

Sustainable Planning of Urban Parks – The Case of Balıkesir, Turkey*

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Introduction

Throughout the past century, the Turkey's population had been rapidly congregating in urban areas. The urban population in the Turkey was approximately 60 million in 1995 number that is expected to duplicate at about the year.

The spatial extent of urban development in Turkey has undergone tremendous change in the last 35 years. Many urban areas in Turkey have expanded mostly on (over) agricultural land in recent decades. The changes in land use patterns certainly provide many social and economic benefits but they also affect the natural environment negatively (Kurucu & Küçükylmaz, 2008, s. 293). The decline of nature during the twentieth century increased public awareness to the necessity of introducing natural assets and components in urban context led to the creation and development of the urban park movement.

Urban parks are of a strategic importance for the quality of life of our increasingly urbanized society and provide significant ecosystem services, as environmentally, aesthetically, recreationally, psychologically and economically. The presence of natural assets such as urban parks and forests, green belts and components (i.e. trees, water) in urban contexts contributes to the quality of life in many ways.

The movement started in Turkey creating public city parks like the Gülhane Park and Yıldız Park which are the historical urban park in the Istanbul, Turkey. They are one of the oldest and the most expansive-public parks in Istanbul (Figs. 1-3).

In the 19th century with massive urbanization, the continued explosive growth of urban areas and the decline of nature throughout the 20th century, the alienation between people and the nature was increased. Urban parks, open space and related human health issues are a critical component of any state, regional, and local infrastructure plan for livable, just communities. Urban parks promote the core values at stake in building public infrastructure: providing children the simple joys of playing in the park; improving health and recreation; equal access to public resources; democratic participation in deciding the future of the community; economic vitality for all with increased property values, local jobs, small business contracts, and affordable housing; spiritual values in protecting people and the earth; the environmental benefits of clean air, water, and ground; and sustainable regional planning.

Urban Parks and green spaces are vital places for us to learn, play, grow, and connect with both nature and our neighbours and communities in modern and

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Figure 1. Gülhane Park-Istanbul.



Figure 2. A section of the outer garden was planned as a park by the municipality and opened to the public in 1912.



Figure 3. Yıldız Park.





Figure 4. Tekirova/Antalya-Kemer Eko Park.



urbanised society. They replenish our air and water; they protect or provide safe havens in cities. They define what a civil society is, they define what a liveable city is. The emergence of the leading urban parks and green spaces in the Turkey during the past decade reflects the growing professionalism and commitment of the management agencies and their leaders to the parks and green spaces agenda.

The last years we have seen local authorities aimed to create an environment-friendly urban setting through a planned landscape development in urban areas involving the use of “naturalistic” styles. Professional interest in ‘naturalistic’ landscapes has certainly been very strong across northern Europe for the last few decades and a fashion among landscape professionals towards the production of more natural landscapes within the urban fabric has been popular (Flint, 1985, p.37, Emery, 1986, p.127, Goode and Smart, 1986, p.156, Kendle and Forbes, 1997, p.223 and Dunnet and Hitchmough, 2004, p.47).

Recently, however, the importance of open space and green space in cities has been strongly supported

by landscape ecologist due to its ecological function. The ecological function of open space was initially advocated by (MacHarg, 1964, p.47), followed by (Laurie, 1979, p.89) and (Hough, 1984, p.123). They suggested that land use allocation should be determined by pattern of natural resources and individual ecological elements. Nature not only represents the material basis of all human life but also provides man with optimum living conditions.

In the beginning of the urban park movement designers had as objective the representation of rural landscapes like in the central park in Turkey, but without any attempt to re-establish ecological functions.

Later Park Yumurtalık Lagun evolves in a mode to adapt ecological functions as wetland ecosystem and afterwards, urban park design adopted the formal design principles taking into consideration ecological criteria (Park İğneada Longoz Ormanları) (Fig. 5).

In Turkey, according to 2010 data, there are total 40 National Park. (Dağdaş, Kırış, Ateş, 2006, s.44).Some of them are shown in below:



Figure 5. Park İğneada Longoz Forest.



