

## Use of Green Spaces for Liveable and Sustainable Cities; Urban Allotment Gardens

Neslihan DEMİRCAN<sup>1</sup>, Işık SEZEN<sup>2</sup>

**ABSTRACT:** Urban green spaces contributing to sustainable development of cities are of the characteristics of increasing human quality of life. It is a requirement for more comfortable physical and psychological life to predict the needs in a place resulting from its physical, physiological, psychological and social structures and to shape such environment consisting of open spaces according to such needs. Today's cities have turned out to be the clusters of concrete structures due to rapid human population and distorted and dense urbanisation. Urban human quality of life is also negatively affected by environmental problems such as air, water, soil and noise pollution and the use of arable lands out of their main aims. Excessive building density in cities due to various reasons increases rents on lands and confines the ratio of public areas like green spaces. Main material of the study is urban small gardens, a type of community gardens which can be evaluated to be alternative green space sources in urban design works, several examples of which can be seen abroad from old days to present. Such garden types are known in Turkey in the names of small gardens, public gardens, urban gardens, hobby gardens and urban allotment gardens. As study method, related literature review was performed from Turkey and abroad and required etude, analysis and synthesis methods were used. As a conclusion, large cities lack of green spaces and recreation areas. In the present study, the role and importance of urban gardens, a type of allotment gardens seen for a long time in the world, in liveable and sustainable urban design is focused by considering that in urban design studies, urban gardens can be evaluated as an alternative green space use. Positive contributions of urban small gardens were put forward on humans and the increase of green area rate.

**Key Words:** City, green spaces, liveability, sustainability, urban allotment garden

## Sürdürülebilir ve Yaşanabilir Kentler İçin Yeşil Alanların Kullanımları; Kişiy Tahsisli Kent Bahçeleri

**ÖZET:** Kentsel alanların sürdürülebilir gelişmesine katkıda bulunan kentin yeşil alanları kentsel yaşam kalitesini arttırmada önem taşımaktadır. Hayatı fiziksel ve psikolojik olarak daha yaşanabilir kılmak ve ihtiyaçlara daha uygun ortamlar oluşturmak için, kullanıcıların fiziksel, fizyolojik, psikolojik ve sosyal yapısından kaynaklanan ihtiyaçlarını önceden kestirmek ve açık mekanlardan oluşan çevreyi bu ihtiyaçlara göre şekillendirmek gereklidir. Günümüz kentleri hızlı nüfus artışı, çarpık kentleşme, yoğun yapılaşma ile beton yığını durumuna gelmiştir. Hava, su, gürültü, toprak kirliliği, tarım arazilerinin amaç dışı kullanımı gibi çevre sorunları da kentlerdeki yaşam kalitesini olumsuz etkilemektedir. Kent yakınındaki verimli arazilere sanayi ve yerleşim alanları kurulmaktadır. Gecekondu ve çöküntü alanları kent imajını değiştirmektedir. Kentlerimizin çeşitli nedenlerle aşırı yoğunlaşması, arsa rantlarını artırarak, yeşil alan gibi kamusal alanlara ayrılması gereken bölgeleri sınırlandırmaktadır. Çalışmanın ana materyali, kentsel tasarım çalışmalarında alternatif yeşil alan kaynakları olarak değerlendirilebilen, bir takım topluluk bahçeleri olan kentsel küçük bahçelerdir. Bu bahçelerin birçok örneği geçmişten günümüze yurtdışında görülebilmektedir. Türkiye'de ise bu bahçeler; küçük bahçeler, halk (topluluk) bahçeleri, kent bahçeleri, hobi bahçeleri ve kişiy tahsisli kent bahçeleri olarak bilinmektedir. Çalışma metodu olarak, yurtiçi ve yurtdışından ilgili literatür taraması yapılmış ve gerekli etüt, analiz ve sentez yöntemleri kullanılmıştır. Sonuçta büyük kentlerimiz yeşil alan ve rekreatif alanlardan yoksun kalmaktadır. Çalışmada; Kentsel tasarım çalışmalarında, yurt dışında tarih boyunca var olan günümüzde de örnekleri olan toplum bahçelerinin bir türü olan kişiy tahsisli kent bahçelerinin alternatif yeşil alan kullanımı olarak değerlendirilebileceği düşünülerek yaşanabilir ve sürdürülebilir kent tasarımlarında kişiy tahsisli kent bahçelerinin rolü ve önemi vurgulanmaya çalışılmıştır.

