

Urban Gardening as a Multifunctional Tool to Increase Social Sustainability in the City

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Abstract – The concept of urban gardening varies a lot in terms of gardening forms and main purposes. Followed by changes in people life style, growing interest in healthy living and sustainable urban development, the aims of urban gardening become more complex. The product of urban garden, e. g. vegetables or ornamental plants, nowadays plays less important role, as the main focus is on societal issues, urban regeneration, education and health. Thus, this article provides evidence of multi-functionality of urban gardening to address the variety of societal issues across people of different age and cultural background. Case studies from Malmo, Birmingham and Riga show how urban gardening contributes to social integration, inhabitants' well-being and urban regeneration.

Keywords – Health, social cohesion, sustainable urban development, urban gardening.

INTRODUCTION

The concept of urban gardening includes a variety of gardening forms and functions. Early data about the presence of urban gardening in the city dates back to the time B.C.E [1]. However, the contemporary form of allotment gardening appeared only in the second part of the 19th century in Great Britain [2]. From the early 20th century, allotment gardens started to pop-up all around Europe. Today urban allotment gardens are managed by various institutions and in some cities of Europe the number of allotment plots reaches almost 1 million (Germany with the total number of 934 056 allotments, Poland with 964 682 allotment plots) [3].

Followed by changes in people life style, growing interest in healthy living and sustainable urban development, also urban gardens are gaining new features and can be used to reach various goals. Western European countries show a growing interest not only in traditional allotment gardens (which in some cities have more than 100 years long history), but also new forms of gardening are getting more attention. So for example, the number of community gardens, guerilla gardens, educational and therapeutic gardens is growing in different areas all over Europe. Nowadays, the product of these urban gardens, vegetables or ornamental plants, play less important role, as the main focus is on societal issues. Various research results showed that nature has a positive impact on physical and mental health of people [4]. Following this idea, the popularity of rehabilitation programs in urban gardens is increasing [6]. Last decade was also crucial in terms of emerging urban gardening forms in Central and Eastern parts of Europe. Community and educational gardens appeared in Budapest, Ljubljana (first community garden opened in 2010) and in Prague (in 2011).

Sustainability is one of the key factors of present urban development. Various studies evaluate quality of life in relation to sustainable development. This combined evaluation includes a much broader set of attributes, which can be divided by such categories as environmental issues and access to nature, urban design, tolerance, education, biodiversity and attractiveness, socio-cultural environment, recreation, etc. [9]. Following this, one of the tools to address environmental issues are urban gardens. A research conducted in Barcelona in 2010 showed that despite the fact that all ecosystem services provided by community or allotment gardens are of high value, cultural services are considered to be the most important [5]. The role of urban gardening in global water and carbon cycles is not very high. However, garden can play crucial role in local energy, pollination and circulation of substances. Gardens can help to improve soil quality, prevent soil erosion, minimize negative impact of drainage water and regulate microclimate. Despite these positive features, there are certain risks. The research in Portugal and Berlin concluded that special attention needs to be paid to the location of urban gardens in relation to traffic roads and railroads, which have a negative impact on soil quality. Urban air quality can also appear to be a problem, however this problem can often be solved by washing the grown products [7], [8].

In addition to economic and environmental sustainability, there is also social sustainability, which according to Peter Hall has been disregarded in widespread sustainability debates, as priority has been given to economic and environmental issues [10]. There are several definitions of social sustainability, yet they all describe this type of sustainability as set of principles that address equity and health, notions of happiness and wellbeing. It combines design of the physical realm to support social and cultural life, citizen engagement and place for people to evolve [10]. These social and cultural indicators appear to be crucial for building vibrant and inclusive communities. Following that data, urban gardening can be considered as an important tool to support social sustainability as it implies features that promote health, wellbeing, social integration, etc.

This article provides evidence of multi-functionality of urban gardening in improving social sustainability for people across different age and culture groups. Research methods include data collected from on-site semi-structured interviews with gardeners, NGO representatives and garden managers in Malmo, on-site observations in Birmingham and semi-structured interviews with project authors or managers in Riga, and on-site observations. The aim is to prove the importance of societal issues addressed by urban gardens and to illustrate further development.



Fig. 1. Community garden in the neighbourhood of *Seved*, Malmö [Photo: A.Korolova].



Fig. 2. Community garden in Birmingham [Photo: A.Korolova].