Kuşçenneti National Park, Balıkesir	1959	1195 ha
Uludağ National Park Bursa	1961	12677 ha
Yedigöller National Park Bolu	1965	2019 ha
Nemrut Mountain National Park Adıyaman	1988	13850 ha
Beyşehir Lake National Park Konya	1993	88750 ha
Dilek Peninsula Aydın	1994	27675 ha
Gala Lake National Park Edirne	2005	6090 ha
İğneada Longoz Mountains Kırklareli	2007	3155 ha
Tek Tek Mountains National Park Şanlıurfa	2007	19335 ha
Yumurталık Lagünü National Park Adana	2008	16430 ha

Presently, the movement adopted the environmental education function like it is presented in the Tekirova/Antalya-Kemer Eko Park (Fig. 4). This principle is considered very important, once the development of proactive education and training policies not only on children but on any park user can play an essential role in the sustainability of the city strengthening the importance of urban parks and other natural areas of the contemporary city.

Urban parks and open green spaces are of a strategic importance for the quality of life of our increasingly urbanized society (Beer, 1994, p. 131). Besides ecological functions, natural areas provide social and psychological services, which are of crucial significance for the livability of modern cities and the well-being of urban dwellers. The future social implications of new lifestyles, values, attitudes to nature and sustainability will lead to higher demands for urban parks (Thompson, 1994, 239).

Methodology

The methodology was developed for the "Balıkesir Province" area, located in South Marmara region. Table 1 shows the methodology diagram that is based in the holistic concept of landscape as a resource.

Primary data (literature review and desk research) have been gathered. The most popular parks of Balıkesir created in recent years (The Turkey) have

been collected as secondary data.

In the first phrase it was studied the origin of urban parks, analysed the evolution of urban park design- by analysing significant urban parks and described the expected future of the movement.

In the second phrase was collected and analysed information about the different components of the landscape "public parks" and "recreation areas" often mentioned factors to make the city liveable, pleasant and attractive for its citizens.

The visual quality and opportunities and treats of the study area synthesized to evaluate the scenic value, cultural character and the landscape capacity to absorb change of visual absorption capacity of open spaces rich in natural and visual landscape resources. "Visual absorption capacity" is defined as the landscape's ability to absorb physical changes without transformation in its visual character and quality. (Amir, Gidalizon, 1990, p.258).

High quality landscapes usually present more sensitivity and low visual absorption capability (Panagopoulos, Vargues, 2006, p.282). From the above information was created that the Atatürk Park as an attractive and multifunctional space that promotes sustainable development.

