CONSIDERING THE IMPORTANCE OF INTRA-URBAN PARKS IN SUSTAINABLE URBAN DEVELOPMENT (CASE STUDY: SA’EI PARK)

Masumeh Alamrasi
Department of Architecture, University professor and member of the Young Researchers Club
Masumeh_Alamrasi@yahoo.com

ABSTRACT
The goal of the present study is to consider the role of intra-urban parks in sustainable urban development (case study: Sa’ei Park). Parks are among open urban spaces that are key characteristic of sustainable urban development. Parks are, on the one hand, a ground for plants and green spaces and on the other hand provide a ground for citizens’ presence and social and recreational activities. Parks are beating hearts of every city, playing an important role in urban environment and maintenance of the environment, which are among essential goals of sustainable development. The city of Tehran initially embarks on introducing the concept of sustainable development, and then introduces and considers Sa’ei Park as case study. The study has been conducted with qualitative approach and case study consideration and information collecting has been performed based on library documents and field observations. Results suggest that as green urban space and a combination of natural and artificial spaces, regional parks play a significant role in increasing life quality and they are one of the essential goals in advancing sustainable urban development goals.

KEY WORDS: Intra-urban park, Sustainable urban development, Sa’ei Park, Green urban space, Sustainable development

INTRODUCTION
Increasing expansion of cities in all countries of the world, including Iran, is considered one of the inevitable implications of the age of science and technology. Nowadays, the expansion of cities, especially big cities in the third world, leads to intensified negative consequences of urban development, with aggravation of environmental pollutions being one of their major ones. Parks and urban green spaces comprise the living section of a city’s skeletal structure. Implications of urban green spaces from an environmental point of view include decreased air pollution, noise pollution, improved bioclimatic conditions in the city, increased soil permeability, and positive effect on water cycle in urban environment and increased quality of ground waters. Good vegetation in cities is capable of absorbing air heat and transferring it to the ground. The effect of sun radiation’s reflection in the vicinity of urban buildings and its effect on microclimate are very considerable. This effect can be observed in temperature difference of a city’s streets with concrete, stone, and brick buildings and green spaces of parks or rural areas (Razghian et al., 2012). Also, as green public urban spaces as well as the main essential element constructing the feature of cities, parks are center of life in cities and indicative and symbol of environmental health and hygiene. Sa’ei Park is one of the scale parks of Tehran’s region 6 and considered among index and superior parks with special importance for study. Thus, in the present study, it is initially embarked on introducing the concepts of sustainable urban development and then Sa’ei Park is introduced and its spaces and capabilities, as the case study, are considered. Results suggest that regional parks, as urban green space and a combination of natural and artificial textures have an important role in increased quality of life of citizens and are one of the most essential goals in advancing the aims of sustainable urban development. Functionality of parks and green spaces are correspondent to the goals of sustainable urban development that include attention to and preservation of the environment.

Sustainability
For a better understanding of the concept of sustainable architecture, it is first necessary to provide a clear definition of sustainable development. For the concept of sustainable development, there are various definitions. A definition of sustainable development that is generally accepted, is the one in Brundtland Report, according to which sustainable development is a development which provides for the needs of the present generation without compromise and disregarding the ability of future generations in fulfilling their needs (Golkar, 2000). The concept of sustainable development is an attempt to combine evolving field concepts of environmental topics including socioeconomic ones.
Generations and one in which, “Development which fulfills human needs without compromising future generations and one in which, environment and future generations are considered (Zandieh and Parvardin zadeh, 2010)” The main goal of sustainable development have been suggested to provide for the fundamental needs, improvement and promoting the level of life for all, better preservation and administration of ecosystems and a more secure and generous future. Sustainable development is a procedure in which economic, financial, and commercial policies, energy, agriculture, industry, and other policies are designed in such a way to result in a development that is stable in economic, social, and ecologic terms, so that no social indebtedness is created for future generations and finally, it could be suggested that sustainable development has a comprehensive concept and deals with all aspects of human life and conducting sustainable development models requires basic changes in national and international changes (Soflayi, 2003). Sustainability means endurance, continuance, and duration. It is active and means motion and movement and reservation for future (Armaghan and Gorji Mahlabani, 2009).

Sustainable urban development
Sustainable urban development is a form of contemporary development to guarantee the ability of constant development of cities and urban communities of future generations (Sheikholeslami et al., 2009) Sustainable development was propounded in 1950s in connection with preservation and forestry issues. In 1980s, according to the World Protection Approaches Group and then Brundtland Commission in 1987, sustainable development was defined as a process required to improve conditions and fulfill sociocultural deficiencies of advanced communities that always have to be motor of balanced, appropriate, and coordinated socioeconomic and cultural improvement of all communities, especially that of developing countries (Abhapsour, 2007) In 1992, Earth Summit defined sustainable development as the fulfillment of the present generation’s needs without compromising regarding their needs with future generations (Zarrabi and Azani, 2007). Sustainable city is a city that is able to realize essential and basic needs of a population, while creating infrastructures needed for urban welfare and weal, hygienic-curing services, residence, education, transportation, employment, supervision and deliberate policy of urban issues, etc (Bahmanpour and Muharram nezhad, 2006).

