocated to food purchases  
(Source: Turin Chamber of Commerce, 2023)

The graph in Figure 10.1 shows that the proportion of food expenses on total family expenses has experienced only slight variations along the historical series (attributable to so-called statistical noise, i.e. unexplained variation or randomness within a given sample), settling at around 16% from 2016 to the present.

1 - <https://www.istat.it/it/archivio/91926> (updated in October 2023)

2 - <https://www.to.camcom.it/spesefamiglietorinesi> (updated in October 2023)



**Figure 10.2 - Family expenses for different products**  
 (Source: Turin Chamber of Commerce, 2022)

The graph in Figure 10.2 shows that the food purchased by households has also mainly remained constant and has experienced a consistent increase in the expense of ready-made and takeaway food, coherently with global and local trends and debates on reducing time spent cooking and the changes in the (post)pandemic period. Looking at the distribution of spending among different food items, it's notable that the item on which the most is spent is meat products, followed, at a considerable distance, by milk, cheese and eggs, bread and cereals, vegetables and pulses and, closing, spending on fish (down since 2020), condiments and baby food. It is also relevant, considering the current economic crisis for many families, to observe the adjustment of food expenditure in 2022 compared to the previous year: according to data from the Turin Chamber of Commerce,

while the majority of families continued to spend as in previous years, a considerable number of families has limited their spending on more expensive products such as sweets, meat and fish. However, 85% of households maintained the amount of fruit and vegetables purchased. One could optimistically argue that this indicates an increased awareness of healthier and more sustainable eating styles. However, the remaining 15% presumably found themselves able to reduce their food expenditure on this product type.

Food products and changes in consumption habits in 2022, compared to 2021.

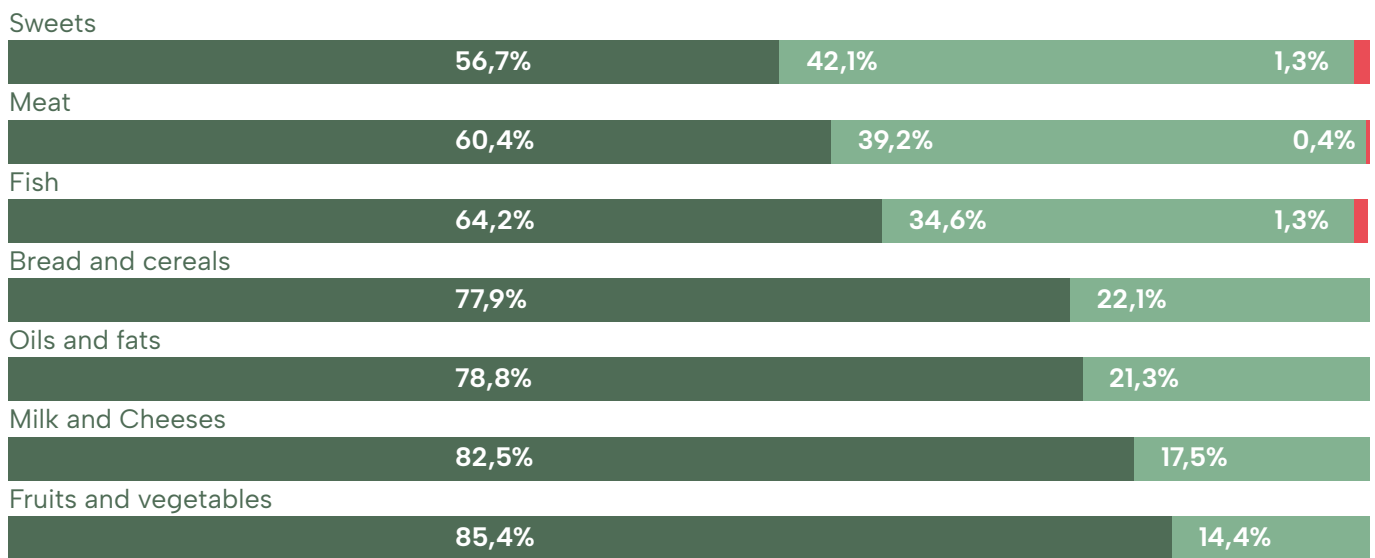


Figure 10.3 – Food products and changes in consumption habits in 2022, compared to 2021.  
(Source: Turin Chamber of Commerce, 2022)

According to data from the ISTAT survey, the most frequently consumed food items by the sample in the Piedmont region are bread and pasta, vegetables in general, tomatoes and fruits. Most frequently here means that participants reported, on average, consuming these items once a day. Meat consumption in the analysis is disaggregated over the different types of meat (cured meats, chicken, beef, pork) that are consumed several times a week, and the totality of this consumption seems to confirm further a relatively high, almost daily, consumption of meat and meat derivatives. Consumption of snacks and sweets, on the other hand, is more infrequent. Generally, there are no consistent differences in consumption habits between the Piedmontese and Italian averages, nor a clear trend in the historical series between 2013 and 2021.

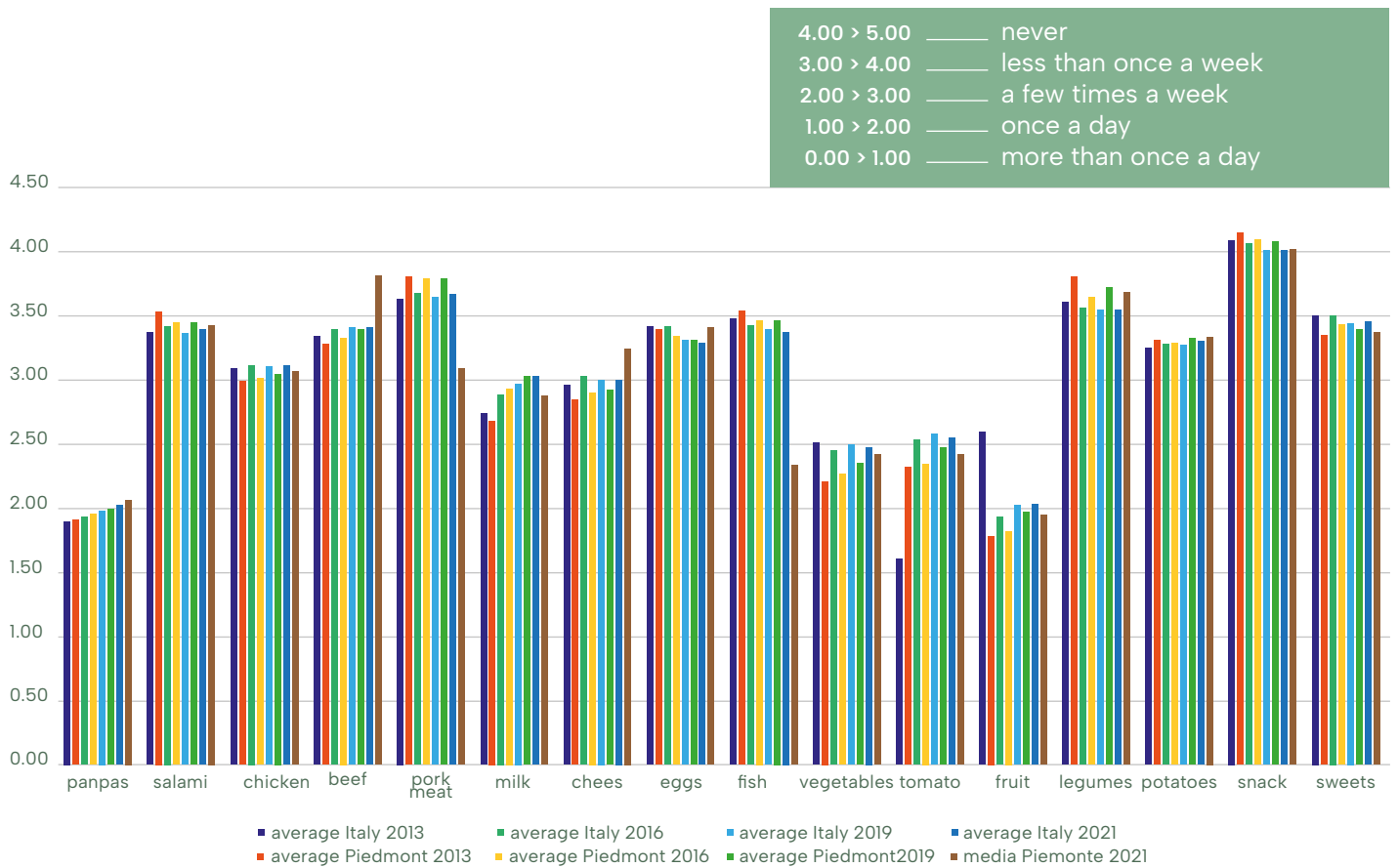
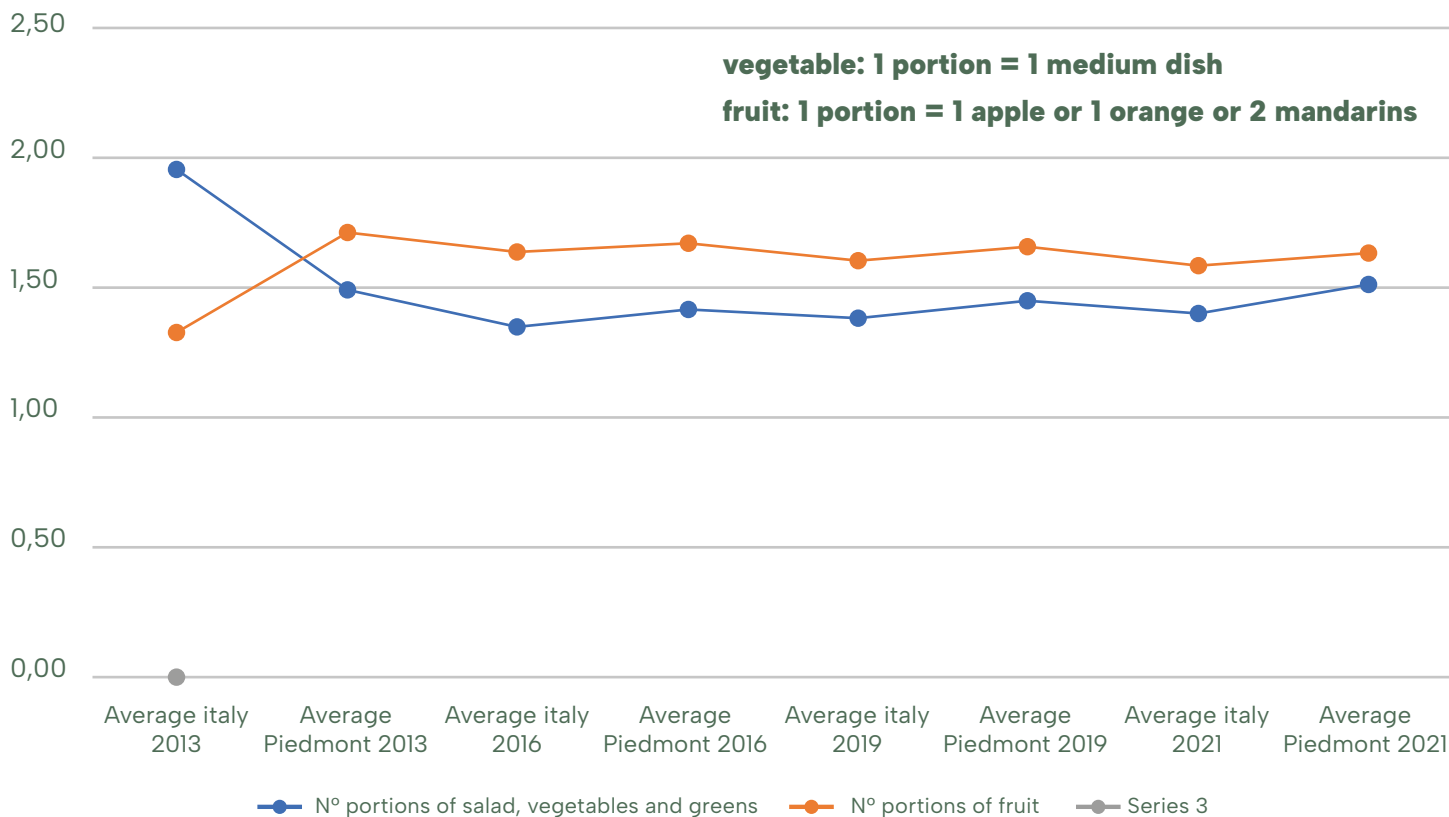