<sup>1</sup> Neslihan DEMİRCAN (0000-0001-5197-6220), Atatürk Üniversitesi, Mimarlık ve Tasarım Fakültesi, Mimarlık, Erzurum, Turkey

<sup>2</sup> Işık SEZEN (0000-0003-0304-9072), Atatürk Üniversitesi, Mimarlık ve Tasarım Fakültesi, Peyzaj Mimarlığı, Erzurum, Turkey  
Sorumlu yazar/Corresponding Author: Neslihan DEMİRCAN, neslihan\_demircan@hotmail.com

## INTRODUCTION

Sustainable cities are also liveable cities targeting the conservation of socioeconomic interests and natural resources in ecological design approaches in order to sustain change and development.

The report *Our Common Future*, prepared by World Commission on Environment and Development in 1987 defines sustainable development to be “the development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Such a definition is expected to have played an effective role in the redefinition of the functional identities and spatial qualities of urban land uses (Anonymous, 1987). In the scope of the debates of creation of ecologically sensitive sustainable cities, this role involves the various spatial – functional qualities from the completion of urban green system infrastructure, definition of urban density zones, effectiveness of different age groups on social – psychological behaviour shapes, democratic participation and negotiation process, increase in urban ecological quality of life and conditions to setting up liveable urban sites (Thompson, 2002; Chiesura, 2004; Antrop, 2004; Yenice, 2012)

Green spaces bear great importance in urban areas for human life and needs. Such areas have the various physical and ecological functions like the provision of circulation between various urban uses and physical comfort, giving city aesthetical value and recreational possibilities. Green spaces may filter air, remove pollution, attenuate noise, cool temperatures, infiltrate storm water, and replenish groundwater; moreover, it can provide food (Escobedo et al, 2011; Groenewegen et al, 2006). In order to complete such functions exactly, these areas should be planned by considering urban planning principles and standards in a definite system (Manavoğlu ve Ortaçesme, 2007).

As it does all over the world, in Turkey, urbanisation continues very fast. Even though urban areas are living areas which human beings created for themselves, they gradually turned out to be unhealthy, problematic and hard – to – live areas remaining away from nature. As the settlements develop and their population densities increase, environmental pollution increases, ratio of green spaces decreases and the urban balance between functional and natural areas of cities can be spoiled (Gül ve ark., 2007). As the result of

such a negative development, distorted urbanisation develops incessantly with its surrounding in the lack of infrastructure, without landscape design, planned and unplanned concrete flocks. Based on this rapid urbanisation, environment pollution increases, green area per capita decreases in and around city centres, physical and physiological health of people is affected negatively. Rapid physical growth in cities due to different reasons increases rant from lands and limits the rate of green and public areas needed for common use. Therefore, beginning from the grand cities settlement areas remain to be in the lack of green and recreational areas (Sandal ve Karademir, 2013).

In addition, urban green spaces are attractive parts of cities with their recreational potentials and regulatory effects on urban ecology (Doygun ve Ok, 2006) and offering more liveable environmental conditions to urban dwellers regardless of the sex, age and socioeconomic conditions of the users (Grahn and Stigsdotter, 2003). Green areas enable people to develop healthily through recreation and sportive activities (Aksoy ve Akpınar, 2011; Ersoy, 2015; Kabisch et al., 2016).

General characteristics of a city is defined by architectural structures, open – green spaces and entire of the relationship between them. Green areas have important roles in the improvement of urban living conditions and balancing spoilt relationship between humans and nature. In this respect, it is crucially important for today’s people to benefit from nature and its parts, green areas. Therefore, in developed countries, quality and quantity of green areas are accepted to be the indicator of civilisation and quality of life. In this scope, several of these countries are in challenges to plan and create urban areas and ecology suitable for human life considering physical and mental needs of humans (Gül and Küçük, 2001; Sandal and Karademir, 2013).

Legal framework of green area planning is based on development laws in Turkey. In this framework, approaches to green areas consider the amount of green areas per capita ( $m^2$ ). In Code 3194 acted in 1985 and is in still force, per capita green area rate is  $7m^2$ . This rate increased to  $10 m^2$  with a regulation declared in official paper 23 804 on 2<sup>nd</sup> September 1999 related to the principles of preparation and changes of development plans. Beyond these figures, there is no forecast to

direct green area planning.

Among the active open and green spaces which society benefits from directly and where urban people can spend their time out of work by performing different and joyful activities (Özgüç, 2011) meet their recreational needs in their daily life are parks (pocket parks, neighbourhood parks, district parks, city parks etc.), sports and play grounds; school and public institution yards, roads, squares and pedestrian zones; urban forests, graveyards and house gardens (Özkan ve ark., 1996) zoos and botanical gardens (Aydemir, 2004). Quantity and quality of these areas should be increased and they should offer larger recreational areas and possibilities.