Parks and Urban Green Spaces
From the environmental point of view, green urban space refers to a relatively broad green space consisting of plants with a semi-forest structure and with certain environmental and ecological productivity that govern biological conditions of the city (Bahram So lani, 1993) From urbanization point of view, green urban space includes part of a city’s feature that consists of different types of vegetation, and as a living vital factor along with lifeless skeleton of the city, it determines the city’s morphologic structure. Green urban spaces can be divided into three categories: 1- public green spaces, 2- semipublic green spaces, 3- green street spaces.

Urban parks divided into different types in terms of goal, size, location properties, etc., and according to these criteria, it could be said that in one classification, urban parks are divided into four groups of neighborhood, local, areal, and regional, with definitions of each of them presented in the following definitions (Majnonian, 1995).

<table>
<thead>
<tr>
<th>Park type</th>
<th>Population covered (ha)</th>
<th>Access diameter (m)</th>
<th>Quota for each person (m²)</th>
<th>Minimum resolution part (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood unit</td>
<td>3000</td>
<td>250-300</td>
<td>1-3</td>
<td>Half-hectares</td>
</tr>
<tr>
<td>Sectional</td>
<td>3500-5500</td>
<td>300-550</td>
<td>2-4</td>
<td>1</td>
</tr>
<tr>
<td>Areal</td>
<td>16000</td>
<td>650-750</td>
<td>3-6</td>
<td>6-8</td>
</tr>
</tbody>
</table>

Sa’ei Park
Sa’ei Park was founded in a forest form in 1950 by Iranian engineer, Karim Sa’ei, professor of Tehran University. In 1962 it was equipped by the Parks Organization and its utilization as a public park started.
Sa’ei Park is one of the Tehran’s scale parks, located on Valiasr Street. Sa’ei Park is located in the middle part of the territory of Region 6 Municipality. It is bounded to the north by Sa’ei Lane, to the west by Valiasr Street, to the south by Golvar Lane, and to the east by Khaled Isilambouli Street. Sa’ei Park was established with an area of over 120 thousand square meters (12 hectares), and its topographical features have been developed as a result of two...
watercourses, which have developed a unit functionality under the influence of human interference.

Figure 1: Sa’ei Park (author)

Quite high topographical events at the northern side of the park resulted by two watercourses that form the park. Routes constructed over surface lines which have led to overexpansion of hard surfaces on the park. Various accesses to the park, and being located between over axes of city furniture.

Non-consistent with the setting of Park Shahr
The oldest park of the city of Tehran.
Being located in a native context with specific social status.
Consistency, fitness and simplicity in design and furniture of the park one reason for which can be considered lack of variety in the unit form of furniture (Adibi et al., 2005).
Sa’ei Park has educational, recreational, sport, welfare, and cultural capabilities. Educational field consists of the education of Persian and English alphabet for children, children’s playground, Child’s House recreational-welfare complex at the north west of the park, exercise facilities and teacher skate at the eastern side and body building tools in two points of the park, Ladies’ Cultural House at the northeast of Sa’ei Park, Japanese Garden at the southwest of the park with walkways made of big cobblestones, artificial waterfall, Shiraz Cedar Terraces, Tehran’s pine and buttonwood are among the features of this beautiful park. Southern side of the park is dedicated to the storage of animals and it has its own specific visitors. This park has 508 benches, 10 drinking water platforms, 12 checkerboards, and 21 WC units in three points of the park to provide for citizens’ welfare.

Sa’ei Park has various spaces built around different functionalities. Buildings in Sa’ei Park include park office, buffet, park’s police station, library, Ladies’ Cultural House, coffee shop, cinema and theatre, and outdoor amphitheater. In Sa’ei Park, recreational facilities have been prepared for all ages in various and different parts.

People’s Presence in the Park
As an urban space, Sa’ei Park hosts citizens in all age groups. This park includes spaces for education, children’s gaming and recreation, collective sports spaces for ladies, the elderly, youths, and what provides for the needs of different ages. Public space is a space that all citizens from every level, age, race and guild have the permission of entering and presence without any limitation (Rahnamayi and Ashrafi, 2007). Athletes are among users of this park. In addition, the elderly and retired people are constant patrons of this park. This park is at the intersection of Valiasr Street and Khaled Islambouli Street. Thus, it is a place where many local people pass by on a daily basis. Koodak Recreation-Welfare Complex also hosts a big group of families and their children every day. This park is a suitable place for study of interested people and students. Ladies’ Cultural House has added to the cultural richness of this park, so that many of the individuals using this Cultural House, also use Sa’ei Park [16]. Citizens easily make connections with Sa’ei Park’s spaces and attend them. Special design of park’s designer has been so that in furniture design and selection of trees, different ages have been considered, which plays a significant role in understanding the park environment and citizens’ communication. Essential prerequisite for a public space to be considered urban space is that in which social interaction and mutuality occur (Rahnamayi and Ashrafi, 2007). By conducting different programs in Sa’ei Park, grounds of
interactions is constructed. Outdoor amphitheater, cinema, various exercise spaces differing with age, etc. have created this capability in Sa’ei Park.

