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Urban Agriculture and Quality of Life: A Comparative Analysis of Different Forms of Urban Agriculture and Its Effects on Welfare

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This paper explores the diverse forms and functions of urban and peri-urban agriculture (UA/PUA) across six European cities–Bayreuth, Prishtina, Budapest, Venice, Brno, and Maribor–highlighting their contributions to social well-being, environmental sustainability, and community development. Drawing on literature review and field research, including interviews conducted in Maribor, the study analyses how UA strengthens local food systems, promotes ecological awareness, and enhances emotional and social resilience in urban communities. Comparative insights reveal that while UA initiatives share common goals of sustainability and inclusion, their success depends on tradition, local governance, institutional support, and civic participation. The Maribor case exemplifies how educational gardens, cooperatives, and community-supported agriculture (CSA) models can integrate learning, production, and social interaction. Overall, the findings suggest that UA serves not merely as a source of food but as a transformative social practice fostering connection, sustainability, and a sense of place in contemporary urban environments.

Keywords:
community-supported agriculture, social well-being, environmental sustainability, urban resilience, food production

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URBANO KMETIJSTVO IN KAKOVOST ŽIVLJENJA: PRIMERJALNA ANALIZA RAZLIČNIH OBLIK URBANEGA KMETIJSTVA IN NJIHOVIH VPLIVOV NA BLAGINJO

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Ključne besede:
skupnostno podprto kmetijstvo, socialna blaginja, okoljska trajnost, urbana odpornost, proizvodnja hrane

Prispevek obravnava raznolike oblike in funkcije urbanega in periurbanega kmetijstva (UA/PUA) v šestih evropskih mestih – Bayreuth, Priština, Budimpešta, Benetke, Brno in Maribor – ter izpostavlja njihov prispevek k socialni blaginji, okoljski trajnosti in razvoju skupnosti. Na podlagi pregleda literature in terenskega raziskovanja, vključno z intervjuji v Mariboru, raziskava analizira, kako UA krepi lokalne prehranske sisteme, spodbuja ekološko ozaveščenost ter povečuje čustveno in socialno odpornost urbanih skupnosti. Primerjalni vpogledi kažejo, da imajo pobude UA skupne cilje trajnosti in vključevanja, vendar je njihov uspeh odvisen od tradicije, lokalnega upravljanja, institucionalne podpore in participacije prebivalcev. Primer Maribora ponazarja, kako lahko izobraževalni vrtovi, zadruge in modeli skupnostno podprtega kmetijstva (CSA) povezujejo učenje, pridelavo in socialno interakcijo. Rezultati kažejo, da UA ni zgolj vir hrane, temveč transformativna družbena praksa, ki spodbuja povezanost, trajnost in občutek pripadnosti v sodobnih urbanih okoljih.

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1 Introduction

Urban and peri-urban agriculture (UA/PUA) is a rapidly expanding practice worldwide that integrates food production with community, environmental, and educational functions. It encompasses activities such as vegetable cultivation, small animal husbandry, food processing, and food distribution within and around urban areas. Due to its proximity to urban life, this form of agriculture provides important solutions to global challenges, including climate change, food security, and environmental sustainability. Recent studies estimate that up to 30% of the urban demand for vegetables could be met through urban and peri-urban agriculture (Pradhan et al., 2023).

In addition to providing food, UA offers numerous social, cultural, and environmental benefits. Engaging in such activities promotes social inclusion, strengthens community ties, and improves the mental well-being of both producers and consumers. Recent empirical evidence from the United States of America confirms that urban gardening activities–especially vegetable gardening in low-income urban households–are significantly associated with higher levels of emotional well-being and happiness (Ambrose et al., 2020). These positive effects, such as enhanced social relationships and reduced stress, are particularly important in today's cities, where social isolation is widespread (Pradhan et al., 2023; Hawkes & Acott, 2013).