Figure 10.4 – Frequencies of consumption of different food products.  
 (Source: ISTAT, 2023)



Also the specific questions on fruit and vegetable consumption show any particular trends along the historical series or considerable differences between Piedmont and Italy. Around a portion and a half of each fruit and vegetable was on average consumed by families in the sample between 2013 and 2021

**Number of portions of fruit and vegetables**



**Figure 10.5** – Number of portions of fruit and vegetables consumed in Piedmont and Italy.  
 (Fonte ISTAT, 2023)

Beyond the question on food consumed, the ISTAT survey presents a few specific insights into sustainable consumption habits, introduced in 2019. Again, the answers to these questions show no substantial differences between Piedmont and Italy. The period needs to be longer to try to highlight trends. On average, potentially sustainable consumption choices such as 'pay attention to ingredients', 'buy organic' and 'buy local' are made only occasionally (Figure 10.6). However, a deeper analysis based on socio-economic indicators will likely reveal a more differentiated picture.

how many times does he choose to...

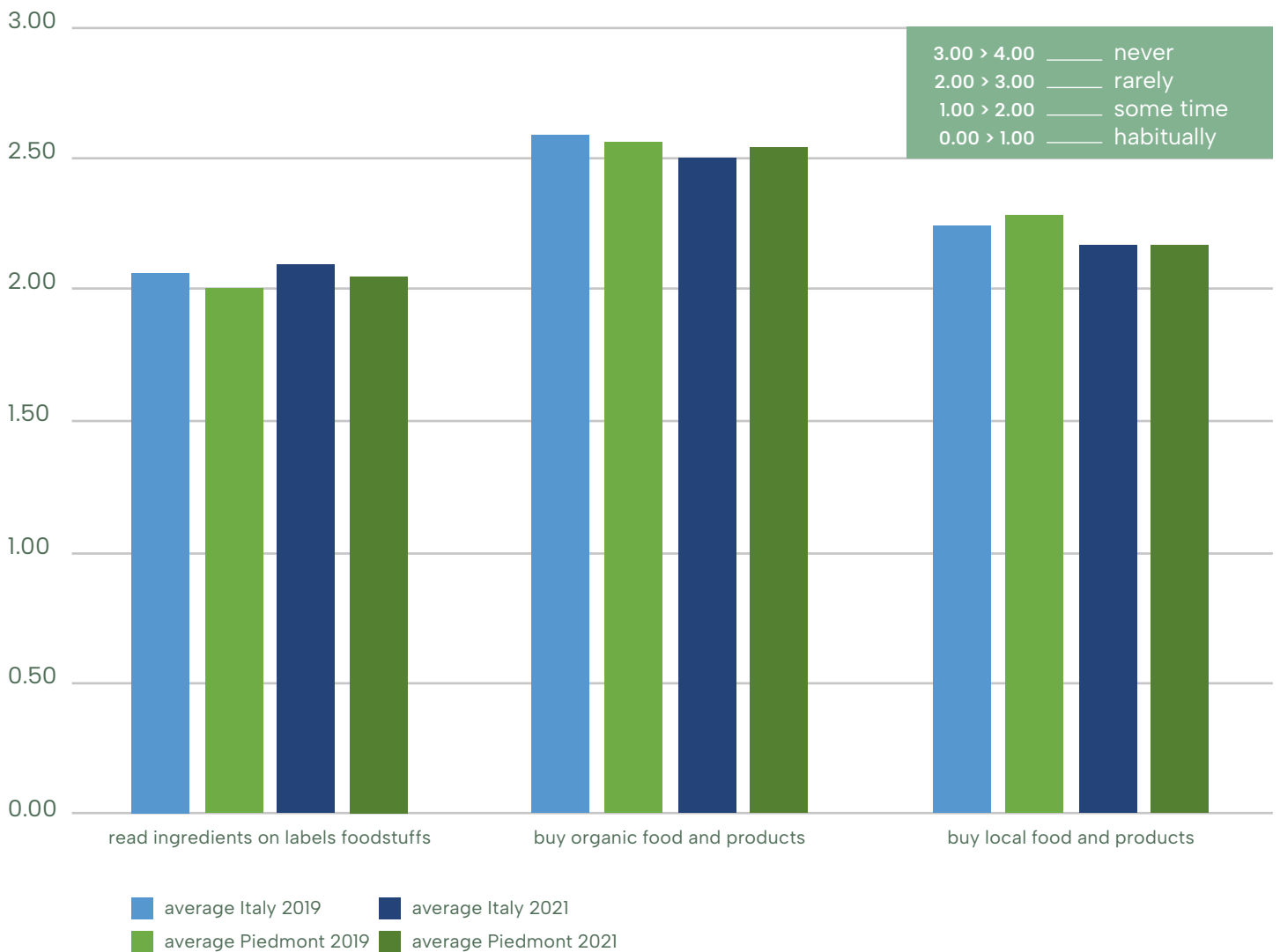


Figure 10.6 – Frequency of eating habits associated with sustainable behaviour. (Source: Istat, 2023)

About the place of purchase, the households in the Turin Chamber of Commerce sample purchased food mostly in supermarkets in 2022 (61% of purchases) and a further 17% in discount stores. Only 12% of purchases came from traditional shops and 9% from markets. In particular, however, for 34% of the sample, traditional shops are the main place to buy bread and cereals, 29% meat and meat products, and 34% markets are the main place to buy fruit and vegetables.

The data reported in this section provide a general representation of food demand and consumption habits in Turin and the Piedmont region. It is helpful to relate them to some parameters of what could be considered a healthy and sustainable diet. As the 2019 FAO and WHO Report "Sustainable healthy diets: Guiding principles" points out, food is linked to significant global socio-ecological challenges: "food production accounts for the use of 48 per cent and 70 per cent, respectively, of global land and fresh water resources" (p. 5). This has much to do with unsustainable food systems and consumption patterns; at the same time, food consumption is a major public health problem in terms of undernourishment, malnutrition, and unhealthy consumption habits. In this context, the FAO and the WHO have defined healthy and sustainable diets as "dietary patterns that promote all dimensions of health and well-being of individuals; have low pressure and low environmental impact; are accessible, affordable, safe and equitable; and are culturally acceptable; moreover, they should respect cultural and territorial differences" (2019, p. 9).

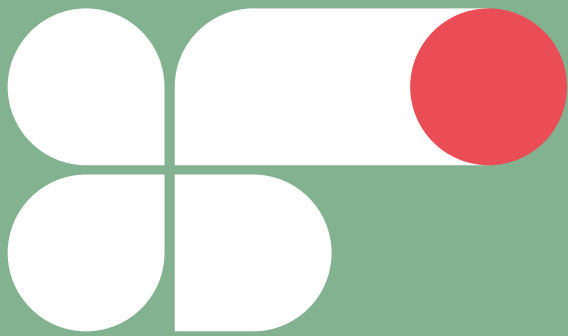
In general, in order to improve the relationship between food systems and consumption concerning environmental sustainability and the health-related dimension, the document recommends predominantly plant-based diets, thus an increase in the consumption of fruits, vegetables and legumes and a reduction (rather than an elimination) of meat consumption, particularly red meat, which is correlated with high ecological impact and health problems (FAO and WHO, 2019).

Looking at the carbon footprints along the food chain of different foods, by far the most impactful is beef, with 60 kg of CO<sub>2</sub> emissions per kg of product, followed by lamb and mutton (24 kg) and cheese (21 kg), while plant-based foods have 10 to 50 times lower emissions: wheat and rye (1.4 kg), tomatoes (1.4 kg) peas (0.9 kg), bananas (0.7 kg), root vegetables (0.4 kg) (Poore and Nemecek, 2018). Most of the emissions are, in fact, related to agricultural production and land-use change, only a small part to food transport. Therefore, carbon emissions from food indicate the need for a low-meat diet much more than a local diet (although other essential arguments favour the latter). Furthermore, the intake of processed foods and the use of packaging should be limited (FAO and WHO, 2019).

About these benchmarks, data on food consumption habits in Turin and the Piedmont region show a contrasting picture. While plant-based products are consumed more frequently, meat consumption is probably higher than what a healthy and sustainable diet would require. In Italy, in general (and the data analysed here suggest that the local situation is probably very similar), the intake of animal products in 2017 was, at 957 grams per day, about three times higher than the amount recommended by the EAT-Lancet diet (a diet conceived as good for both health and the environment), which corresponds to about 335 grams. At the same time, according to FAO data, the annual per capita consumption of vegetables in Italy decreased from a high of almost 200 kg in 2004 to 96 kg in 2020.<sup>3</sup>

---

3 - <https://ourworldindata.org/diet-compositions> (updated in October 2023)



# TERRITORIAL FOCUS MIRAFIORI SUD

Compared to previous editions, the Torino Food Metrics Report 2023 introduces an additional section that investigates specific food systems in Turin.

This first in-depth study considers the Mirafiori Sud area due to its involvement in several projects working on its food system to increase its environmental sustainability, social justice, and economic development, in particular:

- H2020 PROGIREG - 'Productive Green Infrastructure for post-industrial urban regeneration' per il periodo 2018-2023
- H2020 FUSILLI - 'Fostering the Urban Food System Transformation through Innovative Living Labs Implementation' for the period 2021-2024.

As Quaglia (2019) observes in the III Report of the Atlas of Food in Metropolitan Turin, the Mirafiori Sud area has been the subject of numerous studies (e.g. Mirafiori Sud in numeri, 2018; Savio & Guiati, 2014; Mirafiori dopo il mito, 2019) that have explored its history and contemporary socioeconomic profile. His analysis highlights how these studies suggest how the importance of this neighbourhood "lies precisely in the bond, symbolic and material, that exists between it and the whole city from the second after the war: a complex, unresolved and profound relationship, with a first time characterized by the rise of Turin as a factory city and a second time marked by the painful start of the post-industrial phase. It is, therefore, a duty, when speaking of Mirafiori Sud, to remember what it was from an identity point of view: the quintessential working-class and industrial neighbourhood, with a social geography and urban development designed from the ex-Fiat Mirafiori today FCA-Stellantis".