Urban Parks Analysed in the Conception of Visual Quality

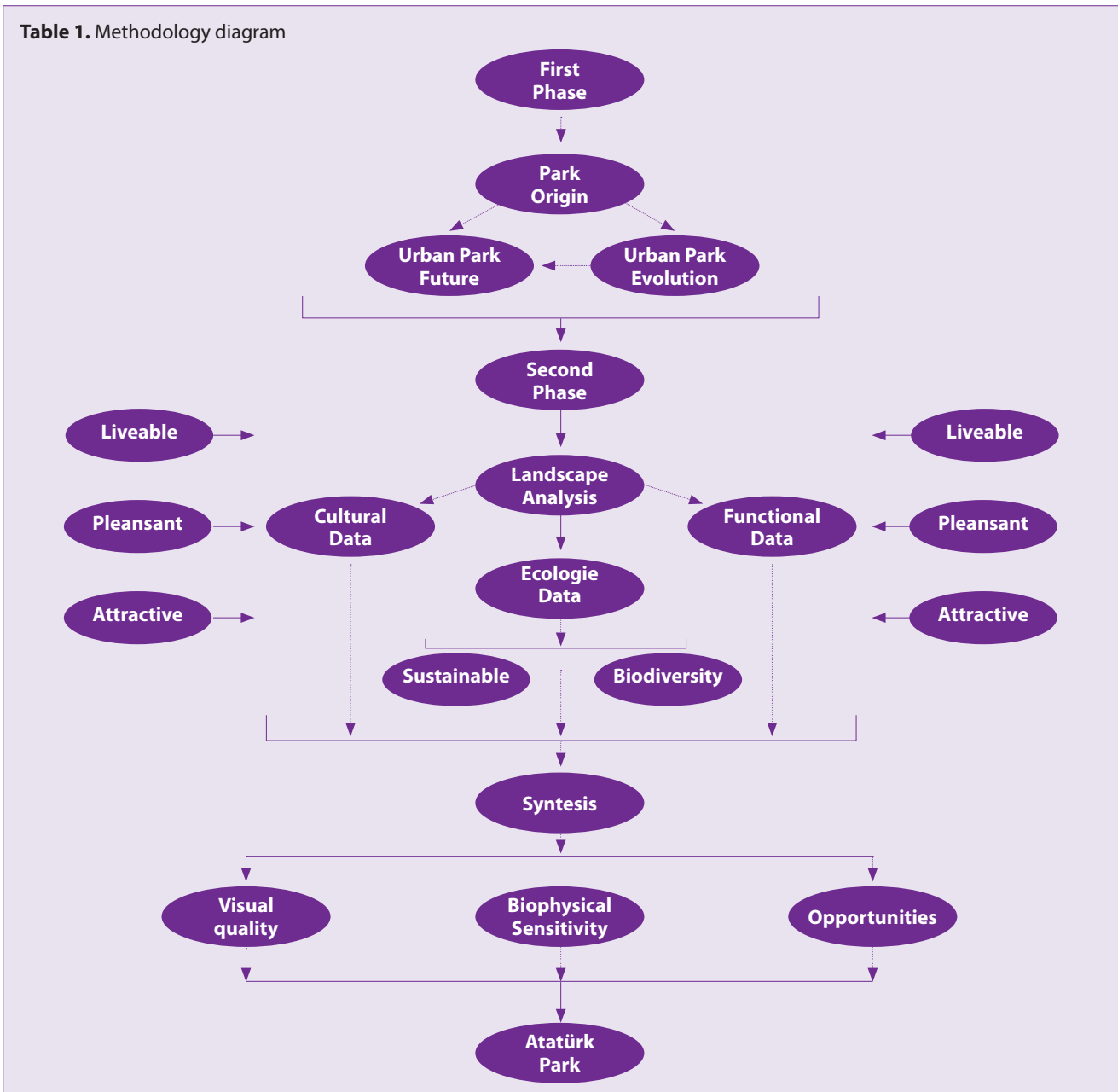
Before analysing the case study of Atatürk Park, it will be performed a short description of some urban parks that marked the urban park movement in their construction period and that influenced its conception- The Şehitler Park, The Park Barrier-Free Life and The Environmental Education Park

The Şehitler Park

The Şehitler Park (Fig. 6) is located in Balıkesir and has an area of approximately 74 hectares. This area is composed by 53 hectares of lawns and meadows.

The park contains roughly 375 trees, 3086 bush and 18200 plant groundcovers. With this structure it intend to barrier to the exterior and to the buildings. This vegetation represent biophysical characteristics of the area, renewal potential of vegetation and the visual exposure of the area to observers. These rural and natural sceneries and its organic forms play an important role in the Dynamics of the Park. Open and closed spaces can help improve the quality of life in urban areas, provide to the visitors of the park a variety of places turning the space into a varied and mul-

Table 1. Methodology diagram



tifunctional space by increasing the attractiveness of the places in which people live and work.

The Environmental Education Park

Environmental Education Park (Fig. 7) is located in Balıkesir. The park with an area of 9 hectares was designed the Department of Balıkesir Municipality.

The park is composed by 5.5 hectares of trees and bushes; 950 square meters of open spaces; 1400 square meters of roads, ways and parking lots and 1150 squaremeters for other different uses.

The green structure of The Environmental Education

Park is quite complex, reason why the plantation plan was very ambitious, not only in dimension, but also in schedule.

The Park Barrier-Free Life

The Park Barrier-Free Life (Fig. 8) is located in Balıkesir. The park has an area of 4350 square meters.

The park contains 800 trees, bushes and plant groundcovers. On the contrary of The Environmental Education Park, the created structure does not intend to represent the natural sceneries and its organic forms, but to create a connection with the city center.



Figure 6. Şehitler Park - green areas and circulation.

The New Atatürk Park Case Study

The park is located in Balıkesir, which is a characterized terrestrial and Mediterranean climate and beautiful landscape. Balıkesir is the west region of Turkey with a 45% of land occupied by forest and 32% by uncultivated land. In Balıkesir the main species are larch, red pine, beech, hornbeam, oak, willow, tamarisk, and sycamore and olive trees.