UA takes diverse forms depending on local traditions, economic conditions, and policy frameworks, yet it consistently pursues the common goal of sustainable urban development. Beyond its social and economic dimensions, UA contributes to environmental resilience by mitigating urban heat islands, enhancing rainwater retention, conserving soil quality, and supporting urban biodiversity (Pradhan et al., 2023). Recent research further indicates that UA can enhance environmental sustainability by reducing greenhouse gas emissions, moderating urban temperatures, managing flood risks, and strengthening biodiversity; however, these benefits depend heavily on appropriate policy support and integration into urban land-use planning (Ebissa et al., 2024). Moreover, studies highlight that UA and green infrastructure together deliver multiple ecosystem services–including provisioning, regulating, cultural, and supporting functions–thus reinforcing their joint potential for sustainable urban planning (Wentworth, 2017). A policy brief by

Margaras & Michelogiannaki (2025) similarly emphasises that UA not only involves food-production activities but also delivers social, educational, and recreational benefits, while its contribution to food security, climate resilience, and social inclusion is increasingly recognised at the EU level.

UA can take many forms depending on local conditions, cultural traditions, and available space. The most common types include household and allotment gardens, community gardens, rooftop and vertical farms, educational and therapeutic gardens, and community-supported agriculture (CSA) systems that directly connect consumers and producers. While household and community gardens focus on self-provisioning and social interaction, CSA initiatives emphasise shared economic responsibility and solidarity between farmers and citizens (FAO & Urgenci, 2016). Other models–such as urban cooperatives, school gardens, and municipal greening programmes–further expand the social and educational dimensions of UA. Together, these diverse approaches form an integrated network that supports local food systems, promotes circular economies, and enhances urban resilience (Pengal & Simoneti, 2015; Lucertini & Di Giustino, 2021; Koopmans et al., 2017).

From a socio-economic perspective, UA generates employment and income opportunities, particularly in disadvantaged urban areas, thereby contributing to reduced food insecurity and improved living conditions. However, the long-term sustainability of these initiatives relies on adequate access to land, infrastructure, technical assistance, and supportive public policies (Pradhan et al., 2023). Furthermore, recent analyses confirm that UA contributes to nearly all of the United Nations' Sustainable Development Goals (SDGs), though its effectiveness depends strongly on local implementation and governance frameworks (Pradhan et al., 2024).

Within this context, the present study aims to explore different forms of UA across selected European cities and to analyse their contribution to individual and community well-being. As part of this comparative approach, the authors first examined the state and forms of UA in their own regions and cities and subsequently conducted fieldwork in Maribor, Slovenia. The central research question guiding the study is therefore: *What forms of urban agriculture exist across different European contexts, and how do they contribute to individual and community well-being?*

2 Methodology

To address the research questions, we adopted a qualitative approach that combined an extensive literature review with fieldwork in the form of a site visit and two expert interviews conducted in Maribor, Slovenia. The fieldwork aimed to provide a deeper understanding of the local context of UA and its social dimensions. During a guided site walk-through, the research team visited key locations in Maribor, including the city's first officially recognised community garden and the Dobrina Cooperative shop in the city centre.

Two semi-structured interviews were conducted to complement the field observations. The first interview was carried out with Simona T. Z., a representative of the Dobrina Cooperative and, at the same time, one of the pioneers behind the establishment of the Community Urban Eco Garden in Maribor during the European Capital of Culture project in 2012. The second interview was conducted with Polonca F., a consumer participating in a CSA scheme, who regularly sources food from the biodynamic farm Zlate Misli while living and working in the urban area.

3 Examples around Europe

We explore different forms and scales of UA in six European cities–Bayreuth (Germany), Prishtina (Kosovo), Budapest (Hungary), Venezia (Italy), Brno (Czech Republic), and Maribor (Slovenia)–to provide a holistic and interdisciplinary perspective on the topic. The comparative analysis highlights how urban agriculture operates in diverse social, cultural, and institutional contexts, revealing both shared opportunities and local specificities that shape its development.

3.1 Urban agriculture in Bayreuth

Although Germany has a highly industrialised agricultural sector (Bauerkämper, 2004), various forms of UA have expanded considerably in recent decades. Waiting lists for *Schrebergärten* (allotment gardens) are consistently long, as residents increasingly seek opportunities for small-scale cultivation and closer contact with nature–often preferring productive gardening over purely ornamental use (Kühn, 2025).