To this first analysis of the Atlas, which explored the food landscape of Mirafiori Sud, this edition of the TFMR identifies a first battery of indicators that allow a more quantitative reading of the local food system to be added to the qualitative vision.

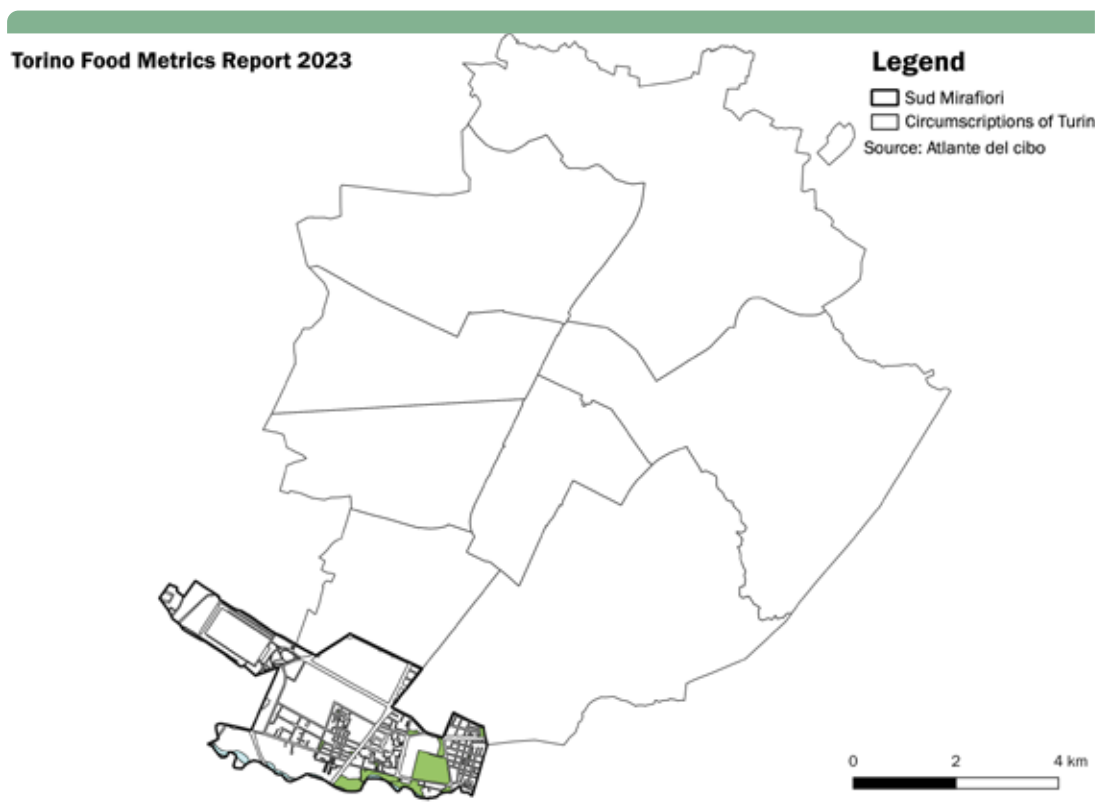


Figure 11.1 - The area of Mirafiori Sud in Turin



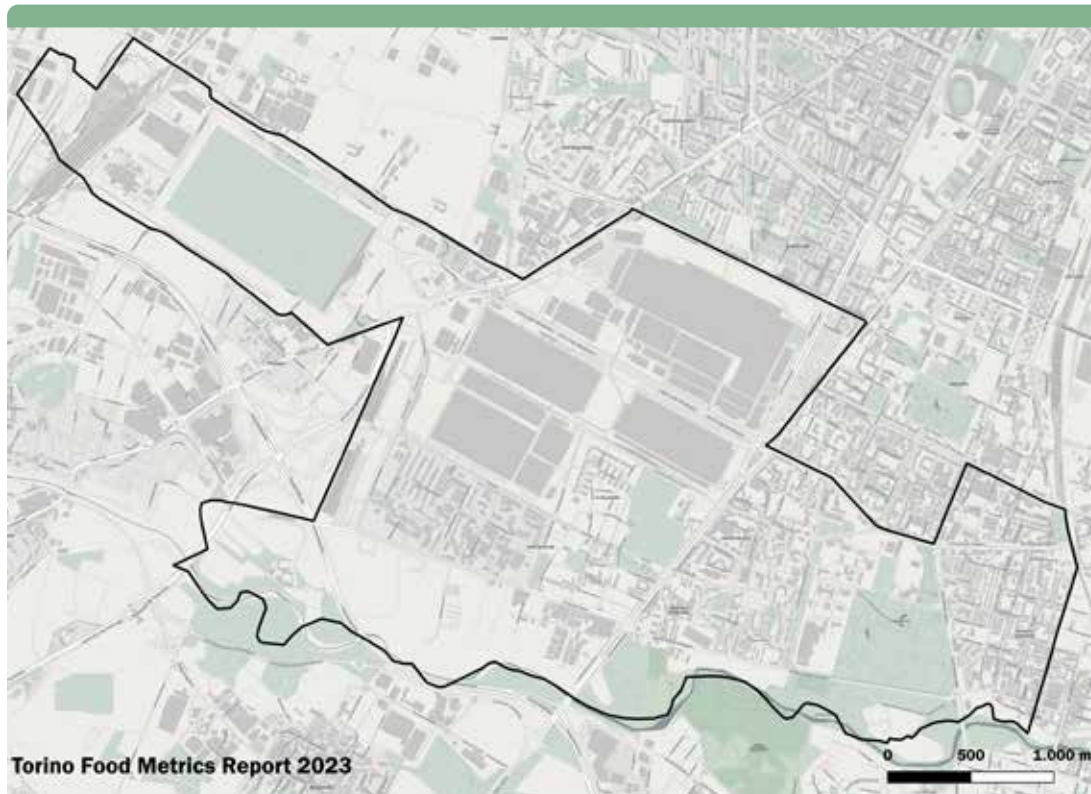


Figure 11.2 – The area of Mirafiori Sud

### 1. PROGIREG e Mirafiori Sud

Progireg<sup>1</sup> is a project funded by the European Commission under the Horizon 2020 program and uses nature to regenerate post-industrial urban areas in Europe and China. In 4 cities, within Living Labs, understood as research activities in the field and everyday life, Nature-Based Solutions (NBS) are developed, tested, and implemented. In addition to Turin, the cities involved are Dortmund (Germany), Zagreb (Croatia), and Ningbo (China). Other four cities are committed to replicating the Nature-Based Solutions, Cascais (Portugal), Cluj-Napoca (Romania), Piraeus (Greece), and Zenica (Bosnia and Herzegovina), and closely follow the progress in the Living Labs.

Turin's objectives are to improve health and quality of life and reduce the city's vulnerability to climate change while providing tangible and measurable economic benefits for citizens and businesses.

The local Living Lab is concentrated mainly in the territory of Mirafiori Sud. Among the 7 NBS launched, some are explicitly connected to the theme of food and production, in particular:

#### NBS #3

- **Community-based farms and urban gardens.** Within Orti Generali, abandoned parts of the Parco Piemonte have been redeveloped (a 2.5-hectare park of gardens for citizens for activities related to social agriculture, including training and job placement). Among the goals achieved by this project are the improvement of the area's security, the spread of social aggregation, and the increase in productivity.

<sup>1</sup> - For more information see the project website (<https://progireg.eu/the-project/>), and the paper in the IV "Rapporto dell'Atlante del Cibo di Torino Metropolitana". (<https://atlantedelcibo.it/sites/default/files/doc/p/files/CORPO%20DEL%20RAPPORTO.pdf>)

- **School gardens.** Construction of box gardens and infrastructures that can be used in areas made impermeable by the presence of asphalt that would otherwise be uncultivable, with an improvement in the microclimatic conditions of the area. In the IC Salvemini and Cairoli schools, the box gardens host educational activities that allow students to learn, in contact with nature, the concepts of sustainable agriculture and approach the themes of the ProGReg research.
- **Gardens between the houses:** box gardens are also present in some places of aggregation, such as Mirafleming (via Fleming) for children, Casa del Mondo Unito (Via Negarville) for asylum seekers, and in points of the neighbourhood that are not frequented, such as via Morandi and the garden of via Roveda. The goal is to experiment with how this type of solution can improve a neighbourhood from an ecological, climatic, and social cohesion thanks to the shared management and maintenance by the residents.

#### NBS #4

- **Aquaponics (supported by the Dortmund Living Lab).** Turin has implemented its first aquaponics system, with the potential for future replication in case of success. The system was designed on a small scale and installed in an abandoned public site.

#### NBS #6

- **Accessible green corridors.** In Turin, interventions are planned to enhance the green areas along the Sangone River and to connect the river with the inside of the neighbourhood through green corridors, favouring the colonization of the city by pollinator insects and making walks more pleasant for people.

#### NBS #8

- **Pollinator biodiversity.** The scientific approach of ProGReg involves citizens in creating, monitoring, and promoting awareness of spaces for pollinators. In Mirafiori, in school gardens, in "pollinators gardens" at the former VOV and in the Cooperativa l'Aquilone, a socially inclusive approach is applied, which comes from the citizenship, in collaboration with medical personnel and patients of mental health centres working on pollinator spaces.

On the Fondazione della Comunità di Mirafiori Sud website, it is possible to discover the productive green in the neighbourhood through videos and itineraries among the green innovations proposed and implemented by ProGReg.<sup>2</sup>

## 2. FUSILLI e Mirafiori Sud

The FUSILLI project<sup>3</sup> aims to overcome the multiple barriers to the development and implementation of integrated and systemic food policies that support the transition to sustainable food systems in urban, peri-urban and nearby rural areas. In this perspective, FUSILLI brings together 12 cities to share knowledge and address the challenges of food system transformation: San Sebastian (Spain), Nilufer-Bursa (Turkey), Oslo (Norway), Kolding (Denmark), Turin (Italy), Castelo Branco (Portugal), Differdange (Luxembourg), Rijeka (Croatia), Kharkiv (Ukraine), Tampere (Finland), Athens (Greece) and Rome (Italy). These cities, which will integrate food as part of their urban-rural agenda, are identifying and creating opportunities to create sustainable, healthy and inclusive food systems. Through an open knowledge community, cities are also implementing innovative and participatory place-based policies and actions.

The City of Turin is responsible – also through its third parties (UNITO, UNISG, ORTI GENERALI) and in collaboration with the Turin partner Fondazione Comunità di Mirafiori – for the implementation of the "Food Innovation Living Lab" which includes (i) transversal and policy activities and (ii) field demonstration activities.

The transversal activities include strengthening the "Turin City of Food" policy by implementing participatory and integrated policies and initiatives (in line with the territorial strategy and the stakeholders of the Food Atlas) on the food system in terms of environmental sustainability, social justice and economic development.

