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DOI: **10.5937/greenb26006B**
Research paper

MULTIPLE BENEFITS OF COMMUNITY GARDENS IN MULTIFAMILY HOUSING AREAS: RODA-RODA-GASSE, VIENNA

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Abstract

Community gardens are increasingly recognized as small-scale but highly effective interventions for improving the quality of life in multifamily housing areas. Inherited housing estates often contain underused or insufficiently activated open spaces, whose spatial, social and environmental potential remains only partially realized. This paper examines the multiple benefits of community gardens in the context of urban regeneration, focusing on the case of the Roda-Roda-Gasse community garden within the Oscar-Helmer-Hof municipal housing estate in Vienna. The research is based on a review of relevant literature and case study analysis, with particular attention to the transdisciplinary planning and participation process through which the garden was developed. The paper analyzes how the implementation of a community garden can contribute to the transformation of an unused green area into an active shared space that supports residents' participation, social interaction, environmental awareness and a stronger sense of belonging. Special emphasis is placed on the social, spatial-functional, environmental, health-related and governance benefits of the project. The findings indicate that community gardens should not be understood only as spaces for gardening, but as participatory tools for the regeneration of residential open spaces and the strengthening of local communities. The Roda-Roda-Gasse case demonstrates that, with adequate institutional support, facilitation and resident involvement, community gardens can become important elements of sustainable and inclusive housing environments. The paper concludes that this model may provide useful guidelines for the revitalization of open spaces in multifamily housing areas with similar spatial and social challenges.

Key words: *community gardens, multifamily housing, urban regeneration, open spaces, quality of life*

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1. INTRODUCTION

The quality of life in multifamily housing areas depends not only on the architectural characteristics of residential buildings, but also on the condition, accessibility and everyday usability of their open spaces. In inherited housing estates built after World War II, open spaces were often planned as important parts of residential comfort, recreation and neighbourhood life. However, long-term problems of maintenance, unclear responsibilities, changing lifestyles and insufficient adaptation to residents' needs often reduce their social, functional and ecological values [1].

Open spaces in multifamily housing areas have a multidimensional role. They provide opportunities for recreation, informal encounters, children's play, contact with nature, visual comfort and everyday outdoor activities. Their quality is therefore related to spatial design, but also to social sustainability, environmental performance and residents' identification with the living environment [1, 2]. When such spaces remain unused or poorly organized, they may become residual areas rather than active components of housing quality.

In this context, community gardens can be understood as small-scale interventions with the capacity to produce wider spatial and social effects. They transform passive lawns or unused green areas into shared places of cultivation, communication, learning and collective responsibility. Although community gardens are sometimes discussed within the broader field of urban agriculture, their relevance for multifamily housing areas is not primarily connected with food production. Their main value lies in the activation of common open spaces and in the creation of social relations around everyday care for the environment [3, 4].

The paper focuses on the Roda-Roda-Gasse community garden, located in the Oscar-Helmer-Hof municipal housing estate in Vienna. This case is particularly relevant because it was developed within Vienna's municipal housing system and is identified as the first community garden in a council housing block of the City of Vienna [5]. The project demonstrates how gardening can be introduced into a collective housing environment through institutional support, facilitation, resident participation and self-organization [5-7]. Recent research on RE:RO:DA also frames Oscar-Helmer-Hof as a post-war municipal housing estate with generous but underused open spaces, infrastructural limitations and social challenges, which confirms the relevance of the case for discussing open-space retrofit and community-based regeneration [8].

The aim of the paper is to examine the multiple benefits of community gardens in multifamily housing areas, using the Roda-Roda-Gasse case as the research platform. The main research question is: How does the implementation of community gardens within urban regeneration projects contribute to improving the quality of life in multifamily housing areas? Following the logic of case-study papers that examine multiple benefits of regeneration measures, the paper first presents the project context, then the implementation process, and finally the main categories of benefits [2]. Methodologically, the paper is based on a qualitative case study approach, combining a review of relevant literature, analysis of available project documentation and secondary research sources related to the Roda-Roda-Gasse community garden. The contribution of the paper lies in systematizing the multiple benefits of community gardens in

multifamily housing areas and in positioning them as participatory, spatial and governance instruments of small-scale urban regeneration.

2. URBAN REGENERATION PROJECT: RODA-RODA-GASSE, OSCAR-HELMER-HOF, VIENNA

The Roda-Roda-Gasse neighbourhood garden is located within Oscar-Helmer-Hof in Strebersdorf, in Vienna's 21st district, Floridsdorf (Figure 1a). Oscar-Helmer-Hof was built between 1960 and 1967 and contains 791 apartments distributed across 102 staircases. It is a municipal housing estate characterized by three- to eight-storey linear residential buildings and relatively generous green open spaces [5, 8] as shown in Figure 1b. The garden is positioned at the edge of the estate, near a busy road, but separated from it by a slope and a pedestrian path.