Across Germany, UA initiatives range from allotment and community gardens to self-harvest farms and semi-commercial urban farming models. Studies in the Bonn/Rhein-Sieg region, for example, reveal that motivations for engagement include environmental education, community building, and local food production. However, while UA demonstrates clear potential for more sustainable urban food systems, it still remains a niche practice requiring stronger policy and institutional support (Hirsch et al., 2016).

A particularly prominent form of UA in Germany is *Solidarische Landwirtschaft* (solidarity-based or community-supported agriculture, CSA), which promotes regional and organic farming through direct cooperation between producers and consumers. Members share production costs and harvests, fostering transparency, joint decision-making, and social responsibility. According to the FAO & Urgenci (2016) overview, Germany hosts one of the most dynamic CSA networks in Europe, with such initiatives enhancing trust in local food systems and strengthening community resilience.

In Bayreuth, the SoLaWi Bayreuth initiative exemplifies this model of urban–rural cooperation. It connects local farmers with approximately 70 to 80 urban households, who contribute monthly fees in exchange for fresh, seasonal produce such as vegetables, fruits, and herbs delivered directly from nearby farms (One for the Planet, n.d.). Beyond providing food, SoLaWi Bayreuth plays an active role in environmental education and biodiversity conservation. One of its flagship programmes, Streuobst-Wissen ("Knowledge about Traditional Orchard Meadows"), combines organic farming with nature conservation and experiential learning. The project preserves traditional orchard meadows (*Streuobstwiesen*) around Bayreuth through educational workshops, pruning demonstrations, and school-based activities. It promotes awareness of the ecological value of these peri-urban landscapes while fostering intergenerational learning and community engagement (SoLaWi Bayreuth, n.d.). Together, these examples demonstrate how Bayreuth's approach to urban agriculture bridges the gap between citizens and their surrounding environment, merging food production with education, biodiversity protection, and social inclusion. Such initiatives show that, when supported by municipalities and civic organisations, UA can contribute meaningfully to resilient urban food systems in Germany.

Figure 1: a) Community flea market and b) Fruit trees pruning workshop organised by SoLaWi Bayreuth
Source: SoLaWi Bayreuth (n.d.)

3.2 Urban agriculture in Prishtina

While Kosovo has supported agricultural development primarily in rural areas, urban regions continue to experience a significant loss of fertile land due to rapid urbanisation and construction, thereby limiting opportunities for local food production. Ramadani and Bytyqi (2018) emphasise that rapid urban expansion, unplanned construction, and surface mining have led to substantial losses of fertile agricultural land in Kosovo, underscoring the need for strategic urban planning and the preservation of green spaces.

Small-scale practices such as household and kitchen gardens, however, have shown potential to provide fresh food–especially during periods of economic hardship. For instance, during years of higher unemployment and poverty (2014 and 2017), the area devoted to home gardening increased notably, suggesting that citizens relied on such practices as a strategy for both survival and well-being. Moreover, initiatives such as the Urban Garden at Termokiss in Prishtina have served as positive examples of creating community spaces that strengthen social ties and provide free food for vulnerable groups during the COVID-19 pandemic (Caka, 2022). One notable initiative, the project Bread for All (Figure 1a), was carried out by volunteers of Termokiss to prepare and distribute food to the homeless and socially vulnerable,

demonstrating the role of urban gardens as instruments of solidarity and community resilience (Olegovich Rakhmanin, 2022). Termokiss itself–a former heating-plant building transformed into a community-run centre and urban garden–exemplifies how old industrial infrastructure can be reused for civic and ecological purposes (Figure 1b). It symbolises the broader movement of citizens reclaiming urban space for community use, creativity, and sustainability, thereby "challenging old policies with new practices" (Rexha, 2022).

A particularly notable example of public engagement with urban greening was the temporary Urban Garden at the Heart of Prishtina, installed at Skënderbeu Square on Earth Day (April 19, 2021). The project, organised by UNDP (United Nations Development Programme), UN-Habitat, the Innovation Centre Kosovo (ICK), and UNDCO, remained open for three weeks and aimed to raise public awareness of environmental sustainability, the green economy, and sustainable urban development (Figure 3). This centrally located, short-term intervention demonstrated how public green installations can enhance citizens' connection to nature, increase environmental consciousness, and offer accessible green spaces within a densely built city core (UN Kosovo, 2021).