2 – <https://fondazionemirafiori.it/progireg-tutte-le-mappe-e-i-tour> (ultimo accesso 11 novembre 2023)

3 – <https://fusilli-project.eu/cities/> (ultimo accesso 12 novembre 2023)

The main demonstration activities of the "Food Policy Living Lab" in Turin are concentrated in the area of Mirafiori Sud and concern:

- Support for the experimentation of circular business models for the production/transformation of food for local trade, including bars, restaurants, collective catering.
- Promotion of local food products of the "Mirafiori Food" brand, with collective storytelling actions on food multiculturalism.
- Food Hub for the collection and redistribution of food surpluses for social solidarity purposes, in cooperation with neighboring municipalities..
- Training activities on the themes of biodiversity, pollinator insects, food waste and the circular economy for schools and citizens.
- Horticultural therapy activities for disadvantaged groups and/or schools in the neighborhood.

## 11.1 food offer

The spatialization of the food system and, in particular, its food offer, was mapped by the Atlas group through a field research, focusing on the following types: food service establishments, food processing industries, retail stores and supermarkets.

Specifically, the following are present:

Nello specifico, sono presenti:

- 7 food processing industries for bakery products (bakery-pasta-grissini-panettone house) (Figure 11.3)
- 39 retail stores, of which the main ones are 11 butchers, 10 bakeries-pastry shops (figure 11.4)
- 11 supermarkets (figure 11.4)
- 89 food service establishments including 52 bars (some only bars, others also restaurant/snack bar) and 2 vending machines (figure 11.5)

In a context characterized by the presence of large industrial areas (FCA - Stellantis) as well as the Parco Cimiteriale di Torino, the various elements appear to be distributed in a relatively homogeneous way. More specifically, areas with a higher concentration of food service establishments, especially in the area of Corso Unione Sovietica and Via Vigliani, can be identified.

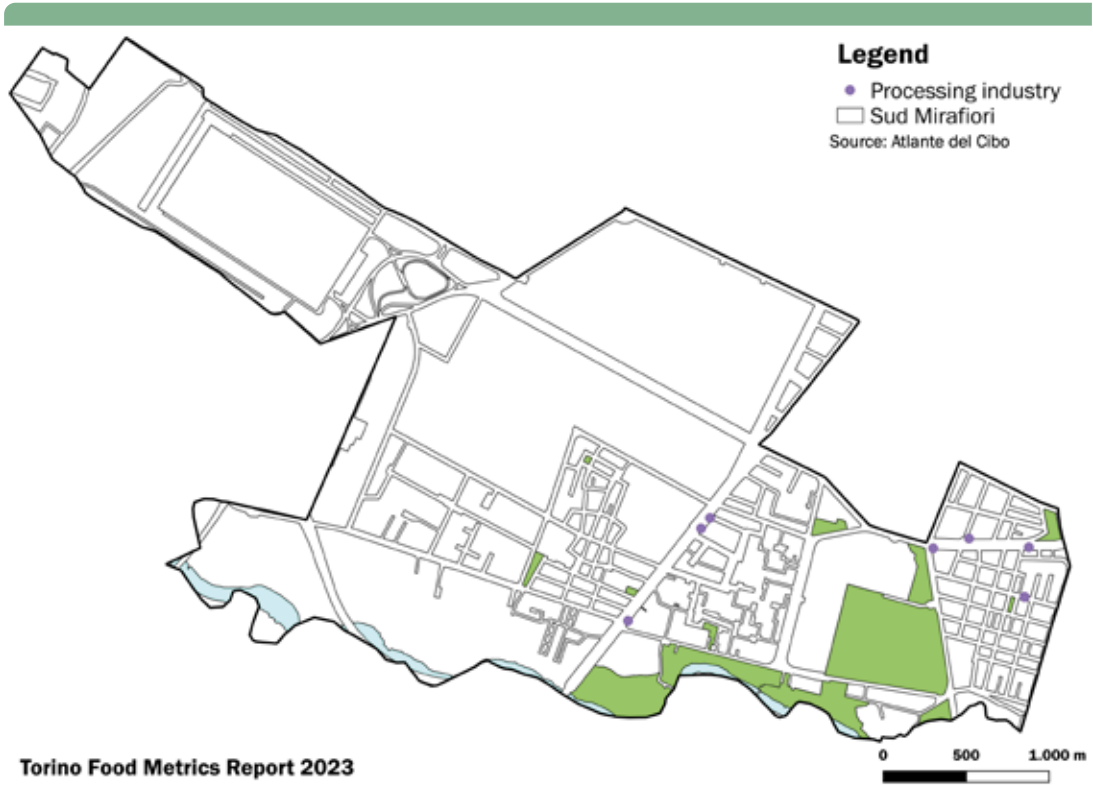


Figure 11.3 - Distribution of processing industries

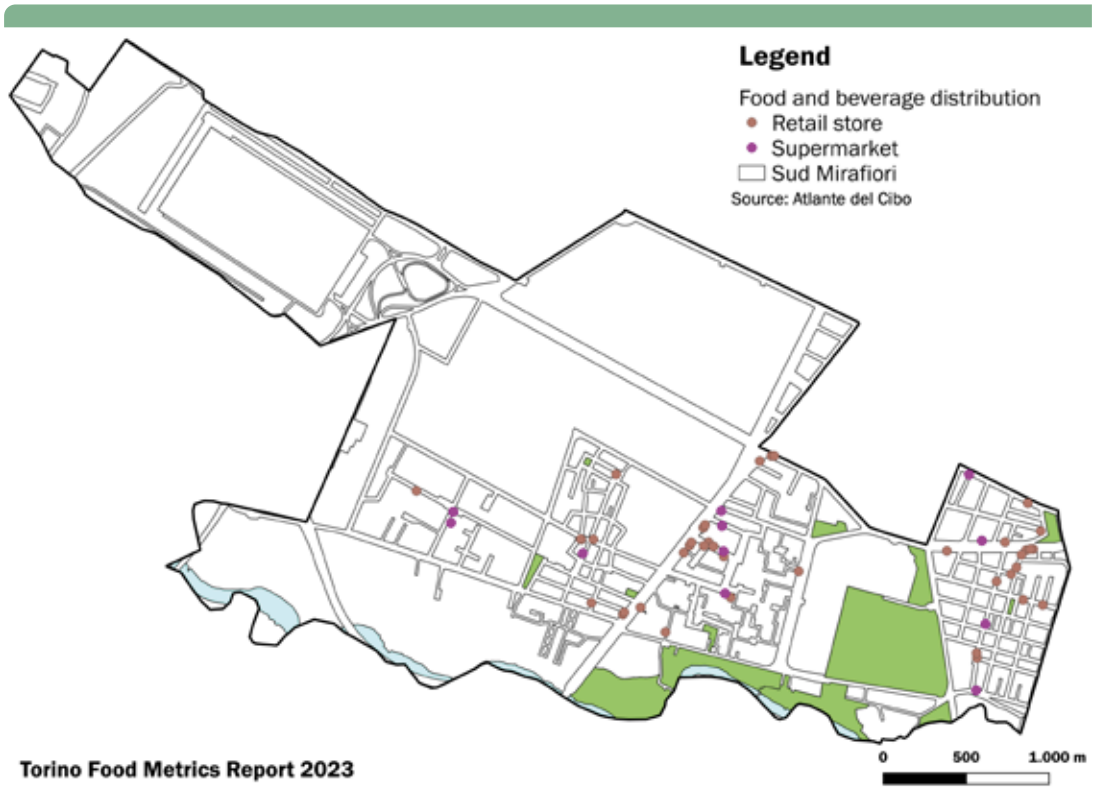
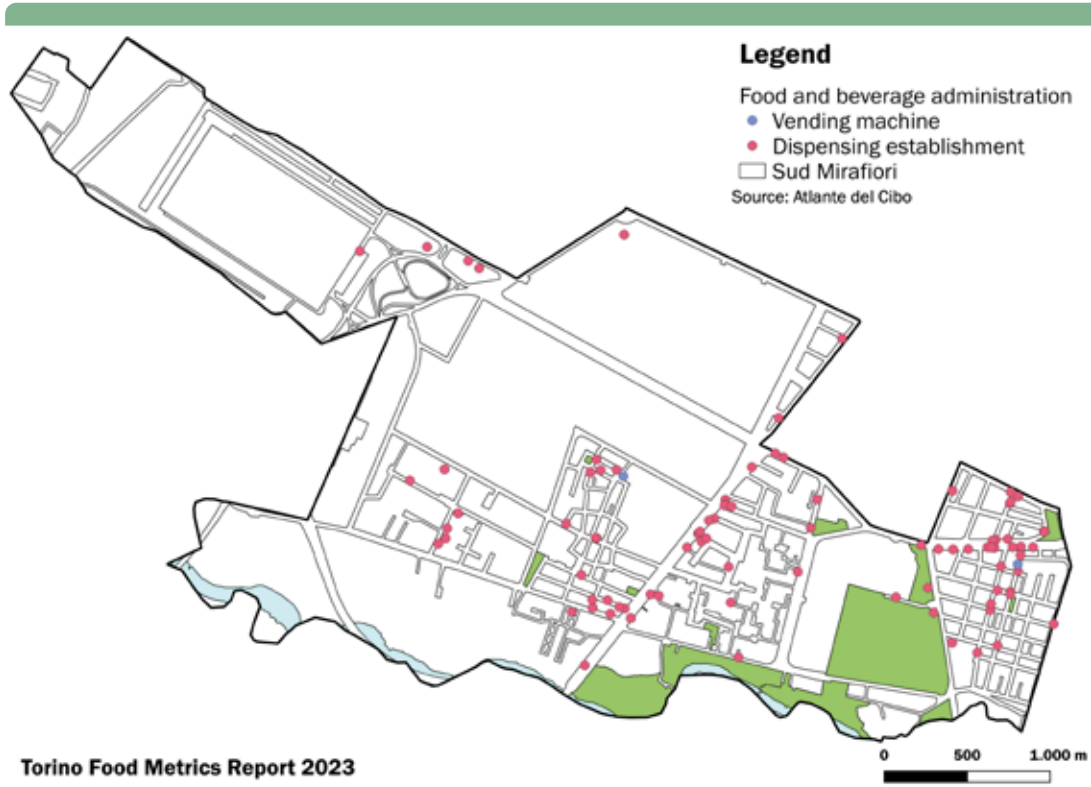


Figure 11.4 - Locating retail shops and supermarkets



Torino Food Metrics Report 2023

Figure 11.5 – Location of catering establishments and vending machines

## 11.2 Urban agriculture

The convergence point of both the H2020 projects mentioned above is represented by Orti Generali (OG), an area dedicated to urban gardens established in 2017, located near the Sangone river<sup>4</sup> and managed by Coefficiente Clorofilla (now Orti Generali)<sup>5</sup>, a landscape and urban regeneration association that deals with: (i) involvement of the neighborhood and the citizenship to investigate the needs and attitudes of the local population; (ii) landscape and sociological research; (iii) marketing and communication.

OG was born with the aim of building a social enterprise model for the transformation and management of residual urban agricultural areas. The project is the outcome of a 4-year participatory design process (through Miraorti) that involved schools, associations, gardeners and inhabitants of Mirafiori. Thanks to its components of social innovation and technology, OG won the call launched by the MIUR Smart cities and Communities and Social Innovation and from 2016 to 2019 launched a research phase supervised by the University Ca' Foscari of Venice.<sup>6</sup>

<sup>4</sup> – Strada Castello di Mirafiori 38/15, 10135 Torino (Circoscrizione 2)

<sup>5</sup> – Other subjects: Fondazione della Comunità di Mirafiori ONLUS Cooperative – Cooperativa Patchanka.