Figure 3: People in Sa’ei Park (author)

Figure 4: Plants and green space of Sa’ei Park (author)

Plants and Vegetation

Current status of the environment in today’s megacities such as Tehran is not much decent. Vegetation in the form of public spaces can lead to reduced imbalance in cities (EmamiMeybodi and Qazi, 2008). In Sa’ei Park, various and suitable vegetation has been selected according to different micro-spaces. Different types of broad-leaved, needle-leaved trees and different variants of vegetation and seasonal plants have been used. In general, needle-leaved trees comprise most parts of Sa’ei Park and their most notable variants are cedar, pine, etc. Majority of broad-leaved trees
involve buttonwood and olive. Other broad-leaved variants include acacia, elm, eucalyptus, oak, etc. Different types of seasonal plants include Narcissus, tulip, violet, aechmeafasciata, etc. Various vegetation plants include grass, ivy, etc. (Tehran Organization of Parks and Green Urban Space, 2006). Attention has been paid to vegetation context and various use of plant varieties consistent with space functionality in the park according to ages. Borderline flowers, leaves grown on stiles, and the park’s crofts are the nearest plants encountered in the walking route. In general, due to having various spaces in natural ground gradient, Sa’ei Park provides a differing and desirable combination for the spectator.

Facilities and Irrigation of the Park
The water required by the park is provided by gravity and hose irrigation from Dare-Gavmishi Spring of Yousef Abad which contains severe contamination because part of the water-conveying path is roofless. Five urban water taps, only two of which are available currently, provide for drinking water and public WCs. Topographic structure of the park requires more water provision, whereas existing fountains and ponds just account for 1.5 percent of the park (Adibi et al., 2005). Nowadays, given environmental crises, the topic of saving in energy and water consumption is of high prominence which has considered in Sa’ei Park. Broad fountains have been employed in Sa’ei Park, which are mostly located in the center and in low height. In some parts, in accordance with other parts of the park, the parts have been constructed in laminate and different levels. In the eastern body of the park, artificial fountain and waterfall have been developed using the ground’s topography, the body of which is birds’ place and continues to Japanese Garden. This waterfall and fountain are among manifest features of the park. Another little fountain is located in the yard of the Cultural House in northern side of the park, which, like other parts of the yard, is quite urban. Other fountains of the park are scattered around the pond or water streams (Adibi et al., 2005).

Economic Features of Sa’ei Park
Attention to economic aspect depends upon social dimension. In Sa’ei Park, various buildings supply the economic dimension of the park. Buffet, restaurant, temporary gallery, and cinema, besides providing for people’s presence and social interactions, lead to development of economic activity and dynamics of Sa’ei Park’s space and the cost for keeping the buildings and preserving the park will be provided.

CONCLUSION
With regard to increasing expansion of cities and increase in urban population, the necessity of using green urban spaces in line with the goals of sustainable development must be considered in urban planning. Parks and green urban spaces play a significant role in preservation of urban structure. The position of parks in reducing air pollution, noise pollution, improving bioclimatic conditions in the city, etc. are inevitable. In addition to that, parks are a space for people’s social interaction, cultural activity along with economic activities, and recreational space citizens. Sa’ei Park has different spaces for social activity and interaction of all ages which is in accordance with all dimensions of sustainable development. Social dimension: the ground for social interaction of citizens cultivates social participation and cultural activities. Economic dimension: attention to potential of the site and saving in expenses, holding temporary exhibitions and educational classes in Ladies’ Cultural House Environmental dimension: respect for the nature and preservation of the natural substrate of the site and maximum use of the site’s capabilities in better design of the building, native materials and variety of plant species Regional parks as urban green space and a combination of natural and artificial context affecting the increase in living quality of citizens are one of the essential goals in advancing the goals of sustainable urban development and creation of regional parks in urban planning can be a step toward the goals of sustainable urban development.
REFERENCES
Soflayi F (2003). Resistance of climatic elements in traditional architecture of Iran (hot and dry climate), Articles of theconference on energy consumption optimization in buildings.
Zandieh M., Parvardinezhad S. (2010). Sustainable development and its concepts in Iranian residential architecture, Village Dwelling Environ. (130);