Figure 1. Roda-Roda-Gasse neighbourhood: a) spatial context; b) open space before regeneration
Source: [8]

The project of community garden started in autumn 2008 as a pilot initiative introduced by Verein Wirbel on a previously unused lawn. The selected plot had an area of about 700 m2 and was chosen in cooperation with Wiener Wohnen, the tenants' advisory board of Oscar-Helmer-Hof, the local customer service centre of Wiener Wohnen and Verein Wirbel. This institutional constellation is important because it shows that the project was not only a spontaneous gardening initiative, but a negotiated intervention within an existing municipal housing framework.

A loan-for-use agreement was concluded between Wiener Wohnen and Verein Wirbel, while the project also received financial support from the City of Vienna through relevant municipal departments. The project paid special attention to the inclusion of women, both in everyday use of the garden and in taking formal roles within the new gardening community. This aspect is relevant for understanding the garden not only as a spatial intervention, but also as a tool for more inclusive participation in shared residential environments.

The first residents were informed through the tenants' advisory board and notices placed in the staircases of the housing estate. After initial information meetings on the future garden site, a group of interested tenants was formed. In 2009, 22 plots of 9 to 15 m2 were prepared and allocated to gardeners; later, the number of plots was increased, and by spring 2010 the garden was cultivated by 25 tenants and their families [5].

The project can be understood as a specific form of urban regeneration because it transformed an underused open space into a socially active and collectively managed place. It did not involve large-scale physical restructuring, but rather a precise intervention that changed the meaning and everyday function of a part of the housing estate. In this way, Roda-Roda-Gasse illustrates how small interventions in open spaces can generate wider effects on community life, spatial identity and residents' relationship with their living environment.

3. IMPLEMENTATION OF COMMUNITY GARDENS WITHIN THE URBAN REGENERATION PROJECT

The implementation of the Roda-Roda-Gasse community garden was based on the activation of unused spatial potential through a participatory and facilitated process. The garden included individually cultivated plots, common areas for sitting and meeting, circulation paths, space for children's movement and areas for storing garden equipment. This spatial organization made it possible to combine individual use with collective interaction.

The plan of the garden shows a clear division between cultivated beds and shared surfaces, which is important for reducing conflicts and supporting different ways of using the space (Figure 2). Some users may primarily cultivate their plots, while others may use the garden as a place for meeting, resting or observing gardening activities. In this sense, the garden was not planned only as a productive area, but as a neighbourhood space with several degrees of participation [7].

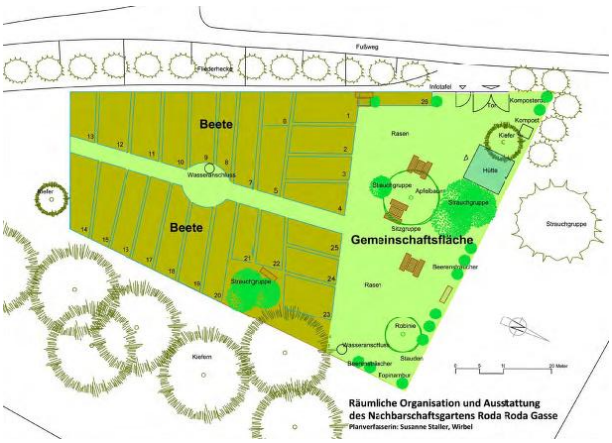


Figure 2. Schematic spatial organization of the Roda-Roda-Gasse community garden, Source: [5]

The implementation process included both technical and social preparation. A fence was installed, a water connection was provided, the area intended for plots was prepared, and paths were covered with wood chips through joint work by the members. All members received a garden pass with the most important rules and a key, which enabled independent access to the garden. The agreed time for garden work was set between 6 a.m. and 9 p.m.

A central feature of the project was the role of facilitation. During the first gardening season, representatives of Verein Wirbel regularly supported the gardeners, helped

with practical questions, organized composting and workshops, and mediated in situations of misunderstanding or conflict. Over time, this support was gradually reduced, which encouraged a transition from external guidance toward stronger self-organization [5, 6].

The project also had a research and learning dimension. The accompanying research examined the process of introducing the garden, its effects on users and neighbours, and the conditions needed for a wider implementation of neighbourhood gardens in Vienna's municipal housing. The methodology included protocol analysis, participant observation, SWOT analysis, interviews with gardeners and relevant actors, short interviews with passers-by, interpretation workshops and content analysis. This makes the case particularly valuable as a documented example for future housing regeneration projects.