Figure 2: a) Bread for All project at Termokiss.
Source: Olegovich Rakhmanin, 2022

Nevertheless, Kosovo continues to face major structural challenges, and institutional support for urban agriculture remains limited. Existing legislation on agriculture, spatial planning, and food systems still does not adequately integrate UA or promote community-gardening initiatives (Caka, 2022). Despite these constraints, urban agriculture in Kosovo presents a valuable opportunity to address food-security concerns, strengthen social cohesion, and enhance the overall quality of urban life. Integrating urban agriculture into frameworks for urban planning and sustainable development–through coherent national strategies, legal reforms, targeted subsidies,

and institutional support–could facilitate the creation of healthier, more inclusive, and more resilient urban environments.

3.3 Community gardens in Budapest

UA in Hungary has evolved rapidly over the past decade, especially in the form of community gardens (*közösségi kertek*). According to FAO & Urgenci (2016), Hungary has developed a growing number of local food and community-based initiatives since the early 2010s, often led by civic organisations and informal neighbourhood groups. While agricultural activism is less established than in some neighbouring countries, these initiatives represent a grassroots response to urbanisation, limited access to green spaces, and a renewed interest in sustainable lifestyles.

In Budapest, both small and large community gardens have been established in recent years, many of them located beneath or near large panel-block housing complexes. These gardens have been developed with the support of municipalities and NGOs and are often coordinated by the Hungarian Contemporary Architecture Centre (Kortárs Építészeti Központ) through its Közösségi Kertek – KEK (Community Gardens) programme. Since around 2010, KÉK has been instrumental in promoting urban gardening by developing methodologies, legal frameworks, and pilot projects in collaboration with local authorities, private firms, and civic groups. According to the programme, more than 80 community gardens have been created in Budapest under its coordination (Közösségi Kertek, n.d.).

One of the largest examples is the Kerthatár Community Garden in District IX, which covers approximately 2,600 m² and offers 90 individual plots (Figure 3a). Annual membership fees range from 2,000 to 12,000 HUF (approximately 5–30 EUR), with discounts available for retirees, families with young children, and other vulnerable groups. Due to high demand, waiting lists are common, reflecting the popularity and social value of these shared green spaces (Közösségi Kertek, n.d.). Some other examples described by Mseddi and Simon (2022) further illustrate the diversity of Budapest's community gardens in terms of size, social role, and spatial context. The Kisdiófa Garden (Figure 3b) was established on a small vacant lot in the city centre and functions as a micro-oasis for residents seeking greenery and social contact in a densely built neighbourhood. The Auróra Garden (Figure 3c) forms part of a broader civic and cultural centre, combining organic cultivation with

artistic and social activities that foster inclusion and participatory democracy. The Rózsa Garden is one of the oldest and most structured community gardens in the city, offering individual plots and shared spaces for families and intergenerational learning. Meanwhile, the Tolnai Garden (Figure 3d) demonstrates how temporary use of underutilised land can bring life and cooperation to socially disadvantaged areas, even under uncertain tenure conditions. Together, these examples reveal how community gardens in Budapest contribute to social cohesion, environmental awareness, and the creative reuse of urban space despite challenges of temporality and limited institutional support.

Figure 3: Examples of community gardens in Budapest: a) Kerthatár Community Garden and b) Kisdiófa Garden (source: Közösségi Kertek, n.d.)**; c) Auróra Garden and d) Tolnai Garden** (source: Mseddi & Simon, 2022)

Community gardens in Budapest serve not only as spaces for cultivation but also as hubs for social interaction, recreation, and environmental education. They host workshops, children's programmes, and neighbourhood events, encouraging community cooperation and environmental stewardship. Mseddi and Simon (2022) emphasise that these gardens contribute to "a new urban ecology", fostering environmental awareness while helping residents reclaim agency over urban space.

Their study also reveals that community gardens often act as informal laboratories for participatory urban design, where citizens, NGOs, and local authorities experiment with new models of cooperation and collective governance.