<sup>6</sup> – For more information see the website <https://www.ortigenerali.it/>





OG offers the opportunity to cultivate, either in groups, as a family, as an association, or individually, and to learn through theoretical and practical training courses, activities, and workshops (within a didactic center where courses can be attended) focusing on topics related to organic farming, horticulture, and rural work.

Regarding environmental sustainability, OG experiments with technology aimed at benefiting the environment. In addition to organic and synergistic production, a control unit is installed to detect local weather, humidity, and temperature. If necessary, it operates a centralized irrigation system for all the vegetable gardens, aiming to reduce water wastage.

In terms of social sustainability, OG provides work grants and internships, especially targeting disadvantaged individuals. In collaboration with ASL and associations, it conducts rehabilitation and vegetable therapy courses. For cultivation support, OG offers a website featuring a crop calendar, plant cards, and alerts to notify users about the timing of preventive biological treatments, providing ongoing assistance.

Technical details from the Atlas of Urban Gardens in Turin reveal the following:<sup>7</sup>

- The vegetable garden spans an approximate total area of 30,000 square meters (owned by the municipality of Turin), containing 170 plots (ranging from 50 to 100 square meters). Collective vegetable gardens cover an area of about 1,000 square meters, involving 500 people.
- Cultivation (always organic and synergistic) occurs both in the ground and in crates, cultivating vegetables, herbs, fruit trees, and maintaining beehives.
- Besides production, OG conducts recreational, educational, and horticultural-therapeutic activities.

As part of the ProGireg project, the University of Turin, specifically the Department of Culture, Politics, and Society and the Department of Agricultural, Forestry, and Food Sciences, initiated a preliminary research phase to understand the type, quantity, and quality of horticultural products grown in various OG plots in 2022.

Results from the initial phase indicate the most cultivated vegetables as chard, cabbage, cauliflower, onions, green beans, broad beans, strawberries, lettuce, mint, potatoes, peppers, peas, leeks, and courgettes. Other vegetables and fruits are also present in smaller quantities.

In the second phase, some growers recorded the weights of harvested vegetables. The methodology is based on research conducted by Edmonson and colleagues (2019), adapted for the Turin area. Preliminary results suggest that a 50-square-meter plot, with a cultivated area of about 33 square meters, produces approximately 110 kg of various vegetables.

The third phase involved distributing tomato, rocket, and lettuce seedlings to gardeners, who then grew and harvested them in July and October 2022. Preliminary qualitative chemical-physical analyses were conducted, measuring Brix (total soluble solids) in tomato berries and investigating nitrate content in rocket and lettuce (leafy vegetables).

Results revealed uniform and good-quality coloration in tomato berries, measured by a colorimeter. The Brix measurement indicated values above 5.0, confirming the product's good quality. Nitrate concentrations in both lettuce and rocket were significantly lower than the limits set by Regulation (EU) 1258/2011.

These preliminary findings were presented at the 2023 Scientific Days of the Italian Society of Horticulture, hosted at the Luigi Einaudi Campus of the University of Turin.

### 11.3 Public procurement

"Regarding the topic of public procurement and collective catering specifically, Table 11.1 and Figure 11.7 provide the spatial distribution of pre-compulsory, primary, and secondary schools that offer cafeteria service for students, along with the number of snacks and meals served in the academic year 2022/2023. It is worth noting that the primary school in via Torrazza Piemonte, part of the IC Cairoli, initiated the 'fresh cafeteria' experiment in 2021. This entails preparing and serving meals within or near the school premises. The school receives meals from the existing but enhanced kitchen at the adjacent preschool in via Monastir. This initiative became possible through co-design involving multiple local stakeholders, including the IC, the Educational Services Offices, and the Chemical Laboratory of the Chamber of Commerce of Turin, Eutourist New. The catering company handled the organizational and financial aspects of the implementation".

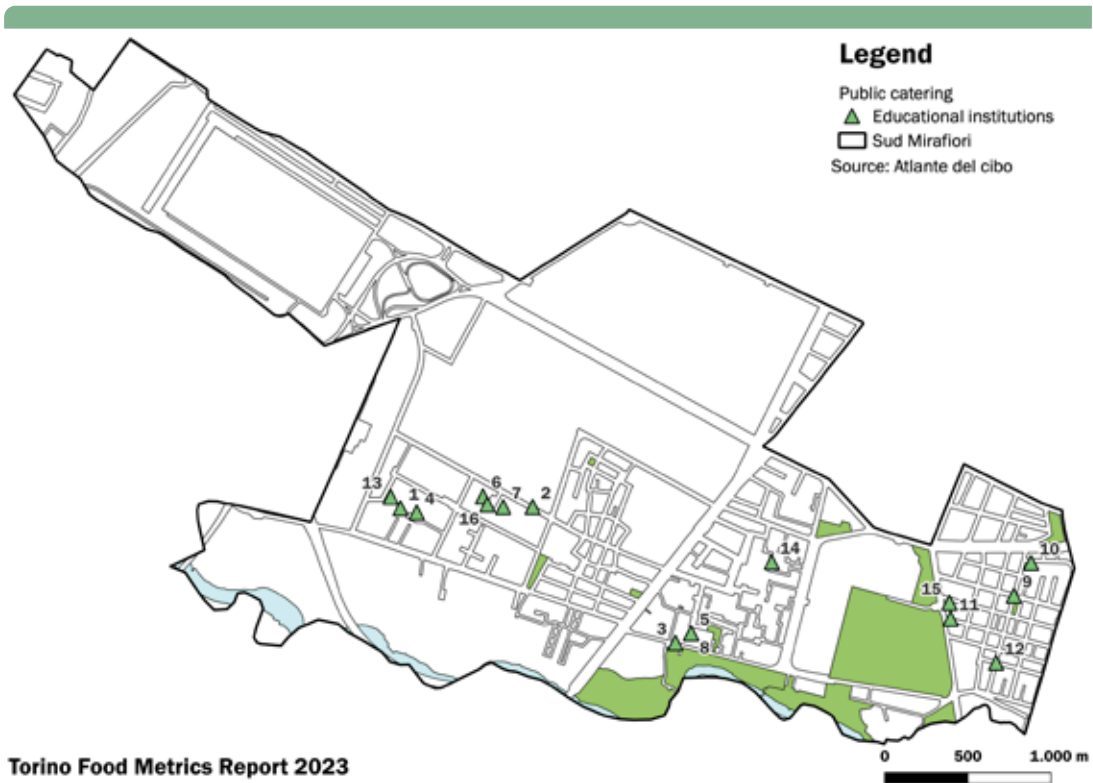


Figure 11.7 - Location of school catering

PUBLIC CATERING AND SCHOOLS			MEALS and SNACKS
1	Kindergarten	Scuola municipale dell'Infanzia "Mirafiori Sud", Via Celeste Negarville 30/8	16.233
2	Kindergarten	Scuola statale dell'Infanzia Mariele Ventre, Via Plava 177/2	10.101
3	Kindergarten	Scuola statale dell'Infanzia "Castello di Mirafiori", Strada Castello di Mirafiori 43	16.802
4	Primary school	Scuola primaria statale Gaetano Salvemini, Via Negarville 30/6	16.060
5	Primary school	Scuola primaria statale "Castello di Mirafiori", Via D. Coggiola 20	26.132
6	Primary school	Scuola primaria statale "Elsa Morante", Piazzetta Jona 4	24.994
7	Secondary school	Scuola statale secondaria di 1° grado "Cristoforo Colombo" Piazzetta Jona 5	606
8	Secondary school	Scuola statale secondaria di 1° grado "Castello di Mirafiori" Via D. Coggiola 22	1.648
9	Kindergarten	Scuola infanzia statale "Torrazza Piemonte", Via Monastir 17/9	31.262
10	Primary school	Scuola primaria statale "Torrazza Piemonte", Via Torrazza Piemonte 10	30.514
11	Primary school	Scuola primaria statale "Cairolì", Via Rismondo 68	17.078
12	Nursery	Asilo nido municipale "I Gabbiani", Via Fratelli Garrone 61/80	16.709
13	Nursery	Asilo nido municipale "Vassilij Kandinskij", Via Roveda 35/1	12.505
14	Nursery	Asilo nido municipale "I Puffi", Via Fleming 20	15.448
15	Kindergarten	Scuola infanzia municipale "Cento Fiori", Via Carlo Pisacane 71	18.970
16	Kindergarten	Scuola infanzia municipale "Mirafiori Nord", Piazzetta Jona 6	13.256

Table 11.1 – Public catering.  
(Source: Città di Torino)

## 11.4 Food poverty

"Regarding the fight against food poverty, Mirafiori Sud relies on its neighborhood's 'Casa nel Parco' (Via Panetti 1), managed by the Foundation of the Mirafiori Community – FCM Onlus ETS, as its main entity. 'Casa nel Parco' is, indeed, one of the 17 territorial hubs of the Torino Solidale Network.

Among the various activities conducted by the Foundation are social and solidarity initiatives related to food access, as well as socio-educational actions, events, cultural initiatives, civic volunteering, and social secretariat. Approximately 600 families benefit from the Foundation's services.

Individuals involved receive social secretariat services and social activities from the hub (including playful moments and convivial events focusing on food education, energy-saving education, and combating waste). Distribution takes place at the organizations adhering to the Community Pact. Signed on June 6, 2021, the Pact is the result of extensive collaboration and shared practices among the signatory entities (in addition to FCM, the Association Crescere Insieme, Caritas Beati Parroci Listening Centers, San Barnaba, San Remigio, and Santi Apostoli, and the Brotherhood of San Vincenzo San Barnaba)<sup>8</sup>.

The Pact's objective is to build territorial coordination to support socioeconomically disadvantaged individuals in the neighborhood, aiming to manage and make more effective every action taken by charitable organizations and the third sector.

Concerning the specific distribution of food items (occurring at participating organizations), FCM relies on purchases from the Torino Solidale network, donations from citizens through the local parish network, and other third-sector organizations in Mirafiori Sud. Additionally, it involves the practice of 'Suspended Shopping' activated locally through the Mirafiori Quartiere Solidali project (in collaboration with Cascina Roccafranca) and Impatto NovaCoop<sup>9</sup>.

The vouchers resulting from the Suspended Shopping are directly collected by the beneficiaries and can be used in local commercial activities (see Figure 11.9)."