City small gardens are important areas for urban people with different open green area recreation possibilities and their examples can be seen in the last years.

The aim of present study is to give information about the appearance and development (place and time) of small city garden (SCG) parks in addition, define the quality and efficiency of these areas and make larger scientific groups discuss the matter. Additionally, it was aimed to make a research platform and movement for Urban Allotment Gardens (UAGs) understanding in Europe related to sustainable urban development and contributing urban planning from social and ecological aspects.

## MATERIAL AND METHOD

Main material of the study is small city garden which will be evaluated in urban design works as alternative green area source, is a type of community gardens frequently seen in many countries from past to present. Method of the study is composed of review of the previous national and international studies related to the topics, data collection, observation, analysis and assessment stages.

## RESULTS AND DISCUSSION

### Urban Allotment Garden Concept and Its Historical Development

SCGs were first called different names depending on the countries and periods and which were introduced

100 years ago for the first time in Germany (Gröning and Schmitt, 1975). At first in Germany, they were called *Armen garten* (gardens of the poor), *Schreber garten*, *Arbeiter garten* (worker gardens) and today *Kleingarten* (Richter, 1981). In UK, they are called *Guinea Garden*, *Allotment Garden* (gardens allotted to a person) and *Hobby Garden* while in the US *Street Garden* and *Community Garden* (Alaimo et al, 2008; Oğuz, 2000; Özkan, 1994; Özkan ve ark., 1996). However, the concepts of community gardens and allotment gardens need to be clarified. Community gardens can use even a very small part of a city for cultivating purpose in a collective understanding with the combination of more than one user while allotment gardens are delivered to users by dividing larger areas into plots. Examples in Turkey resemble much allotment gardens which are called urban allotment gardens, public gardens, urban gardens and hobby gardens. Urban allotment gardens and modern forms of urban gardens (such as community gardens) are confronted with challenges arising from the processes of societal transformation. The demographic change, a pluralisation of lifestyles and changing values lead to consideration of how urban gardens have capacities to adapt to new needs of users and new forms of use (Steffenhagen and Sondermann, 2017)

### Characteristics of Urban Allotment Gardens

UAGs are seen to be the green area use of worker and poor families (Szumilas, 2014) who challenge to survive coming from rural to industrialising cities in Europe. These gardens are land parts given by central or local governments to people to make agricultural production and meet their food needs. Allotment period covers very long periods. The areas bordered in different ways can also contain parking lots. A single – storey small building is allowable in the plots, annual or perennial grassy or woody plants can be produced, and some landscape design can be allowed in them. Allotment conditions can be cancelled when they are used out of aims (Özkan ve ark., 1996).

Allotment gardens are characterized by a concentration in one place of a few or up to several hundreds of land parcels that are assigned to individual families. In allotment gardens, the parcels are cultivated individually, contrary to other community garden types where the entire area is tended collectively by a group of people (Macnair, 2002). The individual size of a

parcel ranges between 200 and 400 m<sup>2</sup>, and often the plots include a shed for tools and shelter. The individual gardeners are organized in an allotment association which leases the land from the owner who may be a public, private or ecclesiastical entity, provided that it is only used for gardening (i.e. growing vegetables, fruits and flowers), but not for residential purposes. The gardeners have to pay a small membership fee to the association, and have to abide with the corresponding constitution and by-laws. On the other hand, the membership entitles them to certain democratic rights (Drescher, 2001; Drescher et al., 2006).

### **Functions of Urban Allotment Gardens in Sustainable Cities**

UAGs (SCGs, Hobby gardens etc.) constitute one of the ecology based sources of structure – plant balance in urban open green space system while at the same time they are important to meet the recreational needs of urban dwellers. Need for these areas enlivening nature in city has rapidly increased in recent years. An important reflection of this increase is seen in the interest of people in plant production as hobby and their sought for ways of meeting this need.

Users of hobby gardens escaping from density and complexity of cities through the occupations related to soil and plant can perform sowing, planting, pruning and hoeing works and also recreational activities (Erduran, 2008).

Through these gardens, surface area of urban active green areas increases and urban lung expands with the multi – facet plant cover they contain and urban climate is affected positively. In addition, urban view turns out to be flexible and aesthetic (Kılıç, 1995)

Masashi et al., (2017), First, allotments, along with other types of urban greenspace, provide people with an opportunity to interact directly with nature. Indeed, exposure to nature benefits psychological health through mechanistic pathways that are now well established, namely attention restoration theory (Kaplan, 1995) and stress reduction theory (Ulrich, 1991).