Nevertheless, community gardens in Budapest face several challenges. A recent study by Mseddi and Simon (2022) found that most gardens operate on temporarily leased land, making long-term sustainability uncertain. The authors also highlight the lack of formal legal frameworks, unequal access to resources among districts, and the dependence on a few active NGOs, such as KÉK, for project continuity and advocacy. Despite these limitations, the study concludes that community gardens represent a promising tool for participatory urban design and social innovation when local governments and civil organisations collaborate effectively.

3.4 Urban agriculture in Venezia

UA and PUA in Italy are highly diverse and deeply rooted in regional traditions, yet they have gained renewed importance in recent years through community-based and socially inclusive projects. According to FAO & Urgenci (2016), Italy has one of the most active CSA networks in Southern Europe, with over one hundred local initiatives and cooperatives promoting sustainable food systems, solidarity, and urban–rural linkages. These projects often combine environmental education, short food-supply chains, and social goals, particularly in metropolitan areas such as Milan, Bologna, Turin, and Venice.

Recent research in the Venetian region highlights the growing potential of PUA as a strategic response to climate change and food insecurity. Using the case of Mestre (Venice), Lucertini and Di Giustino (2021) show that transforming under-utilised urban land–such as rooftops, abandoned lots, and peri-urban fields–into productive agricultural areas can both reduce CO_2 emissions and increase local food production. Their findings confirm that UA and PUA can serve as effective tools for climate change mitigation and adaptation while supporting sustainable urban development in Northern Italy.

The fast-paced lifestyle of Italian city dwellers often distances them from agricultural practices, yet this separation has inspired a renewed awareness of food origin, health, and community well-being. UA initiatives thus provide opportunities to reconnect

with nature and promote more sustainable lifestyles. One inspiring example are the Orti della Pace ("Gardens of Peace") in Bologna, a community project that welcomes people with disabilities, trauma survivors, and the elderly, enabling them to participate in gardening and social interaction. The initiative embodies the principle of "taking care of the garden so that it can take care of us," highlighting gardening as both a therapeutic and community-building activity (PilastroBologna, 2025). In Milan, Allegricola represents a cooperative model focused on reclaiming abandoned urban spaces and transforming them into gardens that blend education, recreation, and food production. Located in the Trenno district, it serves as a community hub where families and individuals cultivate vegetables, participate in workshops, and engage in local food networks (Allegricola, n.d.). Similarly, ORME – Orti Metropolitani in Turin functions as a digital platform connecting citizens with urban gardening initiatives and strengthening the visibility of grassroots projects (ORME, 2025).

In the Venetian metropolitan area, UA and PUA have become increasingly visible through initiatives that combine sustainability with social inclusion. The Municipality of Venice has promoted the creation of *orti urbani*–urban gardens designed to foster active ageing and intergenerational exchange. These gardens provide opportunities for residents, especially older citizens, to engage in physical activity, grow their own food, and connect with neighbours, thereby improving social cohesion and well-being (Comune di Venezia, n.d.; La Piazza Web, 2023). Urban gardens are recognised as spaces of high social value (*valenza sociale*), promoting sustainability, inclusion, and a better quality of life. The city currently manages more than 120 municipal gardens distributed across districts such as Zelarino, Favaro, and Marghera, providing land, infrastructure, and technical support to local associations (Comune di Venezia, n.d.).

Beyond these local examples, a broader transformation is emerging among young Venetians who are redefining the relationship between agriculture, innovation, and urban life. As FreedomLab (2023) notes, a new generation of farmers is embracing sustainable practices, short supply chains, and collaborative models that integrate traditional know-how with digital tools. This movement reflects the wider trend of agri-food urbanism–a form of sustainable development that reimagines food production as an integral part of urban design and community resilience.

3.5 Urban agriculture in Brno

In the Czech Republic, CSA has experienced rapid development over the past decade. The first CSA partnership appeared in 2009, and by 2020 there were approximately 80 initiatives serving around 2,000 families. These are coordinated through networks such as the Association of Local Food Initiatives (AMPI) and Komunitou Podporované Zemědělství or KPZ (KPZ, n.d.). This model provides an alternative to industrial food systems and strengthens local communities by fostering trust-based relationships between farmers and citizens.