The implementation process therefore combined physical, social and organizational dimensions. The physical transformation created a new garden space; the social process created a group of users; and the organizational framework defined rules, responsibilities and support mechanisms. The Roda-Roda-Gasse case shows that community gardens in multifamily housing cannot be reduced to the allocation of land. They require facilitation, governance, shared agreements and continuous communication among stakeholders [5, 6, 7].

4. MULTIPLE BENEFITS OF COMMUNITY GARDENS

4.1. Social benefits

One of the most important benefits of community gardens is the strengthening of social cohesion. Gardening activities create opportunities for residents to meet, communicate and cooperate in an informal setting. In multifamily housing areas, where everyday encounters are often limited to staircases, entrances or circulation areas, a shared garden can provide a more meaningful framework for neighbourly interaction.

The accompanying research on Roda-Roda-Gasse identified the garden's role as a place of social contact as one of the most frequently mentioned effects on individual users. The garden made it possible to create new contacts, maintain existing acquaintances and develop communication gradually, without forcing social interaction. This is important because the garden allows different levels of sociability: residents may participate intensively, occasionally or mainly through quiet individual work (Figure 3).



Figure 3. Everyday use and social interaction in the Roda-Roda-Gasse community garden. Source: [5]

The Roda-Roda-Gasse garden also illustrates the link between community gardening and intercultural contact. The first gardeners and their families had different cultural backgrounds, including Austrian, Bosnian, Egyptian, Indonesian, Iranian and Turkish backgrounds [5]. Such diversity makes the garden a space where social relations can be built through shared activity rather than only through formal neighbourhood programmes. Similar effects have been emphasized in research on community gardens and social cohesion [9, 10, 11].

4.2. Spatial and functional benefits

Community gardens improve the spatial and functional quality of open spaces by transforming underused green areas into active and recognizable places. Many inherited housing estates include large lawns or green surfaces that contribute visually to the residential environment but do not necessarily offer clear possibilities for everyday use. When such areas are reprogrammed as community gardens, their functional value increases substantially.

The Roda-Roda-Gasse project demonstrates how a previously unused lawn can become a shared place with a clear purpose (Figure 4 a, b). The introduction of plots, paths, common areas and regular activities increased the usability of the space and gave it a recognizable identity within the housing estate [7]. The garden also made issues of neighbourhood coexistence visible and negotiable, because themes that existed in the wider housing community could be addressed within a smaller and more concrete shared setting [5, 7].



Figure 4. Spatial and functional benefits: a) activated open space; b) place attachment. Sources: a) [7]; b) [8].

The spatial-functional benefit is closely related to residents' identification with the place. When residents participate in shaping and maintaining a space, they are more likely to perceive it as part of their own living environment. This strengthens territoriality, everyday care and attachment to the neighbourhood [1].

4.3. Environmental benefits

Community gardens contribute to environmental quality by increasing the diversity and intensity of vegetation within housing estates. Even when they are modest in size, they can improve the ecological value of open spaces through planting, soil care,

support for pollinators and the creation of small habitats. Their environmental value is therefore both physical and educational.

This environmental role is consistent with contemporary retrofit approaches in open spaces, where vegetation, soil permeability, biodiversity, shading and water retention are considered together. In the RE:RO:DA study, open-space retrofit is linked to climate resilience and to the creation of social outdoor spaces; community gardens fit this logic because they combine planting with everyday use and collective care [8].

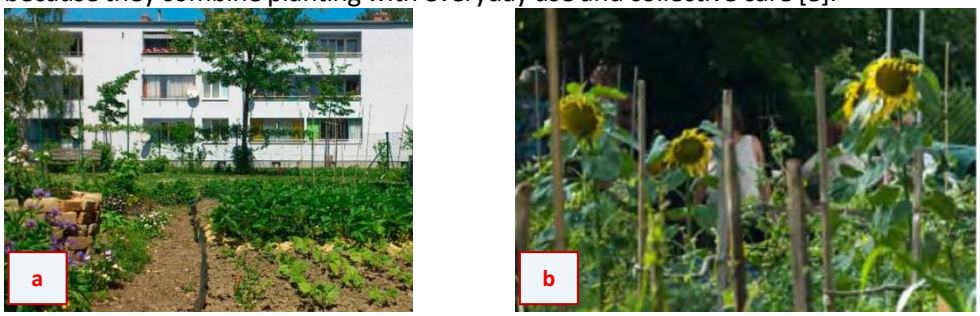


Figure 5. Environmental benefits of community garden a) productive open space; b) urban biodiversity. Sources: a) [8], b) [7].

Residents who participate in gardening gain direct experience of seasonal changes, plant growth, composting, water use and everyday ecological practices. This practical relationship with nature can strengthen environmental awareness more effectively than passive observation of green areas. Research on community gardens emphasizes their role in creating a more active relationship between urban residents and natural processes [12, 13, 14].