I. SOCIETAL ISSUES

Spending time in the nature or just looking at natural environment appears to have positive influence on people health [4]. According to various research data, urban gardening is one of the most popular recreation opportunities, which are related to close interaction with the natural environment. So, for example in the UK 27 mln people (around 40 % of total population) are engaged in urban gardening activities. In the United States of America, this number reaches 117 mln people (every 3rd person), and in Japan 32 mln (every 4th person) [5]. Gardening promotes increase in self-esteem, supports improvement of psycho-emotional health, helps to identify oneself with the community, promotes sense of belonging and improves cognitive functions. So, for example studies in South Korea in 2014 showed positive results in improvement of psycho-emotional health. Two test groups consisting of women with similar level of psycho-emotional disorder were participating in an experiment, where one group was engaged in gardening activities and the other was excluded from this type of actions. The results proved that urban gardening classes supported improvement in psycho-emotional health and gave hope for better future. In turn, health indicators of the group, which was excluded from gardening classes, remained the same [6]. Furthermore, the research data in the Netherlands and the USA provides evidence on efficiency of urban gardening therapy in physical health questions [5].

Besides health issues, one of the emerging challenges in many European cities is social integration. Of importance are sense of community identity and belonging, tolerance, respect and engagement with people of different age and with different cultural and social background [10]. Community gardens in residential areas appear to be a good tool to promote social cohesion and strengthen sense of community. So for example community garden

in Malmö works in various directions: promotion of social integration for people with different cultural background, support of cooperation of different age groups, collaboration between property owners, community, students and professionals.

A. Social Sustainability Issues in the Case of Malmö Community Gardens

Community garden in neighbourhood *Seved* was created in 2010 with an aim to involve children in neighbourhood activities and promote physical activity. After three years, garden territory has been increased (Fig. 1). Thus a new form of community garden – vertical garden has been introduced. The facade garden aimed to show the potential of vertical surfaces to act as green nature territories. The concept of inclusion was complemented with collaboration of students and professional architecture office while creating a vertical garden structure [16]. The plants are managed by local inhabitants and NGO representatives. The *Seved* area in particular is described as a dynamic and diverse living environment. Inhabitants of *Seved* have different social, economic and cultural background. Semi-structured interviews performed in 2015, showed that this type of neighbourhood activity involves not only Swedish people, but also people coming from Poland, Denmark, Bosnia, Finland, Philippines and Algeria, thus playing an important role in social integration [11]. The analysis of gardeners' age showed that gardening attracts people from early childhood (the youngest participant being 4 years old), and is also enjoyable for adults and seniors (the oldest gardeners being around 80 years old). According to surveys, different aspects of gardening, such as health, well-being and social integration have been evaluated very highly (with general score showing 4.9 points out of 5), thus, fresh food produced there was rated with 3.64 points of importance, which proves the statement



Fig. 3. Architects' garden in *Ķīpsala* [Photo: A.Koroļova].



Fig. 4. Mobile garden in *Jugla* [Photo: O. Trebuhina].

that contemporary urban gardening forms are focused on objectives different from food production.

B. Societal Issues Addressed in Line with Urban Planning Challenges

Another objective of contemporary urban gardening forms is regeneration of abandoned or inefficiently used land plots. Gardening is often used as a temporary solution and so appears to be an efficient tool in regeneration processes. One of the examples is *Edible Eastside* garden in Birmingham, England (Fig. 2). With the help of raised beds and containers, a garden appeared in the former territory of gas filling station. Garden offers a variety of opportunities – from planting and cooking to artist performances and lessons on food production and temporary growing. They also offer homeless people support and integration programme and cooperate actively with local NGOs. Moreover, the first Friday of every month offers performances of poets, artists or musicians [12]. So being primarily meant for urban regeneration, garden works as a strong social support tool involving people with different social background.

C. Emerging Urban Gardening Initiatives in Riga

The city of Riga has more than 100 years of allotment garden history, but it is only from 2010 that Riga faced introduction of new urban gardening initiatives. Some activities were focused on social integration, the others on education, ecology and sustainable development, or cooperation and dialogue between different inhabitant groups. So for example, in 2010, representatives of *New Media and Culture Centre RIXC* collaborated with *Latvian New Theatre* and the Botanical Garden of the University of Latvia in order to create green art installation. According to the interview with representatives from RIXC in 2015, this project helped to collaborate with local inhabitants of different age and

social groups, who wanted to become part of the initiative and donated their home plants for green installation [13].

In 2013, project “*Iesakņotāji*” offered an opportunity for primary school children to cooperate with seniors from a social care centre. According to interviews with project authors, both participant groups were interested in participation: children enjoying the gardening and learning something new, and seniors being involved in growing plants and cross-age dialogue. Later, in 2014, interdisciplinary art group “*Serde*” created a green wall in *Vidzeme market* area, with an aim to educate people about vertical gardening systems [13]. Regardless the fact that in summer the centre of the city and market area is less crowded, there still was interest from young women with children and seniors with grandchildren.

Despite all societal aspects, also economic issues can be solved with the help of gardening. So in 2014, *Samsung Latvia* used the idea of pop-up garden cafe to attract more people to their product advertising campaign. As a result, there were very different groups of inhabitants among the visitors: young couples, young people with children, adult men and women in the age of 35–60, and seniors [13]. According to the manager's reflections, the unusual green cafe attracted very diverse groups of potential customers and helped to advertise products in comfortable atmosphere.