In Czechia, the CSA movement operates through the national platform KPZ, which serves as the central hub for such type of UA. The network provides education, coordination, and communication between farmers and consumers, supporting the development of local food systems based on solidarity and transparency. Through its interactive map, the platform connects dozens of active CSA groups and farms across the country, helping citizens find nearby producers and join local partnerships. In addition to coordinating national activities, KPZ offers training courses, educational videos, and practical guidelines for members (farmers and consumers), promoting fair prices, shared responsibility, and local (organic) production methods. This decentralised, participatory model demonstrates how CSA in Czechia functions not only as an alternative food network but also as a community-based approach to sustainable agriculture and civic engagement (KPZ, n.d.).

UA in Czechia also takes the form of community gardens and allotments, which have become increasingly popular in cities such as Prague and Brno. Sovová (2015) examines the everyday practices of Brno's allotment gardeners, revealing how they engage in "quiet sustainability"–small-scale, self-provisioning activities that promote environmental awareness, food self-sufficiency, and community connection. Her findings show that allotment gardens function not only as productive spaces but also as important sites for social interaction and informal environmental education. Building on this local perspective, Pixová and Plank (2024) analyse urban food governance in Czech post-socialist cities and identify a persistent gap between municipal strategies and grassroots initiatives such as community gardens and local food networks. While sustainability and food issues are gradually entering policy agendas, urban agriculture remains marginalised, with limited institutional support

and weak cooperation between public authorities and civic actors. Together, these studies highlight that urban agriculture in Brno is sustained primarily by bottom-up engagement rather than policy frameworks, functioning as both a social and ecological practice that strengthens local resilience and urban well-being.

The Kraví hora allotments in Brno are a prominent example, covering 14 hectares in the city centre and encompassing more than 500 individual plots (Koopmans et al., 2017). Established in the 1930s, the site has evolved into a multifunctional space where food production, recreation, and social life intersect. The area also features a public park, swimming pool, and astronomical observatory, illustrating the integration of productive and recreational urban green spaces. Authors highlight that Kraví hora plays a crucial "place-making" role within Brno: gardeners perceive their plots as personal and family heritage, often passed down through generations. This sense of belonging transforms the allotments into a form of "home" within the city, reinforcing social ties and continuity across generations (Figure 5b). Despite the site's cultural and historical value, however, the allotments remain under pressure from urban redevelopment plans that propose converting parts of the area into public parks or sports facilities. This tension between the private and public use of urban green space exemplifies broader planning challenges for urban agriculture across Europe.

Beyond the long-established Kraví hora site, Brno hosts several other allotment and community gardens that play important ecological and social roles. A study by researchers from Masaryk University, reported by Solaříková (2021), revealed that urban gardens across the city function as vital microhabitats supporting pollinators, birds, and soil biodiversity. These green enclaves also help regulate urban microclimates and provide residents with recreational and psychological benefits. However, many of these sites face increasing pressure from urban development, as zoning plans often reclassify garden areas for potential construction. The findings underline that urban gardens in Brno represent not only spaces of self-provisioning and community life but also important ecological assets that contribute to the city's environmental resilience.

3.6 Urban agriculture, happiness and the community – a case study from Maribor

UA in Maribor represents a vibrant mosaic of practices that connect education, community development, ecological awareness, and sustainable food systems. Various forms of UA and PUA coexist in the city–from educational gardens in schools, kindergartens, and the university to community gardens, cooperatives, and CSA models. These initiatives illustrate how food production, learning, and social interaction are interwoven into the urban fabric, contributing to a greener and more connected city. This diversity is deeply rooted in Slovenia's long-standing tradition of small-scale food production and home gardening (MKGP, 2020). Such cultural orientation toward gardening as both a practical and emotional activity provides fertile ground for the development of diverse UA initiatives–many of which have found a home in Maribor.

One of the most widespread programmes in Slovenia is the Organic School Gardens Programme (*Šolski ekovrtovi*), launched in 2011, which now supports more than 400 schools and kindergartens in establishing organic gardens integrated into the curriculum (Inštitut za trajnostni razvoj, n.d.). These gardens act as living classrooms for science, mathematics, art, and language learning while promoting ecological awareness and cooperation. In 2025, the national Urban Garden Stories competition involved approximately 1,700 mentors and 17,500 students across Slovenia, illustrating the educational and social reach of school-based urban agriculture (Interreg Central Europe, 2025).