Wood et al., (2015) indicated by conducting t-test on 136 urban allotment garden users and 133 allotment garden nonusers that one session of allotment gardening can result in significant improvements in self-esteem and mood via reductions in tension, depression, anger and confusion. These findings are supported by previous

research demonstrating the health and well-being benefits of participating in green exercise activities. With an increasing number of people residing in urban areas, a decline in the number of homes with gardens, and the increased risk for mental ill health associated with urban living; these findings are particularly important and suggest that allotment gardening might play an important role in promoting mental well-being in people residing in urban areas.

Camps Calvet et al., (2016) assess ecosystem services provided by urban gardens in Barcelona, Spain, to urban resilience and the results showed that ecosystem services from garden are related to a number of policy challenges in the city, such as lacking awareness and stewardship of urban ecosystem and biodiversity, lacking opportunities for recreation and the need for social integration and environmental justice in cities. Urban allotment gardens as part of the urban green infrastructure network can play a significant role (Breuste, 2010; Matos and Batista, 2013) in tackling these challenges when acknowledged in urban policies. The natural conservation in cities which have benefits for humans have a combination of systemic approach and allotments to fit intensively into the urban green infrastructure (Carrus et al, 2015).

Urban gardens (Camps Calvet et al., 2016) and roadside vegetation (Saumel et al., 2016) are discussed as green network elements to provide ecosystem services and to counteract challenges from ongoing urbanization.

Urban allotment and community gardens provide important ecosystem services to city (Wolch et al, 2014) dwellers sustaining human well-being and providing habitats for plants and animals. They also promote the conservation of soil-water plant systems and improve resilience to weather extreme events. Thus, the concept of an environmentally-friendly garden integrates sustainability with multifunctionality, from ecological to socio-economic activities (Voigt and Leitao, 2016)

Community gardens paved the ways of evaluating abandoned urban and industrial areas, avoiding population losses and effective use of extended urban open spaces and were produced as a solution tool for problems caused by migration and unsuccessful urban reformation (Vitiello and Nairn, 2009). These gardens play important roles in the reduction of the extent of



urban environmental problems. Mainly European countries and other developed ones try to implement projects today to transfer the gardens as a part of urban culture from past to present and future.

Urban green areas can give organic characteristics to cities by mitigating solid structure acquired by formal buildings (Tankut ve ark., 1988; Şahin ve Barış 1988; Emür ve Onsekiz, 2007). These areas also can contribute with their ecological functions to air cleaning by removing dust and harmful gases released from motor – vehicles and industrial plants and producing oxygen causing air pollution (Ersoy, 2015).

AG make significant contributions to urban greening and life. These areas offer the opportunities for people living in apartments away from natural environment to be together with nature and recreate

(DeSilvey, 2003; Dus, 2014) themselves. These gardens can contribute positively human health by allow people to relax psychologically as well as physically through the activities they perform in the gardens. UAGs are also taken into consideration in urban agriculture practices.

For especially the elderly, these gardens have several social, cultural and economic functions. In addition to being an occupation for the elderly in pensioner periods, these gardens enable them to consume cheaper vegetables (Tei et al., 2009).

**Examples of UAGs from The World and Turkey**

Community garden, modern form of UAGs, has been used since 19<sup>th</sup> century in several European countries, especially Germany, and in 1970s, in USA, New York City, some of which are given in Figure 1.



**Figure 1.** Examples of UAGs

In Turkey, UAG samples are seen to be hobby gardens, the first examples of which were seen in Bursa in 1986 and then in Izmir in 1999 followed by 15 such gardens in 10 new cities (Balkan, 2004). Bursa Küçük Gardens were constituted in an area of totally 26 500 m<sup>2</sup>. The number of gardens, 24 at the beginning, increased to 86 by adding new ones. Izmir Urban Gardens were constituted in an area of totally 13 950 m<sup>2</sup>. The number