The population is characterized by scattered distribution in the center areas and concentrated in coastal zones. Tourism is the main activity especially in coastal zones and farmer population is continuously aging. Balıkesir boasts a rich and diversified natural heritage. Throughout the province of Balıkesir, many mounds, cave and even residential areas emerged in the period between 8000-3000 BC. Agiros (Achiraus) is the first city that is said in this region (Hacıoğlu, Bozok, 1997, s. 10). Karesi principality was established in the region after the collapse of the Anatolian Seljuk State, and then the region was conquered by the Ottoman Empire (Akşit, Sanır, 1981, s. 790).

The Atatürk Park represents an exceptional opportunity to establish a best practice example of sustainable urban development. The objective of the urban park Project was to create an economically sustainable Project that will take into consideration the environment and cultural heritage, and the spirit of the place (genius loci) (Galofaro, 20007, p. 122, Schulz, 1997, p. 96, Spirn, 1998, p. 121, Tilley, 1994, p. 63).

Thus, it was created interest points that attract and serve the population; was used different plants and urban equipment and materials adapted to the surrounding landscape; was asked the people satisfaction of user what they expect to see in that place.

In order to identify the views of users in this research, social value was measured by indicators using surveys before and after the project.

The research involved a range of questionnaires for all ages. Separate questionnaires were developed for teenagers and adults and 400 personal interviews conducted with users aged 12 and over. Examples of indicators used in social survey were the following:

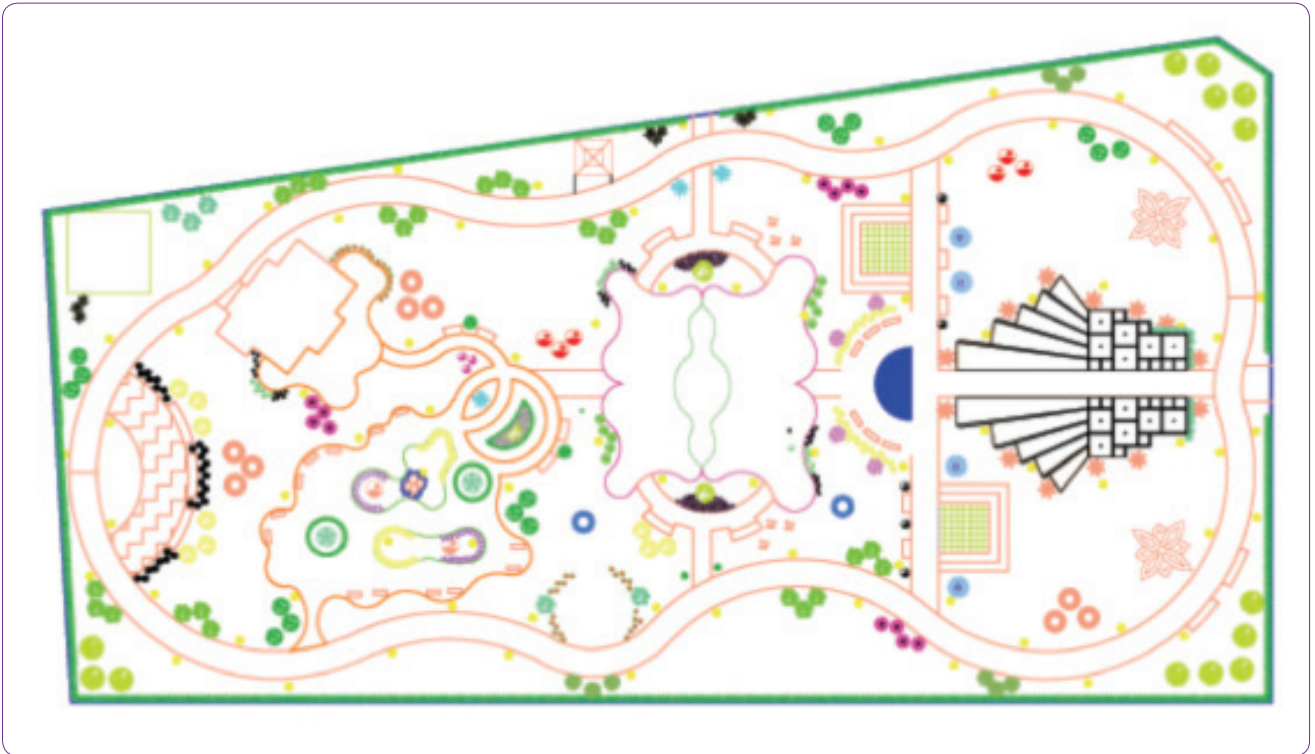


Figure 7. Environmental Education Park- green areas and circulation.