Building on this educational approach, a similar initiative has been developed at the University of Maribor, where student dormitories in the Koroška vrata district have created an educational garden featuring organically managed grapevines, vegetables, and herbs (Figure 4). Installed in 2021, the raised-bed gardens allow students to grow their own produce and promote sustainable habits within campus life. The project–coordinated by the Student Council of the University Dormitories–encourages peer collaboration and environmental stewardship, demonstrating how urban agriculture can foster community spirit and sustainability among young adults (personal communication with a former student involved in the project).

As explained by Simona T. Z., our interviewee–who was involved from the very beginning and is now employed at the Dobrina Cooperative–the first officially recognised Community Urban Garden in Maribor was established in 2012 during the European Capital of Culture programme Urban Furrows. Supported by the Seed Guardians Association, the gardeners founded the Urban Eco Garden Association, which leased the land from the municipality at a symbolic price and committed to organic cultivation, making it the first community-based, organically certified urban garden in Slovenia (group certification only became feasible after amendment of the EU organic regulation Reg. (EU) 2018/848, effective in 2022). The garden covers approximately one hectare and includes around 50 plots, eight tool sheds, and a community house for meetings and workshops, all accessible to people with disabilities. Participants receive training in organic farming techniques and regularly attend workshops focused on sustainability and knowledge transfer to younger generations. Pengal and Simoneti (2015) recognise this initiative from Maribor as a milestone in the development of community gardening in Slovenia, demonstrating how local collaboration between citizens, NGOs, and municipal authorities can transform neglected urban spaces into productive and socially inclusive environments.

Figure 4: Student community garden.
Source: own

Today, the Urban Eco Garden Association remains active in promoting sustainable resource management and community engagement. It is part of the national platform Dovolj za vse – Sustainable Community Resource Management, which

connects local initiatives in food sovereignty, social inclusion, and environmental education. The association also participates in national and international projects and has produced the *Manual for Establishing a Community Garden* in 2017, offering practical guidelines for municipalities and community groups (Dovolj za vse, n.d.).

Figure 5: a) Entrance and b) Community garden in Maribor
Source: own

Beyond municipally supported initiatives, other local actors also play an important role in connecting producers and consumers. One of the most active actors in Maribor is the Cooperative Dobrina, founded in 2011 by small farmers from the Slovenske gorice region with the aim of supporting sustainable family farming, ensuring fair payment for producers, and improving access to high-quality local food. In 2015, the cooperative obtained the official status of a social enterprise (Zadruga Dobrina, n.d.).

As indicated on its website and explained by Simona T. Z., an employee interviewed for this study, the cooperative currently has around 130 members, of which slightly more than 60 small farms are actively offering their products at the time of writing this contribution. Maribor residents can access local produce through Dobrina's shop in the city centre, its online store, or by subscribing to weekly or biweekly boxes of seasonal fruit and vegetables–small (3 kg for 10 €), medium (5 kg for 15 €), or large (8 kg for 20 €). The boxes are delivered free of charge to households in Maribor

and its surroundings. In its stores, the cooperative offers over 600 products across diverse categories, including fruit, vegetables, grains, oils, vinegars, beverages, meat and dairy products, pastries, honey, and artisanal goods. The available food items are produced either organically, under conversion to organic farming, through integrated production (a national standard), or by small-scale conventional farms. Dobrina also supplies over 70 public institutions, such as schools and kindergartens in the Maribor and Slovenske gorice regions, and provides catering services featuring ingredients produced by its members. These include traditional finger foods, soups, desserts, and local beverages such as wine, spirits, and juices. As a legal entity, the cooperative actively participates in projects co-financed through various measures of the Common Agricultural Policy and collaborates within consortia of local action groups, contributing to regional development and sustainable food systems (Simona T. Z., interview, Maribor, August 2025; Zadruga Dobrina, n.d.).