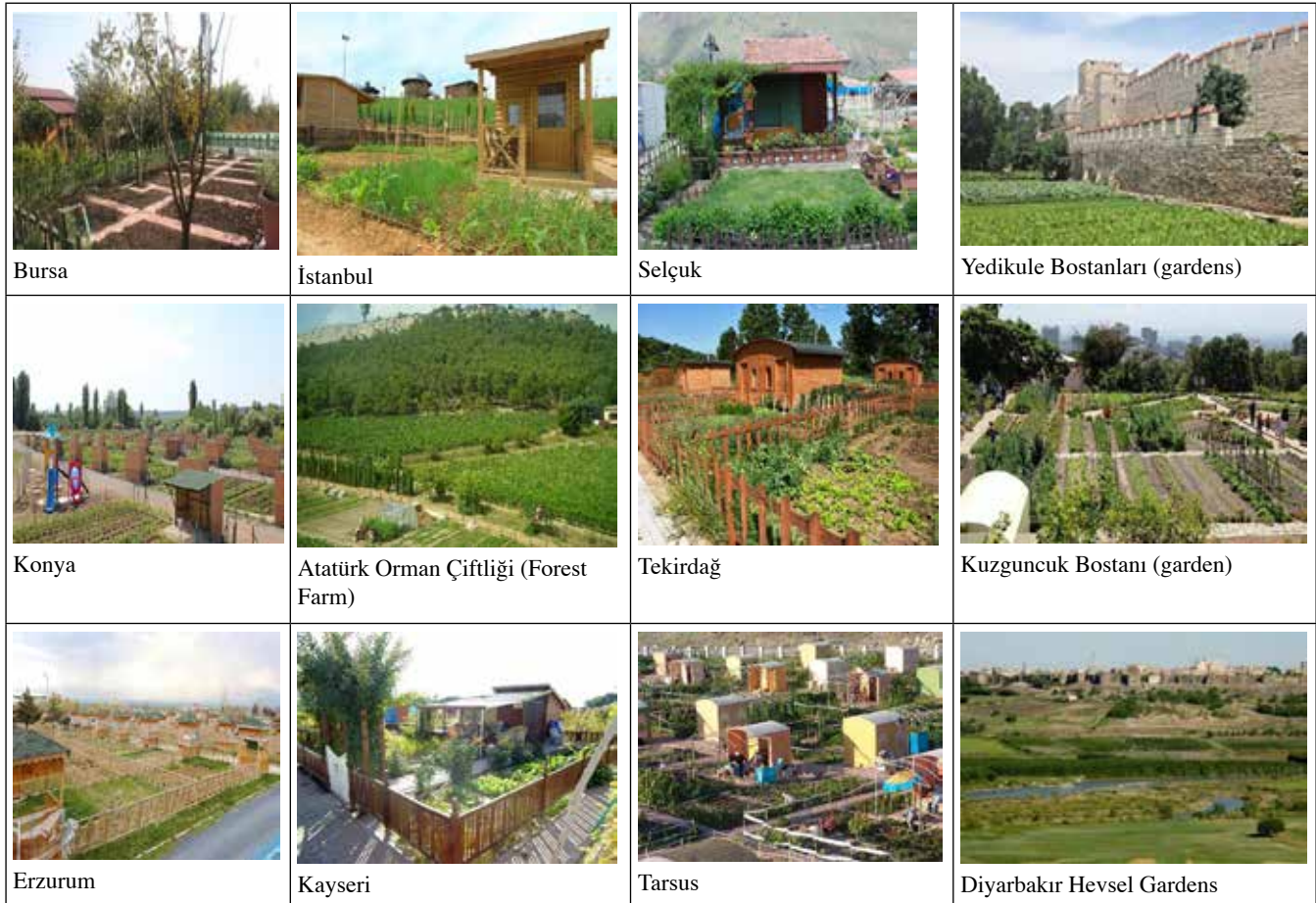
of plots in the area is 44 and their sizes are between 140 and 160 m<sup>2</sup>. Plots do not contain garden houses. These plots are rent to only pensioners for a year (Kılıç, 1995). In Ankara, in 2000, Atatürk Forest Farm hobby gardens were constituted. Surface area of the gardens is 60 000 m<sup>2</sup> and contain 520 plots with a size of 200 m<sup>2</sup>. They are rent for four years (Erduran, 2006). Atatürk University Hobby Garden was constructed by the rectorate of the

university in 2011, in the west part of Ata Botanical Garden containing 96 plots with the size of 88 m<sup>2</sup>. In addition, there are some other similar examples in the cities of Istanbul, Ankara, Gaziantep, Kayseri, Manisa, Eskişehir, Tekirdağ and others (Figure 2).

In addition, in Turkey, there are some other uses with the function of UAG in the scope of urban agriculture. The first example of which is Yedikule

Gardens from Ottoman and Byzantine periods, 1500 – year urban agriculture land (Anonim 2013; Koca 2014) (Figure 2).

The area, just adjacent to the conservation line of Istanbul City Walls in UNESCO World Heritage List was rescued from demolition through a court decision on 06<sup>th</sup> July 2013 by 2<sup>nd</sup> Administrative Court (Anonymous, 2016a).



**Figure 2.** Examples of UAGs in Turkey

Boğazköy Kuzguncuk Bostanı (garden) has a 700-year-old history in Istanbul and been evaluated for year as urban garden site (Figure 2). This site has been under the pressure of housing since 1990s and desired to be opened to housing in every 10 – year period. The site first entered the agenda in 2011 through a private school project. Dwellers in Kuzguncuk rejected the project since the site is agriculture area, green space, meeting and sharing point, playground for kids, recreational and social area for the elders. Ministry of Environment and Urbanism Board for the Conservation of Nature declared that project was abandoned since it

is not suitable with the characteristics and architecture of built structure in Kuzguncuk (Koca, 2014).