-the percentage of people who feel there is good community spirit where they live,

-the percentage of people who are proud of their city,

-the percentage of people who indicate that fresh air is the main reason of using Atatürk Park

-the percentage of people who indicate that visit the park for the greenery and natural view,

-the percentage of people who consider the parks to be an urban oasis of greenery, where they are able to escape for a while from the burdens of life in the concrete urban desert,

-the percentage of people who indicate that Shade and Seclusion are the main reason of using The Atatürk Park,

-the decrease in the number of people suffering from mental health problems,

This survey aimed to discover respondent's imagination, favourite, least favourite things and their associations of urban parks. According to the survey results, respondents indicate that The Atatürk Park was identified relate to naturalness and recreation activity; was appreciated urban parks not only for passive and active pursuits such as "walking "Children's play area,

"Sport", "recreation facility", "cultural events";"see animal" "Leisure time", "Picnic", but also for human contact activities, such as meeting people.

As a result the design and Project concept assent in the idea of "Urban Nature Symbiosis".The Atatürk Park responded to the needs ecological and social benefits to exist. The idea of symbiosis was based in the fact that the urban park movement was cerated as a solution environmental problems, which was represented as "calm", "open space", "beautification", "cleanliness", "safety", "life ", largeness" and the "free".

Urban parks provide great opportunities for contact with nature for residents. "Parks can be an awe-inspiring contrast to the every day technological word. They can give urban dwellers contact with the plant and animal world, which is missed in towns, but is deeply satisfying" (Turner, 1992, p. 369).

The principal formation of the Project is the tree roots represent the cycling network, trails and walkways. Purpose of the structures was also to give access and to connect the functional areas like the constructed elements and vegetation.

The development of this approach was based the fact that if a design is not based social and environmental ideals and if designers do not have substantial