However, these were short-time projects and did not have greater impact on urban environment and on the community. So later, in 2017, to test the community garden idea, the Faculty of Architecture of Riga Technical University had a collaboration with the Faculty of Geography and Geo Sciences of University of Latvia and private company “*Easywood*” specializing in wood materials. The collaboration resulted in a new garden – recreation area on the entrance steps of the Faculty of Architecture (Fig. 3). The garden idea came from experience and new contacts gained

during the COST Action TU 1201. The creation and management of the garden was realised by involving the staff and students of the Faculty. The experiment resulted in “a new life” of previously unused entrance area. Observation results show that now “Architects’ garden” works as meeting and recreation space for students and even tourists of different age groups.

Following the positive experience of “Architects’ garden”, activists from the Faculty of Architecture and the Faculty of Geography and Geo Sciences together with volunteers proposed to create a mobile community garden in the residential neighbourhood of *Jugla*, built in the second part of the 20th century. The main aim was to promote more active use of courtyard space and to show local inhabitants the concept of community garden by providing a real example. Collection of supporting documents in order to receive official permit for garden establishment started in the beginning of 2017. In parallel, local inhabitants were surveyed about their attitude to the new community garden close to their home. As the surveys showed, majority of people supported the idea of community garden, however not everyone understood what it will look like and how it will be managed. The approval process was not completed until June 2017, as there were difficulties in obtaining the approval from Real Estate Department. For this reason, the activity transformed into a guerilla action (Fig. 4).

As it was a guerilla action, it was decided to create a mobile community garden to ensure mobility, short-term and low-cost of the project. Garden beds were created from used palettes and transported to *Jugla* by cargo bikes to advertise the action on the way to neighbourhood. Even being short-term, this initiative helped to engage with locals in informal way: children willing to participate and ready to share their ideas on further development of the neighbourhood, adult women interested in getting “a small peace of greenery” under their windows and ready to discuss the future of the area, and adult men less active in participation but open for discussion. The guerilla action proved the hypothesis of community garden being a good tool for social cohesion. However, it has been found that the approval process needs to be made easier and clearer. Also issues of management and protection from vandalism appeared to be a challenge, which in the case of “Architects’ garden” was solved through natural surveillance and safeguarding ensured by the university.

II. FUTURE CHALLENGES

Undefined future, short-term rent agreements and therefore lack of gardeners’ interest to invest in their plots, often has a negative impact on visual quality of allotment areas. Allotment garden territories are often located on degraded land [14]. Large territories and seasonal character of allotment gardens offers an opportunity for vandalism and theft, thus creating unsafe environment. In turn, community gardens are under threat when interests of different users come in conflict [4].

In the process of development of Riga new territory planning until 2030, urban gardens gained special attention. The future of gardens has been analysed in thematic plans (supportive

document of the new territory planning) and discussed in public meetings [15]. As a result the term “courtyard garden / community garden” appeared, also many allotment garden territories appeared in the new planning as green nature territories. The creation of local plans offers an opportunity to receive permanent status for those allotment territories. Still, despite these positive changes there are territories with uncertain status being under threat of new commercial or residential development.

Also the most recent Inhabitant Forum (*Rīgas iedzīvotāju forums*) held in Riga on 12 December 2018, showed the interest of people in participating in city greening initiatives. After the round table discussions, each thematic group had to offer 3 topics to be considered for implementation during the next year (2019). As a result, the proposal by thematic group *Neighborhoods* to ask Riga’s inhabitants to put their flower boxes on windows and support this initiative with competition for the most beautiful flower box in town was supported by 18 votes out of 30. Similar situation was with thematic group *Zero waste*, where the proposal to support integration of allotment garden areas in each neighbourhood of Riga was supported by majority – 13 votes out of 29 (with 10 votes in favour of dissemination of information regarding recycling opportunities and 6 votes for provision of local air quality measurement devices) [16].

CONCLUSION

Regardless location, form and the main objective, community and allotment gardens in different cities of Europe is a strong tool to support social integration, cross-age and cross-cultural dialogue and human well-being. However, understanding of this fact in some areas does not result in easier urban gardening creation and integration processes.

The examples of Malmo and Birmingham show that a community garden can be a long-term solution and help to improve the quality of living for very diverse inhabitant groups. However, in the case of Riga there are still a lot of challenges to deal with when creating a community garden.

The process of integration, creation and legal acceptance of a community garden remains unclear, there is necessity to improve the approval process and make it transparent and understandable for the community.

Inhabitants’ interest to promote city gardening is proved by active involvement in community gardening initiatives in Malmo and Birmingham, and in gardening related initiatives in Riga. Also most recent Inhabitants’ Forum in Riga showed that gardening is of interest to both those who care about ecology of our city and planet in general, and those who appreciate aesthetical quality of greenery.

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