A different but complementary model of urban–rural cooperation in Maribor is represented by a CSA system operated by the biodynamic farm Zlate Misli (Golden Thoughts), which holds an international Demeter certification. Polonca F., our second interviewee, who lives and works in Maribor and has been a long-term customer of the farm, shared further details about how this system operates. As she explained, her family sources most of its vegetables from Zlate Misli through a prepayment scheme. According to her, the process is quite user-friendly: customers top up an online virtual wallet, depositing either smaller sums or a larger contribution that effectively represents a share in the farm's annual production–similar to crowdfunding. Depending on the balance in their account, they can fill a virtual box each week (or every other week) with the vegetables currently available on the farm. On average, a box weighs around 6.5 kg and includes seven or more types of seasonal vegetables, although customers can adjust the content according to their preferences. Additional products such as grains, fruit, preserves, or other farm produce can also be ordered. Orders are picked up weekly at a designated, cost-free parking area in Maribor, accessible by all means of transport. According to Polonca F., this system ensures access to high-quality organic food while fostering a sense of community, trust, and shared responsibility between producers and consumers. However, she also noted that CSA participation still mostly attracts individuals with strong ecological awareness and a greater willingness to pay for sustainable food, highlighting the need for broader consumer education and outreach (Polonca F., interview, Maribor, August 2025).

Founded in 2012 in Jarenina (NE Slovenia), the 16-hectare farm Zlate Misli is run by Maja and Matjaž, a young couple with three children who combine farm family life with scientific expertise. Both hold PhDs in agricultural sciences, with Matjaž being the first Slovenian to earn a doctorate in biodynamics. The farm produces a diverse range of vegetables, fruits, and field crops throughout all four seasons, applying organic and biodynamic methods combined with regenerative practices such as green manuring, mulching, and minimal soil cultivation. More than 40 vegetable species and 12 apple varieties are grown, along with blueberries, hazelnuts, ancient grains (einkorn, emmer, spelt), sunflowers, and gluten-free crops such as buckwheat and millet. Unheated greenhouse cultivation enables year-round vegetable production. The farm also integrates education and practical training, offering internships and seasonal learning experiences to students and aspiring farmers from Slovenia and abroad. Over the past decade, more than 250 participants have taken part in these programmes, gaining hands-on experience in sustainable and biodynamic production (Zlate Misli, n.d.). Through this multifaceted approach–combining food production, education, and community engagement–Zlate Misli demonstrates how small-scale farms can successfully implement the principles of the circular bioeconomy and CSA within the context of UA and PUA

4 Conclusion

This study explored how urban and peri-urban agriculture (UA/PUA) across six European cities–Bayreuth, Prishtina, Budapest, Venezia, Brno, and Maribor–contributes to individual well-being, community cohesion, and sustainable urban development. In all cases, UA emerges as far more than food production: it is a social, cultural, and ecological practice that reconnects people with land, nature, and one another.

The cases demonstrate the wide diversity of UA forms–from solidarity-based agriculture and traditional orchards in Bayreuth, to community and temporary gardens in Budapest and Prishtina, municipal *orti urbani* in Venice, and long-established allotments in Brno. Despite different contexts, shared patterns are evident: UA strengthens community ties, enhances biodiversity, and improves urban resilience, yet faces recurring challenges such as insecure land tenure, fragmented institutional support, and limited accessibility beyond environmentally aware citizens.

The Maribor case provides a detailed example of how multiple initiatives can interact within one city, ranging from school gardens and student community plots to the Dobrina Cooperative and biodynamic CSA models such as Zlate Misli. Together, they illustrate how food production, learning, and social engagement can intertwine to support emotional well-being, sustainability, and local food security. At the same time, interviews revealed that advanced forms like CSA still mainly attract citizens already committed to sustainable lifestyles.

Overall, UA represents a promising but underutilised element of sustainable urban development. Its long-term success depends on: (i) secure access to land and integration into urban planning; (ii) inclusive and affordable participation supported by education and infrastructure; and (iii) stronger roles for cooperatives, schools, and civic networks linking producers, consumers, and municipalities. When understood as a multifaceted strategy rather than a marginal activity, UA can substantially contribute to healthier, more resilient, and socially connected European cities.

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