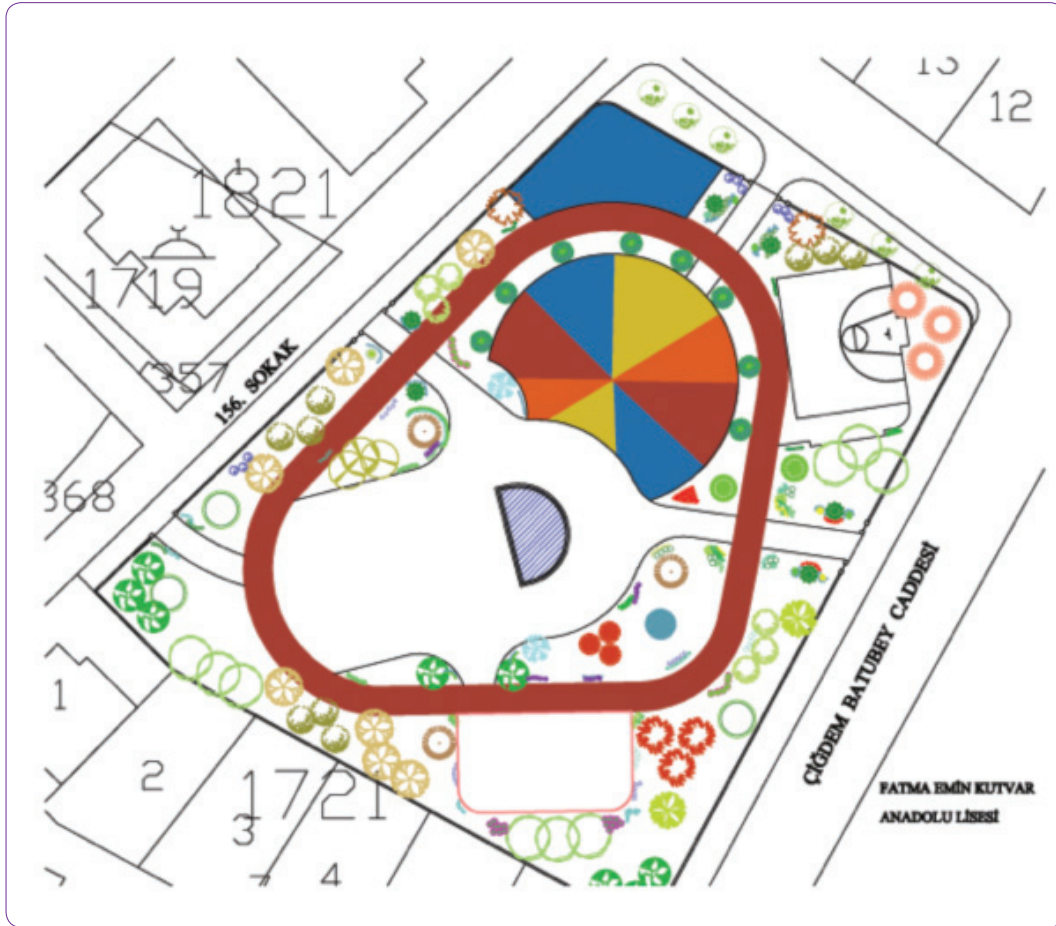


Figure 8. The Park Barrier-Free Life- green areas and circulation.

efforts what problems they are solving and what goals they intent to achieve, sustainable program and form become extremely banal. It was based in this idea that the design team started to develop long-range plans for the delivery of recreation and parks services.

Although the analysis phrase was developed mutually, in order to develop leisure participation, citizen expectations, recreation as a promoter of community and individual health, and trends in park design and development.

In this sense, the development plan of Ataturk park was based in three different system, developed independent, which after designed were superimposed: (1) circulation; (2) green structure, and; (3) functional areas.

This idea applied to development plan was the first step in realising the long-term vision for the park.

Well-managed public open spaces are linked to improving the attractiveness of urban areas, promoting healthier lifestyles, benefiting wildlife and the envi-

ronment and acting as an important educational tool. They are also seen as vital to enhancing the quality of urban environments and the quality of life in urban area (Dunnett, Swanwick, Woolley, 2002, p. 29). The objective was to establish functional connections with the surrounding area in away to facilitate access to the park by different means (foot or bicycle) and connect it in a coherent mode to the city. In this way the strategy allowed the creation of the best design possible to each one of the three systems that include concerns about ease of moving around safely within them, including design of surfaces.

In terms of structure and form we opted to use naturalized lines. New formal and aesthetic qualities including organic forms both in terms of landscape and architectural forms are proven to be more connected with the natural environment than rectilinear ones in terms of their relationship to city around them. The objective was to integrate the proposed landscape in the existing one, reason why organic forms were the most appropriate ones.



Figure 9. The aerial photograph of The Atatürk Park.

The circulation plan constitutes the principal structure which systematizes the whole park and “creating its skeleton”(Fig. 9).

There are three main forms of circulation within parks:

1. Vehicular
2. Pedestrian
3. Maintenance

Atatürk Park’s structure is composed by Pedestrian Circulation concerning cycle and walk ways. The main forms of pedestrian circulation within parks are:

Walks: These are utilitarian support routes and provide access to main areas throughout the park (Fig. 10).

Paths: These are considered a compromise between walks and trails, and are informal in design (Fig. 11-12).

Those ways have five meters width (enabling both the use by cyclists and walkers). The exclusively walkable structure is allows its connection with the inner spaces of the park.

Access to city parks has always been an important and ongoing topic for planners, landscape architects, and city officials. In the early days, urban parks were only found in upper-class neighborhoods, as those individuals realized the potential for city parks and had

the means to create these spaces as well. Parks have since become a representation of equality, where everyone is allowed to share and enjoy the same space. Balıkesir city center’s residential population is approximately 300 thousand. Green area per capita is less than 2 m². There isn’t a significant recreation area in city center except of The Atatürk Park. This percentage is similar in many provinces.

Access to City Park can affect a person’s capacity to communicate, interact with others, learn or move about independently. Accessibility was analysed during the circulation plan development and is a very important issue because high quality public spaces should be utilized by each and everyone.

The status between residential spaces and The Atatürk Park’s prevents the congestion of green spaces, and its optimal location endowments the visitors’ requirements, ensures a correct distribution of the natural and leisure services between different green spaces. For this reason, The Atatürk Park creates important stage in territorial sustainable planning as to accessibility to urban park.

Purpose of the park is to assist people with mobility and vision to strengthen their communities in these broader ways. This initiative is a wide-ranging effort to improve the quality of urban parks and the vitality of cities.

In functional terms the park can offer multiple func-



Figure 10. Circulation form.

tions of spaces many of which equipped for urban dwellers such as area for active and passive recreations, social communications, and contact for natural environments. The different functional areas were strategically located to obtain a symbiosis between form and function. Existing constrains, the proposed objectives and, other design components were located together to enable superimposition strategy.