In dense urban environments, such spaces may also improve microclimatic comfort by introducing more varied vegetation and reducing the monotony of poorly used surfaces. Urban green spaces are widely recognized as important for health, climate adaptation and the improvement of urban living conditions [15]. Community gardens add an active and participatory dimension to this broader green-space function.

4.4. Health and well-being benefits

Community gardens can positively influence health and well-being by encouraging outdoor activity, contact with nature and everyday relaxation. Gardening involves light physical activity, sensory experience and time spent outside, which can contribute to both physical and psychological well-being.

In the Roda-Roda-Gasse research, gardeners described the garden as a place for meaningful activity, recreation, success experiences, stress relief and contact with nature [7]. Several users connected gardening with memories of childhood or their country of origin, which suggests that the garden can also support emotional continuity and personal identity [5, 7].



Figure 6. Health and well-being benefits of community garden: a) relaxation; b) physical activity; c) children's recreation.
Sources: a) https://donaufeld.wordpress.com/2010/05/31/nachbarschaftsgarten/; b, c) [5].

Studies on community gardening indicate positive effects on psychosocial outcomes, community well-being and health-related behaviour [16]. Contact with nature has also been associated with restoration, stress reduction and improved mental health [17], [18]. For residents of multifamily housing areas who do not have private gardens, community gardens provide an accessible opportunity to engage with nature close to home (Figure 6 a, b, c).

4.5. Participatory and governance benefits

The Roda-Roda-Gasse case is particularly important because it demonstrates the governance dimension of community gardens. Shared gardens require rules, communication, collective decisions, maintenance responsibilities and the ability to resolve everyday issues. These processes can strengthen residents' capacity for self-organization and shared management of common spaces.

The accompanying research identified the transition from external support to self-organization as one of the central themes of the project [5], [7]. The role of Verein Wirbel gradually shifted from leading and organizing toward supporting the gardeners' own structures. This transition is important because long-term sustainability depends on whether the garden community can continue to function beyond the initial project phase [5, 6, 7].

The governance benefit of a community garden is also related to collective resource management. The garden creates a small-scale common resource that must be shared, negotiated and maintained. This makes it relevant to broader discussions on commons and collective management [19]. In the context of multifamily housing, such practices can strengthen the culture of shared responsibility for open spaces.

Mayrhofer's analysis shows that the co-creative process helped participants move towards stronger forms of involvement and self-organization [6, 7]. Such support is important where social diversity, language barriers, lack of initiative or previous negative experiences may limit participation. The project therefore offers useful lessons for regeneration initiatives in housing estates with similar spatial and social challenges.

5. CONCLUSION

The analysis of the Roda-Roda-Gasse community garden shows that community gardens can play an important role in the urban regeneration of multifamily housing areas. Their contribution is multidimensional and includes social, spatial-functional, environmental, health-related and governance benefits. The project demonstrates that an unused green area within a housing estate can be transformed into an active shared space that supports everyday interaction, resident participation, environmental learning, outdoor activity and a stronger sense of belonging.

The Roda-Roda-Gasse case is particularly valuable because it shows that community gardens can be implemented within municipal housing, where spatial, institutional and social conditions may be complex. Its success depends on the combination of available open space, resident involvement, institutional support and professional facilitation. This confirms that community gardens should not be treated as isolated greening interventions, but as integrated tools of urban regeneration.

For multifamily housing areas with underused or neglected open spaces, community gardens can provide a practical and adaptable model of improvement. In the context of Serbian housing estates, where many open spaces face problems of poor maintenance, insufficient use and weak resident participation, the Roda-Roda-Gasse example may offer useful guidelines. These include participatory planning, clear management models, cooperation between housing institutions and residents, and the recognition of open spaces as resources for improving quality of life.

The paper concludes that community gardens can contribute significantly to the creation of more sustainable, inclusive and socially active housing environments. Their multiple benefits make them relevant not only as green spaces, but as planning, design and governance instruments for the revitalization of multifamily housing areas. By clarifying the social, spatial-functional, environmental, health-related and governance dimensions of the selected case, the paper provides a transferable analytical framework for considering community gardens in similar multifamily housing contexts. In this way, they can be positioned within broader retrofit strategies for post-war housing estates, where existing buildings, open spaces and social infrastructures need to be improved together [8].

ACKNOWLEDGMENT

This research was supported by the Ministry of Science, Technological Development and Innovation of the Republic of Serbia, under the Agreement on Financing the Scientific Research Work of Teaching Staff at the Faculty of Civil Engineering and Architecture, University of Niš - Registration number: 451-03-34/2026-03/200095 dated 05/02/2026.

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