---

<sup>8</sup> – For further information, see the FCM website <https://fondazionemirafiori.it/patto-di-comunita-per-il-contrasto-alla-poverta-socio-economica> e il Patto di Comunità <https://fondazionemirafiori.it/mirafiori/attachments/patto-comunita-web.pdf>  
<sup>9</sup> – For further information <https://fondazionemirafiori.it/spesa-sospesa>



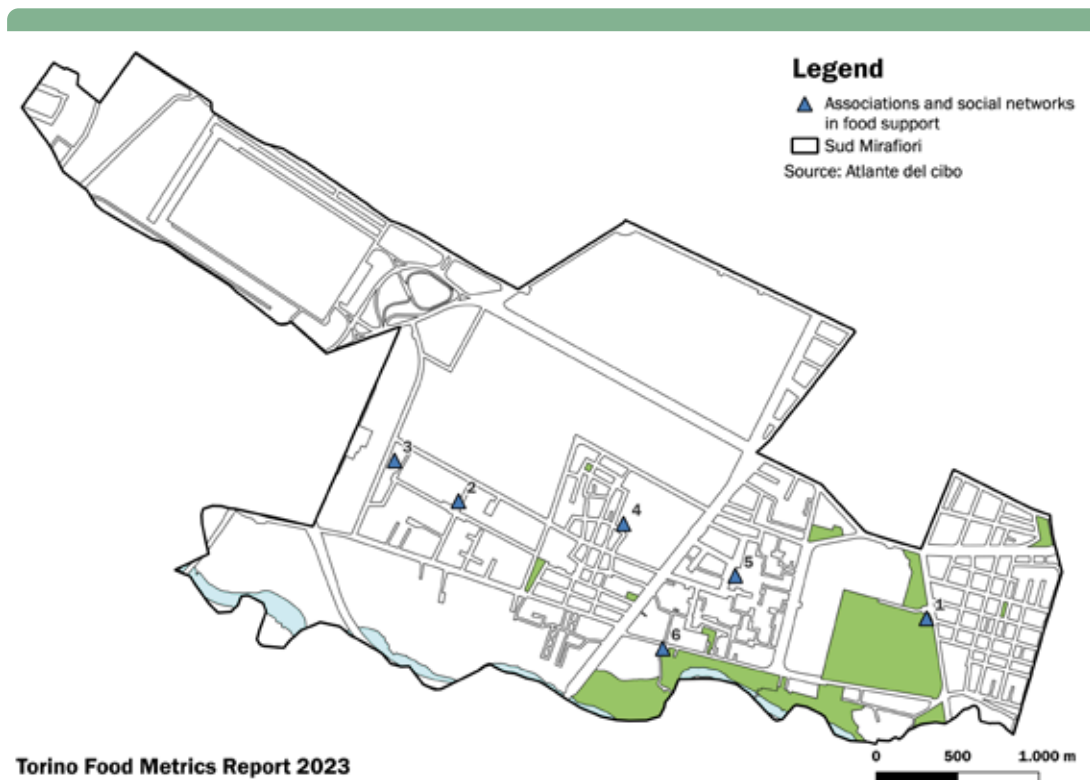


Figure 11.8 – Solidarity organisations providing social catering, charitable canteens, food distribution and Spesa Sospesa vouchers. (Source: Patto di Comunità di Mirafiori)

INSTITUTION AND ADDRESS		SERVICE PROVIDED
1	Casa nel Parco (Casa del Quartiere Mirafiori Sud), Via Modesto Panetti 1	Catering
2	Centro di Accoglienza S.Luca (Parrocchia S.Luca), Via Negarville 14	Canteen
3	Associazione Crescere Insieme ONLUS – Torino Sede operativa in via Anselmetti 67 - 10135 Torino	Food Distribution and Vouchers
4	Centro di Ascolto Caritas della Parrocchia dei Beati Parroci Federico Albert e Clemente Marchisio, Via Monte Cengio 8 - 10135 - Torino	Food Distribution and Vouchers
5	Centro di Ascolto Caritas della Parrocchia San Remigio e della Parrocchia dei Santi Pietro e Paolo Apostoli, Via Palmiro Togliatti, 35, Torino	Food Distribution and Vouchers
6	Centro di Ascolto Caritas e Confraternita di San Vincenzo presso Chiesa della Visitazione e di San Barnaba Str. Castello di Mirafiori, 42, 10135 Torino TO	Food Distribution and Vouchers

Table 11.2 – Localisation of food distribution entities/goods Suspended spending.  
(Source: Patto di Comunità di Mirafiori)

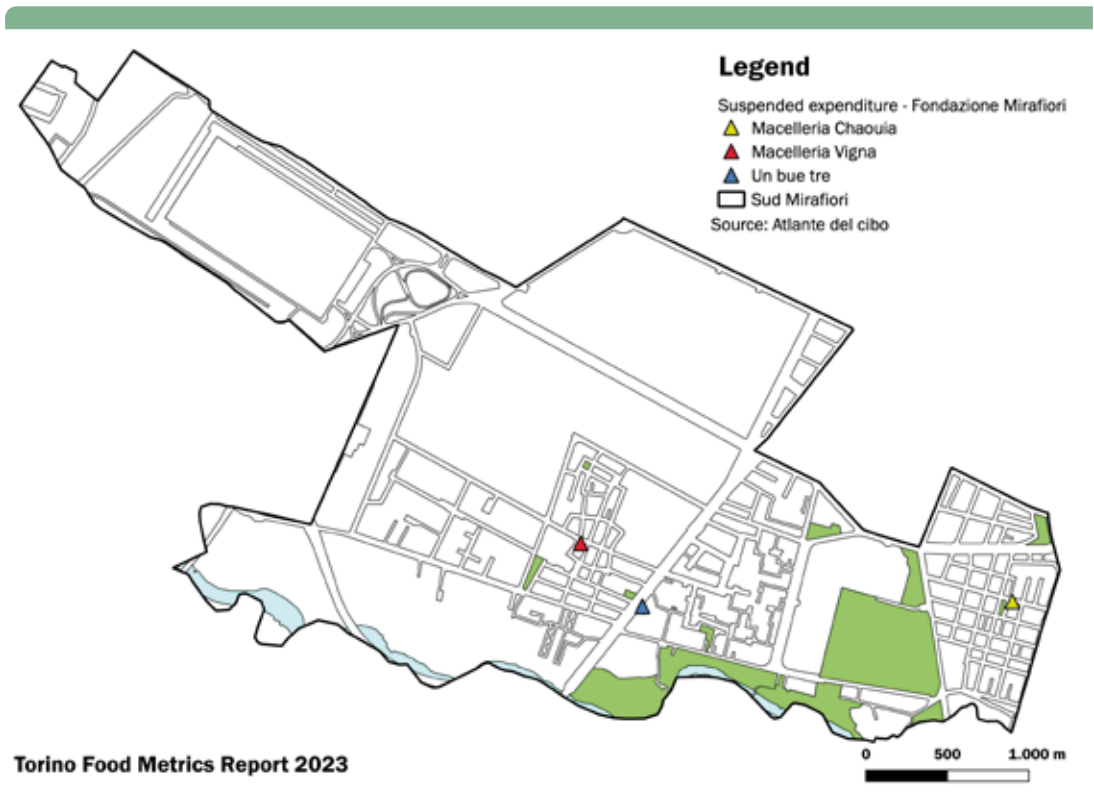


Figure 11.9 - Location of shops where to spend Spesa Sospesa vouchers

**11.5** Circular economy

Data on separate waste collection in Mirafiori Sud, carried out since 2019, through the door-to-door method, was above the urban average from 2016 to 2020 and then lower in the last two years, while remaining fairly stable over the period.

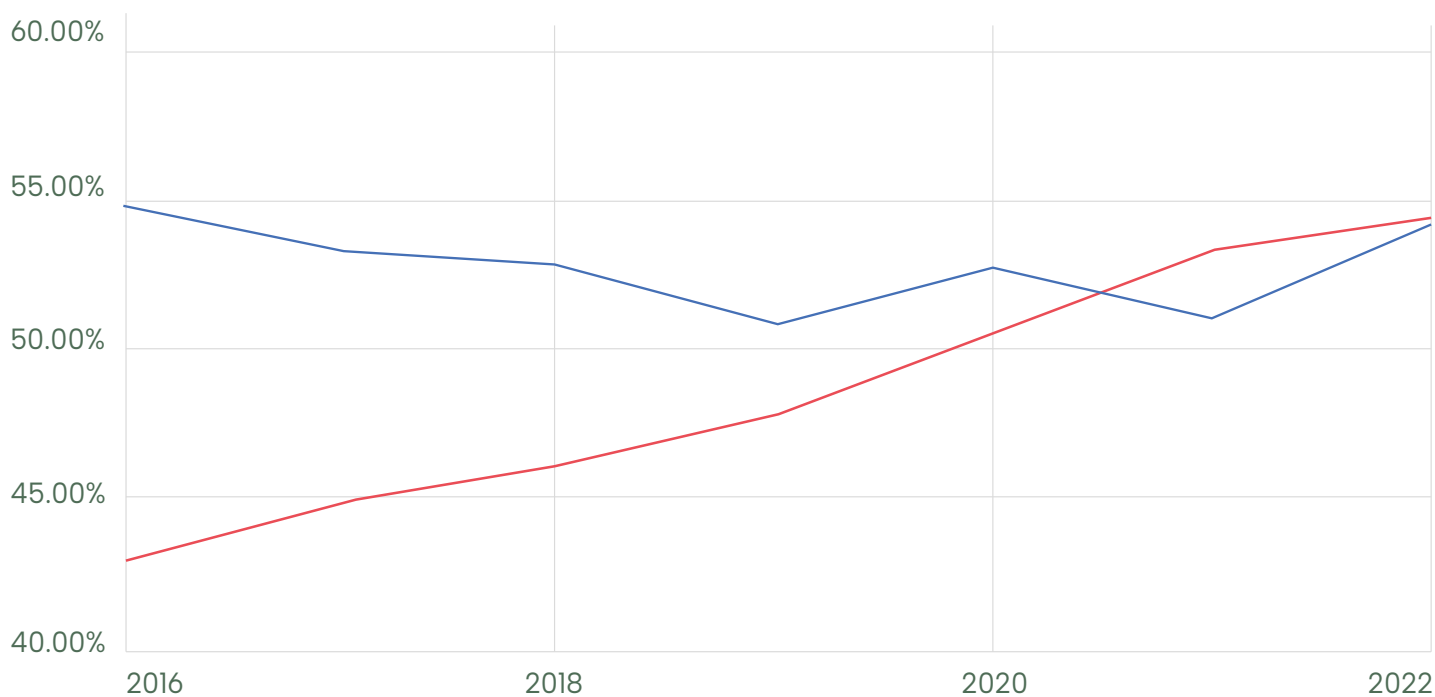
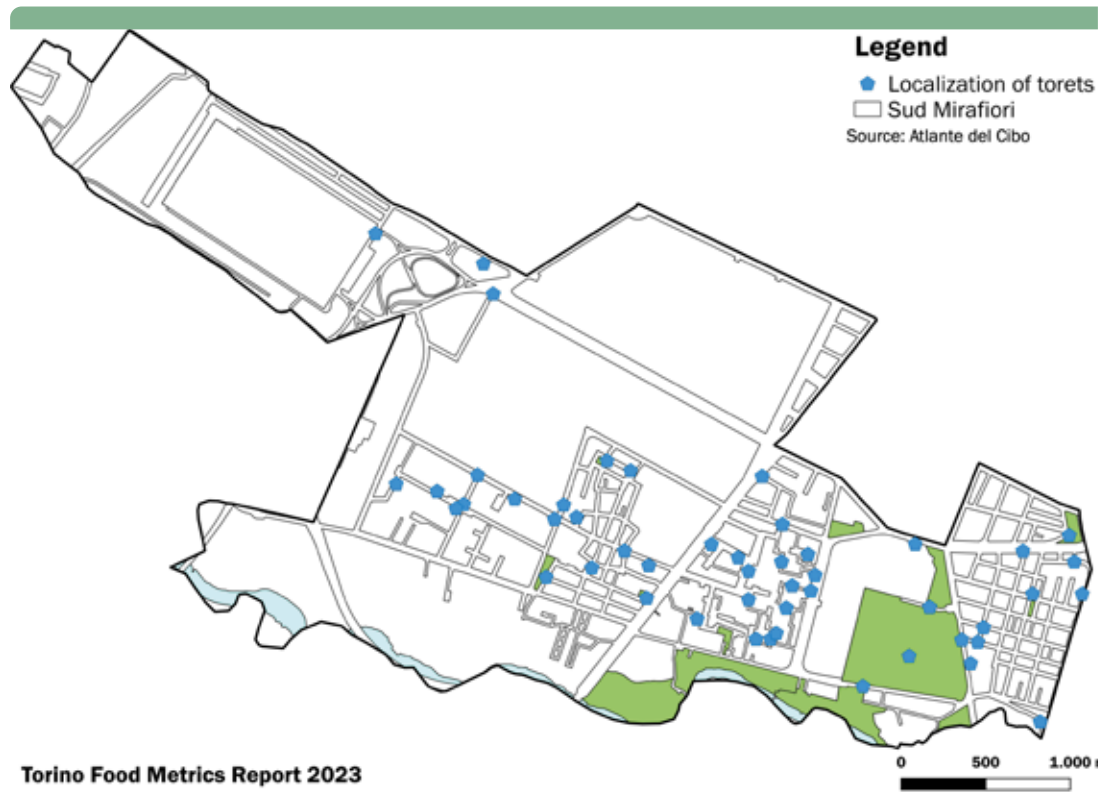


Figure 11.10 - Separate collection rates in Turin and Mirafiori Sud

Concerning the water cycle and its use and recovery possibilities, 2 SMAT points and 53 Toret points are considered in the area.