Another important example having been used for ages in Turkey as UAG is Diyarbakır Fortress and Hevsel Gardens, declared to be included in 2015 in UNESCO World Heritage List (Figure 2). These gardens, which were once the topics of legends and folk songs lie extensively between Diyarbakır walls and the river Tigris. It is likely to be the oldest grain store of Mesopotamia, home of agriculture. Hevsel gardens exhibit unique value as an example of civil gardens always open to public use along a geography



where garden culture is very important. Since the area has been functioning as garden for more than an eight – year period in a region, bearing the traces of more than 30 civilisations, it has a unique historical and cultural place away from its agricultural value (Anonim, 2016 b).

## CONCLUSION

As the result of the study, practice of UAGs is suggested in also Turkey, which existed in any countries ages ago for the purposes of meeting food at the beginning and then recreational needs of poor people especially as vegetables, increase green space rate, harbour organic agriculture practices and the examples of which are seen today.

It is thought that with the rapid increase in the amount of distorted and irregular housing areas in cities due to urban population increase, amount of green space

systems decreases. In this respect, urban allotment garden practices can be evaluated as alternative green land use. UAGs can also create positive physical and physiological effects on humans in every age group by contributing to sociocultural development of individuals as well as creating feelings such as curiosity, creativeness, excitement, discovery of nature.

UAG can increase the value of urban land uses by preventing land misuse. Such areas also positively affect urban ecologic systems with their effects like increasing urban biodiversity, sustaining hydrological cycle, constituting microclimatic environment, moderating climatic elements, mitigating urban heat island effect. They can also contribute to urban green network and green infrastructure.

UAGs not only affect urban landscape with their recreational potentials but also offer opportunities for urban agriculture in metropolitan regions.

## REFERENCES

- Aksoy Y, Akpınar A, 2011. Yeşil Alan Kullanımı ve Yeşil Alan gereksinimi Üzerine Bir Araştırma. İstanbul Ticaret Üniversitesi Fen Bilimleri Dergisi, Sayı:20, Cilt:10.
- Alaimo K, Packnett E, Miles RA, Kruger DJ, 2008. Fruit and vegetable intake among urban community gardeners. *J Nutr Educ Behav* 40: 94–101
- Anonim 2013. Arkeologlar Derneği İstanbul Şubesi Bülteni, Eylül-Kasım 2013, Sayı:01.
- Anonim 2016a. Tarihi Yedikule Bostanları. <http://yedikulebostanlari.tumblr.com/> (Erişim tarihi: 9 Mayıs, 2016)
- Anonim 2016 b. T.C. Kültür Ve Turizm Bakanlığı Kültür Varlıkları Ve Müzeler Genel Müdürlüğü, Diyarbakır Kalesi ve Hevsel Bahçeleri. <http://www.kulturvarliklari.gov.tr/TR,44403/diyarbakir-kalesive-hevsel-bahceleri-diyarbakir.html> (Erişim tarih: 9 Mayıs, 2016)
- Anonymous 1987. World Commission on Environment and Development, Our Common Future: The Brundtland Report. Oxford University Press, Oxford
- Antrop M, 2004. Landscape change and the urbanization process in Europe. *Landscape and Urban Planning* 67, 9-26
- Aydemir S, 2004. Kentsel Açık ve Yeşil Alanlar “Rekreasyon”, Kentsel Alanların Planlanması ve Tasarımı, Trabzon
- Balkan DS, 2004. Ülkemizdeki Kent Küçük Bahçe Parklarının Yeterlilikleri ve Olanakları Üzerine Bir Araştırma. Ege Üniv. Ziraat Fak. Peyzaj Mim. Anabilim Dalı Yüksek Lisans Tezi. İzmir.
- Breuste J, 2010. Allotment gardens as part of urban green infrastructure: actual trends and perspectives in Central Europe. In: Müller N, Werner P, Kelcey JG (eds) *Urban biodiversity and design*. Wiley Blackwell Publishing, Oxford, pp. 463–476
- Camps-Calvet M, Langemayer J, Calvet-Mir L, Gomez-Baggethun E, 2016. Ecosystem services provided by urban gardens in Barcelona, Spain: insights for policy and planning. *Environmental Science and Policy*. 62,14-23.
- Carrus G, Scopelliti M, Laforteza R, Colangelo G, Ferrini F, Salbitano F, Agrimi M, Portoghesi L, Semenzato P, Sanesi G, 2015. Go greener, feel better? The positive effects of biodiversity on the well-being of individuals visiting urban and peri urban green areas. *Landscape Urban Planning* 134:221–228
- Chiesura A, 2004. The role of urban parks for the sustainable city. *Landscape and Urban Planning* 68, 129-138.
- DeSilvey C, 2003. Cultivated histories in a Scottish allotment garden. *Cultural Geographies*, 10:442-468
- Doygun H, Ok T, 2006. “Kahramanmaraş kenti açık-yeşil alanlarında ağaçlandırma çalışmalarının değerlendirilmesi ve öneriler”. *KSÜ Fen ve Mühendislik Dergisi*, 9 (2): 94-103.
- Drescher W, 2001. The German Allotment Gardens-A Model for Poverty Alleviation and Food Security in Southern African Cities? *Urban Agriculture Notes*: <http://www.cityfarmer.org/germanAllot.html> (Erişim tarih: 20 Mart, 2017)
- Drescher AW, Holmer RJ, Laquinta DL, 2006. Urban Homegardens and Allotment Gardens for Sustainable Livelihoods: Management Strategies and Institutional Environments. *Tropical Homegardens*, 3:317-338.
- Duś E, 2014. Recreational use and health functions of allotments gardens in the Katowice conurbation, Poland. *Environ Socio Econ Stud* 2(2):16–25
- Emür SH, Onsekiz D, 2007. Kentsel Yaşam Kalitesi Bileşenleri Arasında Açık ve Yeşil Alanların Önemi Kayseri-Kocasinan İlçesi Park Alanları Analizi, *Sosyal Bilimler Dergisi*, Sayı:22, Yıl:2007/1, 365-396.