Urban parks are defined as active green public spaces which provide opportunities for recreations, and family gathering. Public spaces in The Atatürk Park can be considered as multi-purpose areas. In addition, park is regarded as an important venue to fulfill resident's leisure times they are known as important destinations for residents. For this reason, to create a multifunctional space we introduced three distinct typologies for functional areas: leisure, education and ecology. Each one these were carefully located to connect people with natural environments, and to enhance mental and physical health both according to the community needs and desires as it is the case of pleasant vistas.

Another objective was to preserve the natural environment enhance biodiversity and protect ecosystems. Urban parks can play an important role in the conservation of biodiversity, especially in a strongly urbanised region.

To determine habitat diversity in a time-efficient way, we developed a plant list with 6 possible plant units that can be found in suburban parks in The Atatürk Park for example coniferous tree, leaved trees and shrubs, bushes, groundcovers, aquatic plants and ivy plants.

The plant species, densities and diversity created different experiences inside the park, enhancing and celebrating the merge between ecology, leisure and recreation.

For the green structure, leaved trees and shrubs was chosen because they are well adapted to the region and provide a continental and Mediterranean image to the space which permits better adjustment with the surrounding landscape. Furthermore with the objective to create promoting diversity, activity an



Figure 11. This walk provides main access to many shops and buildings.



Figure 12. Walking track and trails in the Atatürk Park.



Figure 13. This path is less formal than a walk, yet it still provides access to main areas.



Figure 14. Functional areas.

deven casual walks in the park green space played an important role.

Finally, the vision was to create vibrant, diverse and multi-functional community such as leisure, living, communication, sport, recreation.

Conclusions

In the context of this study, the role of urban parks as provider of social services and their importance for city sustainability has been addressed. Some results have been presented of a survey aimed at exploring the motives and perceptions of visitors of a Balıkesir urban park.

Although the results do not reflect universal, some conclusive remarks can be made, due to the small size of the sample analysed and the limited statistics performed.

First of all, urban nature fulfils many social functions and psychological needs of citizens, which make urban nature a valuable municipal resource, and a key ingredient for city sustainability. Secondly, different us-

ers have different motives to visit the park and different activities they are going to undertake. Therefore, should take into account recreational requirements of all target groups.

This study was held to identify the users' preferences for park usability in urban park in Balıkesir, Turkey. The results declared that park's visitors highly prefer to involve with natural settings. For example, they favor observing landscape views, and being close to trees and shaded areas. Urban dwellers in Balıkesir face with wide range of mental and physical pressures. Physical planning of park creates positive impact on users' mental and physical restoration. Compared with other parks in Balıkesir, such as The Şehitler Park, The Environmental Education Park and The Park Barrier-Free Life, The Atatürk Park is more conceptual and multi-functional, and it tries to struggle the fact that work is still the dominant fact of human life.

In term of environmental education aspect, Environmental Education Park should include learning community in which student life and learning processes



Figure 15. Green structure.

beyond leisure and different activities. As the strategy, park should be progressively a centre for education and training, receiving students from all schools and universities of the region. For example, park amenity planners can increase people's knowledge about natural plants.

They should provide biographic information on signboards for different species. In addition, park designers should allocate some place in the park for exhibition of outdoor and indoor plants. Municipalities can occasionally provide free plants for visitors. Moreover, park amenity planners can consider another particular space for visitors to engage with gardening and planting which gives direct involvement with nature. Landscape designers should re-consider role of The Environmental Education Park.

The Urban Park of Ataturk is planned at the city and neighbourhood levels in order to reduce tensions, stress, and pressure among the residents, but also the needs of people for green space and recreation. Park serves the diverse interests of different users in

a balanced system that includes places for physical activity to improve health, active recreation, passive recreation, and wilderness areas. Ataturk Park should be re-considered as taking into more comprehensive ecological principles. This study discussed about park's contribution to improve social and environmental aspects of the city. However, parks' role should be re-considered ecologically to improve quality of life and finally city sustainability, such as habitat diversity.

Furthermore, park should include more comprehensive plants which provide great shade. Landscape architects should suggest plants which can mitigate intensity of sounds. Therefore, urban parks can bring back tranquility and calmness to the dwellers' life and this phenomenon augment spontaneously sustainability of environment and city.

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