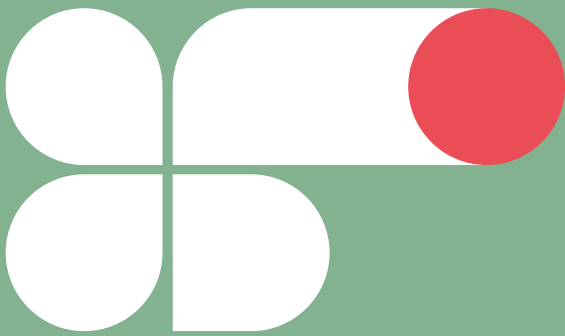
Torino Food Metrics Report 2023

Figure 11.11 - Localisation of the "Torets"

- Anelli, G. (2008).**  
Il turismo enogastronomico: promozione del territorio attraverso la valorizzazione dei prodotti tipici. *Aracne*
- Bourlessas P., Cenere S., Vanolo A. (2021).**  
The work of foodification: an analysis of food gentrification in Turin, Italy. *Urban Geography*, 33(9), 1-22.
- Timothy, D., & Boyd, S. (2007).**  
Heritage e turismo (Heritage Tourism, Italian version). Hoepli.
- Albano R., Dansero E., Puttilli M. G. (2009).**  
Da città-fabbrica a fabbrica di cultura? L'evoluzione del turismo culturale a Torino. *Rivista geografica italiana*, 117, 391-421.
- Dansero E., Pettenati G., Toldo A. (2014).**  
"La città e le filiere del cibo: verso politiche alimentari urbane", in Faccioli M. (a cura di), *Quali filiere per un territorio metropolitano?*, Franco Angeli, Milano, 186-208.
- Dansero E., Pettenati G., Toldo A., Bonavero P. (2019).**  
"Verso politiche locali del cibo a Torino: attori, progetti, processi", in Dansero E., Marino D., Mazzocchi G., Nicolarea Y., *Lo spazio delle politiche locali del cibo: temi, esperienze e prospettive*, Torino, Celid.
- Dansero E. e Pettenati G. (2018).**  
Reterritorialization, Proximity, and Urban Food Planning: Research Perspectives on AFNs, in Corsi A., Barbera F., Dansero E., Peano C., *Alternative Food Networks. An Interdisciplinary Assessment*, London, Palgrave Mc Millan, 273-301.
- Dowler E. (2003).**  
Food and poverty in Britain: Rights and responsibilities. In: *The welfare of food: Rights and responsibilities in a changing world*. Hoboken: Wiley-Blackwell Publishing.
- FAO e WHO (2019).**  
Sustainable healthy diets: Guiding principles, Roma.
- Fassio, F., Cionchi, E., & Tondella, A. (2020).**  
The circular economy for food in future cities. Good practices that define Smart Food. *AGATHÓN| International Journal of Architecture, Art and Design*, 8, 244-253.
- Fassio, F., & Minotti, B. (2019).**  
Circular economy for food policy: The case of the RePoPP project in the City of Turin (Italy). *Sustainability*, 11(21), 6078.
- Goodman M. K. (2016).**  
Food geographies I: Relational foodscapes and the busy-ness of being more-than-food. *Progress in Human Geography*, 40(2), 257-266.
- Grasseni C. (2013).**  
Beyond alternative food networks: Italy's solidarity purchase groups. Londra, Bloomsbury Publishing.
- Lake A. A., Burgoine T., Greenhalgh F., Stamp E., Tyrrell R. (2010).**  
The foodscape: classification and field validation of secondary data sources. *Health&Place*, 16(4), 666-673.
- Loda M., Bonati S., Puttilli M. (2020).**  
History to eat. The foodification of the historic centre of Florence. *Cities*, 103, 102746.
- Marchetti S., Secondi L. (2022).**  
The economic perspective of food poverty and (in) security: An analytical approach to measuring and estimation in Italy. *Social indicators research*, 162(3), 995-1020.
- Miani F. (2015).**  
Il cibo da eredità delle culture locali ad attrattore del turismo gastronomico. *Annali del Turismo - Geoprogress*, IV, 11-24.
- O'Connell R., Brannen J. (2021).**  
Families and food in hard times: European comparative research, UCL Press.
- Peano, A. (2007).**  
Torino, ieri, oggi, domani: una visione di sintesi. Torino, ieri, oggi, domani, 1000-1009 oppure Torino, ieri, oggi, domani, in *Macramé : trame e ritagli dell'urbanistica*; Firenze, 1, 1:10
- Pettenati G, Toldo A. (2018).**  
Il cibo tra azione locale e sistemi globali, Spunti per una geografia dello sviluppo. Milano, Franco Angeli.
- Poore J., Nemecek T. (2018).**  
Reducing food's environmental impacts through producers and consumers. *Sciences*, 360(6392), 987-992.
- Roe M., SarlövHerlin I., Speak S. (2016).**  
Identity, food and landscape character in the urban context. *Landscape Research*, 41(7), 757-772.
- RUAF Foundation, IDRC and IIRR (2006).**  
Cities Farming for the Future, Urban Agriculture for Green and Productive Cities. Edited by René van Veenhuizen.
- Vanolo A. (2015).**  
The image of the creative city, eight years later: Turin, urban branding and the economic crisis taboo. *Cities*, 46, 1-7.







# LIST OF INDICATORS

FOOD OFFER						
ITEM	FIGURE	INDICATOR	MEASUREMENT	SOURCE	YEAR	SCALE
Markets	39	Average number of open-air markets during weekdays	n	Trade Services Division	2022	city
Markets	41	Maximum number of open-air markets during weekdays (Wednesday)	n	CCIAA - Chamber of Commerce	2022	city
Markets	37	Minimum number of open-air markets during weekdays (Monday-Tuesday-Thursday)	n	Trade Services Division	2022	city
Markets	5215	Stalls assigned for fruit and vegetables on a daily basis	n	Trade Services Division	2022	city
Markets	577	Stalls assigned for fish produce	n	Trade Services Division	2022	city
Markets	1794	Stalls assigned for direct sales encounters by producers on a daily basis	n	Trade Services Division	2022	city
Markets	540	Number of food stalls licensed/day (open-air markets –fruits & veg)	n	Trade Services Division	2022	city
Markets	328	Number of free food stalls/day (open-air markets –fruits & veg)	n	Trade Services Division	2022	city
Markets	51	Number of food stalls licensed/day (open-air markets – fish produce)	n	Trade Services Division	2022	city
Markets	732	Number of stalls on a daily basis in Porta Palazzo	n	Trade Services Division	2022	city
Markets	84	Number of food stalls on a weekly basis in Porta Palazzo	n	Statistical Yearbook	2022	city
Markets	1322	Number of stalls on a weekly basis in Porta Palazzo (fruit and vegetables)	n	Statistical Yearbook	2022	city
Markets	612	Number of producers' stalls in Porta Palazzo on a weekly basis	n	Statistical Yearbook	2022	city
Markets	16	Number of producers' markets organized by private entities	n	Trade Services Division	2022	city
Retail trade	4155	Number of food retail business	n	CCIAA - Chamber of Commerce	10/2023	city
Retail trade	458	Number of retail business selling meat and its products	n	CCIAA - Chamber of Commerce	10/2023	city
Retail trade	278	Number of retail business selling bread and its products	n	CCIAA - Chamber of Commerce	10/2023	city
Retail trade	247	Number of retail business selling fruit and vegetable	n	CCIAA - Chamber of Commerce	10/2023	city
Retail trade	31	Number of retail business selling fish	n	CCIAA - Chamber of Commerce	10/2023	city
Retail trade	119	Number of retail business selling beverage and alike	n	CCIAA - Chamber of Commerce	10/2023	city

FOOD OFFER						
ITEM	FIGURE	INDICATOR	MEASUREMENT	SOURCE	YEAR	SCALE
Retail trade	482	Number of retail businesses selling monopoly goods	n	CCIAA - Chamber of Commerce	10/2023	city
Retail trade	37	Number of large sales areas	n	CCIAA - Chamber of Commerce	2022	city
Food & Beverage	8579	Number of catering businesses (restaurants, bars, and alike)	n	CCIAA - Chamber of Commerce	10/2023	city
Food & Beverage	192	Number of vending machines	n	CCIAA - Chamber of Commerce	10/2023	city
Food & Beverage	275	Number of supermarkets and discount stores	n	CCIAA - Chamber of Commerce	10/2023	city
GAS	42	Number of Solidarity Purchasing Groups (GAS) surveyed by Solidarity Economy Portal (Metropolitan City)	n	economiasolidale.net	2022	metropolitan city
GAS	26	Number of Solidarity Purchasing Groups (GAS) surveyed by Solidarity Economy Portal (Municipality Turin)	n	economiasolidale.net	2022	city

INDUSTRY						
ITEM	FIGURE	INDICATOR	MEASUREMENT	SOURCE	YEAR	SCALE
Processing Industry	807	Number of food processing companies	n	CCIAA - Chamber of Commerce	10/2023	city