- Erduran F, Sülüoğlu M, 2006. Hobi Bahçelerinin Kent Ekolojisinde ve Gelişiminde Önemi ve Kocaeli-İzmit Örneği. VI. Ulusal Ekoloji Sempozyumu. Diyarbakır.
- Erduran F, Kabaş S, Ayhan Ç, Kelkit A, 2008. Çanakkale Kentinde Hobi Bahçesi Amaçlı Kullanılan Alanların Peyzaj Mimarlığı Açısından Değerlendirilmesi. Çanakkale Kenti Çevre Sorunları Sempozyumu. Çanakkale.
- Ersoy M, 2015. Kentsel Planlamada Standartlar. Ninova Yayınları, 335s.
- Escobedo FJ, Kroeger T, Wagner JE, 2011. Urban forests and pollution mitigation: Analyzing ecosystem services and disservices. *Environmental Pollution*, 2011, 159 (8) 2078-2087
- Grahn P, Stigsdotter UA, 2003. Landscape Planning and Stress, *Urban Forestry and Urban Greening*, 2:1-18.
- Groenewegen P, van den Berg A, de Vries S, Verheij R, 2006. Vitamin G: Effects of green space on health, well-being, and social safety. *BMC Public Health*, 2006, 6 (1), 149.
- Grönig G, Und Schmitt V, 1975. Entwicklung von Zielvorstellungen zur Eingliederung Städtischer Kleingarten. *Das Garten*, 24, 1975/9
- Gül A, Nayır O, Eraslan G, 2007. "Kent kimliği üzerinde kent ormanlarının rolü ve etkisi", SDU. 15. Yıl Mühendislik Mimarlık Sempozyumu Bildiriler Kitabı, 14-16 Kasım 2007, 304-311, Isparta
- Gül A, Küçük V, 2001. "Kentsel Açık-Yeşil Alanlar ve Isparta Kenti Örneğinde İncelenmesi", SDÜ Orman Fak. Dergisi, Seri A 2, 27-48.
- Kabisch N, Strohbach M, Haase D, Kronenberg J, 2016. Urban green space availability in European cities. *Ecological indicators*, 2016, 70:568-596.
- Kaplan S, 1995. The restorative benefits of nature: Toward an integrative framework. *J. Environ. Psychol.* 15,169-182.
- Kılıç H, 1995. İzmir Kenti Örneğinde Kent Küçük Bahçeleri Planlama Olanakları Üzerine Araştırmalar, Yüksek Lisans Tezi, Ege Üniversitesi Fen Bilimleri Enstitüsü, Peyzaj Mimarlığı Ana Bilim Dalı, Ege Üniversitesi Basımevi, İzmir, 102s (Yayınlanmamış).
- Koca A, 2014. İstanbul'un Yaşayan İki Bostanı Neden Yok Edilmek İsteniyor? *Yapı* 386, 58-63.
- Macnair E, 2002. *The Garden City Handbook: How to Create and Protect Community Gardens in Greater Victoria*. Polis Project on Ecological Governance. University of Victoria, Victoria BC, Canada
- Manavoğlu E, Ortaçesme V, 2007. Konyaaltı Kentsel Alanında Bir Yeşil Alan Sistem Önerisi Geliştirilmesi. *Akdeniz Üniversitesi Ziraat Fakültesi Dergisi*, 20(2), 261-271.
- Matos RS, Batista DS, 2013. Urban agriculture: the allotment garden as structures of urban sustainability. *Advances in Landscape Architecture*. doi:10.5772/55892 Accessed 18 October 2017
- Oğuz D, 2000. Hobi bahçeleri ve Avrupa ülkelerinden örnekler. *Türk-Koop Ekin Dergisi*, 14
- Özkan B, 1994. Kentsel Rekreasyon Alan Planlaması Ders Notları (Basılmamış) E. Ü. Z. F. Peyzaj Mimarlığı Bölümü, İzmir.
- Özgüç N, 2011. *Turizm Coğrafyası*, İstanbul: Çantay Kitabevi.
- Richter G, 1981. *Handbuch Stadtgrün*, München, Wien, Zürich.
- Sandal EK, Karademir N, 2013. Kahramanmaraş'ta Yeşil Alanların Yeterliliği İle Halkın Beklentilerinin Ve Bilinç Düzeyinin Belirlenmesi. *Doğu Coğrafya Dergisi* – 29, 155-176.
- Saumel I, Weber F, Kowarik I, 2016. Toward liveable and healthy urban streets; roadside vegetation provides ecosystem services where people live and move. *Environmental Science and Policy*. 62, 24-33.
- Soga M, Cox DTC, Yamaura Y, Gaston KJ, Kurisu K, Hanaki K, 2017. Health Benefits of Urban Allotment Gardening: Improved Physical and Psychological Well-Being and Social Integration. *Int J Environ Res Public Health*. 2017 Jan; 14(1): 71.
- Steffenhagen P, Sondermann M, 2017. Adaptive Capacities Of Urban (Allotment) Gardens. Case Study Germany. <http://www.urbanallotments.eu/case-studies/germany.html> (Erişim tarihi: 18 Ekim, 2016)
- Szumilas H, 2014. Allotment gardens in former Eastern Bloc countries – a comparative study of spatial policy in Tallinn and Warsaw. *Horticulture and Landscape Architecture* No 35, 2014: 39-51
- Şahin Ş, Barış M, 1998. Kentsel Doku İçerisinde Açık Yeşil Alan Standartlarını Belirleyen Etmenler, *Peyzaj Mimarlığı Dergisi*, s.10, İstanbul.
- Tankut G, Göksu Ç, Ersoy M, 1988. Kentsel Planlama Standartları Araştırması. (Özet Rapor), Bayındırlık ve İskan Bakanlığı için hazırlanan Araştırma Raporu Özeti, Ankara.
- Tei F, Benincase P, Farneselli M, Caprai M, 2009. Allotment Gardens For Senior Citizens In Italy: Current Status And Technical Proposals, II International Conference on Landscape and Urban Horticulture.
- Thompson CW, 2002. Urban open-space in the 21st century. *Landscape and Urban Planning* 60, 59-72.
- Ulrich RS, Simons RF, Losito BD, Fiorito E, Miles MA, Zelson M, 1991. Stress recovery during exposure to natural and urban environments. *J. Environ. Psychol.* 11, 201-230.
- Vitiello D, Nairn M, 2009. "Community Gardening in Philadelphia: 2008 Harvest Report." Penn Planning and Urban Studies, University of Pennsylvania, <http://sites.google.com/site/urbanagriculturephiladelphia/home>. (Erişim tarih: 20 Mart, 2017)
- Voigt A, Leitão TE, 2016. Lessons Learned Indicators and good practice for an environmentally-friendly urban garden. *Urban Allotment Gardens in Europe*. Chapter 7, Page 165.
- Welch JR, Byrne J, Newell JP, 2014. Urban green space, public health, and environmental justice: The challenge of making cities 'just green enough. *Landscape and urban planning*, 2014, 125; 234-244.
- Wood CJ, Pretty J, Griffin M, 2015. A case-control study of the health and well-being benefits of allotment gardening. *Journal of Public Health*, Vol. 38, No:3, pe 336-e344.
- Yenice MS, 2012. Kentsel yeşil alanlar için mekânsal yeterlilik ve erişebilirlik analizi; Burdur örneği, *Türkiye. SDÜ Orman Fakültesi Dergisi*, 2012, 13:41-47.