URBAN AGRICULTURE						
ITEM	FIGURE	INDICATOR	MEASUREMENT	SOURCE	YEAR	SCALE
Agriculture	22	Number of association garden areas	n	Municipality of Turin ORME	2022	city
Agriculture	7	Number of community garden areas	n	Municipality of Turin ORME	2022	city
Agriculture	148.594	Municipal and association garden surface	sq.m	Municipality of Turin	2022	city
Agriculture	1093	Community and associative gardens individual parcels	n	Municipality of Turin ORME	2022	city
Agriculture	78	Municipal and association gardens collectively run	n	Municipality of Turin ORME	2022	city
Agriculture	58	Number of bees business	n	Local Health Authority City of Turin	2022	city
Agriculture	323	Number of beehive	n	Local Health Authority City of Turin	2022	city
Agriculture	36	Number of schools with school gardens in open field	n	Municipality of Turin Schools	2022	city
Agriculture	54	Number of schools with in-tank school gardens	n	Farm register	2022	city
Agriculture	307	Number of agricultura firms based in Turin	n	Farm register	2022	city
Agriculture	5200	Exploited agricultural areas in the Municipality of Turin	ha	Farm register	2022	city
Agriculture	36	Number of animal husbandry firms based in Turin	n	Farm register	2022	city
Agriculture	380	Arable land area	sq.m	Farm register	2022	city
Agriculture	110	Meadow and pasture area	sq.m	Farm register	2022	city
Agriculture	77,50	Forest area	sq.m	Farm register	2022	city
Agriculture	9092	Number of head of cattle	n	Municipality of Turin	2022	city
Agriculture	1.967.32	Municipal cultivated areas	sq.m	Municipality of Turin	2022	city
Agriculture	4.124.516	Cultivated areas owned by other entities	sq.m	Municipality of Turin	2022	city
Agriculture	42.421	Municipal not cultivated areas	sq.m	Municipality of Turin	2022	city
Agriculture	256.111	Not cultivated areas owned by entities different from the Municipality of Turin	sq.m	Municipality of Turin	2022	city

FOOD POVERTY						
ITEM	FIGURE	INDICATOR	MEASUREMENT	SOURCE	YEAR	SCALE
Food assistance	187	Number of charitable structures accredited by Banco Alimentare del Piemonte	n	Municipality of Turin ORME	2022	city
Food assistance	40.673	Number of people helped by Banco alimentare	n	Municipality of Turin ORME	2022	city
Food assistance	3.296.030	Total weight of food delivered by Banco Alimentare	Kg	Municipality of Turin	2022	city
Food assistance	81	Kg of food per person delivered by Banco Alimentare	Kg	Municipality of Turin ORME	2022	city
Food assistance	17	Number of structures of Torino Solidale network	n	Municipality of Turin ORME	2022	city
Food assistance	11.600	Number of people helped by Torino Solidale network	n	Local Health Authority City of Turin	2022	city
Food assistance	3740	Number of families helped by Torino Solidale network	n	Local Health Authority City of Turin	2022	city
Food assistance	240	Number of people involved in food recovery	n	Municipality of Turin Schools	2022	city
Food vouchers	413.087	Number of food vouchers spent since the beginning of the pandemic	n	Farm register	2022	city
Food vouchers	9.027.948,60	Euros for food vouchers delivered since the beginning of the pandemic	€	Farm register	2022	city



PUBLIC PROCUREMENT						
ITEM	FIGURE	INDICATOR	MEASUREMENT	SOURCE	YEAR	SCALE
Delivery	80	Number of municipal buildings equipped with machine vendors	n	Municipality of Turin	2022	city
Delivery	427.118,00	total value of vending machine sales in municipal buildings (estimate)	€	Municipality of Turin	2022	city
Delivery	173	Number of machine vendors installed in municipal buildings	sq.m	Municipality of Turin	2022	city
Collective catering	15.097	Number of meals provided by social catering in the City of Turin (Day Care Centres)	n	Municipality of Turin	2022	city
Collective catering	30.173	Number of meals provided by collective social catering in the City of Turin (home delivery)	n	Municipality of Turin	2022	city
Collective catering	181.268	Number of meals provided by collective catering in the City of Turin (charity canteens)	n	Municipality of Turin	2022	city
Collective catering	13.806	Number of meals provided by collective catering in the City of Turin (Bricca hospice)	n	Municipality of Turin	2022	city
Collective catering	240.344	Number of meals provided by collective catering in the City of Turin (total)	n	Municipality of Turin	2022	city
Collective catering	106.409,44	Euros spent in meals provided by collective catering in the City of Turin (Day care centres)	€	Municipality of Turin	2022	city
Collective catering	332.414,07	Euros spent in meals provided by collective catering in the City of Turin (home delivery)	€	Municipality of Turin	2022	city
Collective catering	646.340,86	Euros spent in meals provided by collective catering in the City of Turin (charity canteens)	€	Municipality of Turin	2022	city
Collective catering	43.130,5	Euros spent in meals provided by collective catering in the City of Turin (Bricca hospice)	€	Municipality of Turin	2022	city
Collective catering	1.128.295	Euros spent in meals provided by collective catering in the City of Turin (total)	€	Municipality of Turin	2022	city
School catering	6.035.196	Number of meals provided every year by collective school catering	n.	Municipality of Turin	2022	city
School catering	34.398.825,54	Expenditure in euros for collective school catering	€	Municipality of Turin	2022	city
School catering	100	% of reusable tableware	%	Municipality of Turin	2022	city

PUBLIC PROCUREMENT						
ITEM	FIGURE	INDICATOR	MEASUREMENT	SOURCE	YEAR	SCALE
School catering	2.433.895	Quantity of organic products on school menus	Kg	Municipality of Turin	2022	city
School catering	2.017.770	Amount of short supply chain products on school menus	Kg	Municipality of Turin	2022	city
School catering	55	Percentage in weight of organic products on school menus	%	Municipality of Turin	2022	city
School catering	26	Percentage of short supply chain products on school menus	%	Municipality of Turin	2022	city
School catering	81	Percentage in weight of organic and short supply chain products on school menus	%	Municipality of Turin	2022	city
School catering	42.800	Number of meals delivered in school canteens (approximately)	n	Municipality of Turin	2022	city
School catering	35.120	Number of standard meals (approximately)	n	Municipality of Turin	2022	city
School catering	1150	Number of special diets for health matters	n	Municipality of Turin	2022	city
School catering	3.974	Number of meals without meat	n	Municipality of Turin	2022	city
School catering	2557	Number of meals without pork meat	n	Municipality of Turin	2022	city
School catering	128	Number of vegetarian meals	n	Municipality of Turin	2022	city
School catering	41	Number of vegan meals	n	Municipality of Turin	2022	city
Meal vouchers	7.413	Number of workers that can have meal vouchers	n	Municipality of Turin	2022	city
Meal vouchers	1.130.828	Number of meal vouchers delivered in a year	€	Municipality of Turin	2022	city
Meal vouchers	6.938.760,61	Total value of meal vouchers delivered in a year	€	Municipality of Turin	2022	city
Meal vouchers	1605	Number of contracted catering establishments for meal vouchers/municipal employees	n	Municipality of Turin	2022	metropolitan city
Meal vouchers	962	Number of contracted catering establishments for meal vouchers/municipal employees	n	Municipality of Turin	2022	city

CIRCULAR ECONOMY						
ITEM	FIGURE	INDICATOR	MEASUREMENT	SOURCE	YEAR	SCALE
Waste	57	Percentage of of separate aste collection in neighbourhoods served by door-to-door or eco-islands	%	Municipality of Turin	10/2023	city
Waste	54,4	Percentage of total separate waste collection	%	Municipality of Turin	2022	city
Waste	86	% of town dwellers served by door-to-door waste collection or eco-islands	%	Municipality of Turin	10/2023	city
Waste	39	% of separate waste collection in quarters with traditional street waste collecting (dustbins)	%	Municipality of Turin	10/2023	city
Waste	5400	Quantity of sorted organic waste	t	Municipality of Turin	10/2023	city
Waste	10 (media impianti destino)	% of organic waste transformed in compost	%	Municipality of Turin	2022	city
Water	20	Number of SMAT water delivering points (water-houses)	n	SMAT	2022	city
Water	800	Number of fountains	n	SMAT	2022	city

TRAINING AND RESEARCH						
ITEM	FIGURE	INDICATOR	MEASUREMENT	SOURCE	YEAR	SCALE
Entities	3	Number of professional institutes in the food and wine sector (diploma)	n	Municipality of Turin	2022	city
Entities	16	Number of training agencies in the food and wine sector (no diploma)	n	Municipality of Turin	2022	city
Start Up	40	Number of start-ups and innovative SMEs active in agribusiness	n	Start-ups and SMEs register	2022	city

TOURISM AND FOOD AND WINE						
ITEM	FIGURE	INDICATOR	MEASUREMENT	SOURCE	YEAR	SCALE
Tourism	6	Number of museums dedicated to food or wine themes in the Metropolitan City	n	Turismo Torino	10/2023	metropolitan city
Tourism	3	number of ecomuseums also focusing on food or wine themes in the Metropolitan City	n	Turismo Torino	2022	metropolitan city
Tourism	25	Number of packages focusing on food or wine themes	n	Turismo Torino	10/2023	city
Restaurants	42	Number of restaurants in the Area of Turin with a mention on Gambero Rosso guide	n	Gambero rosso	10/2023	city
Restaurants	29	Number of restaurants in the area of Turin with a mention on Michelin guide	n	Guida michelin	10/2023	city
Restaurants	12	Number of restaurants in the area of Turin with a mention on Osterie d'Italia Slow Food 2023 guide	n	Osterie slow food	2022	city
Restaurants	11	Number of starred restaurants (at least 1 star)	n	Michelin guide	2022	city
Artisanal food and wine production	82	Number of Maestri del Gusto Awards	n	CCIAA - Chamber of Commerce	2022	city
Products	24	Number of DOP, IGP e STG products in the Metropolitan City	n	Ministry of Agricultural Policy	2022	metropolitan city



**Scientific support from the University of Turin**  
**Food Atlas working group with contributions by:**

Introduction and methodology: **Alessia Toldo e Tommaso Tonet**

Food offer: **Tommaso Tonet**

Processing industry: **Tommaso Tonet**

Urban agriculture: **Luca Battisti**

Food poverty: **Alessia Toldo**

Public procurement: **Alessia Toldo**

Food and health: **Alessia Toldo**

Food and circular economy: **Tommaso Tonet**

Training and research: **Tommaso Tonet**

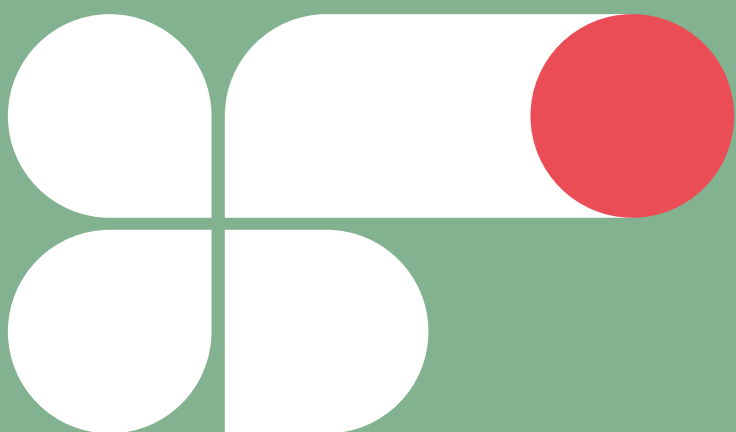
Tourism and food and wine: **Tommaso Tonet**

Food consumption: **Karl Krahmer**

Mirafiori Sud.: **Alessia Toldo e Tommaso Tonet**

Cartography: **Tommaso Tonet**





# TORINO FOOD METRICS REPORT 2023

Collane@unito.it  
Università di Torino  
ISBN: 978-88-7590-282-7



This work is distributed under License:  
Creative Commons Attribuzione 4.0 Internazionale