

A study on the dwindling of Shiraz green areas

Introduction

As 21st century has started, Iranian find themselves fleeing the problems of urbanization. Between 1956 and 1996, urban population of Iran becomes more than six times from 8.4 million (33% of total) to 49 million (60% of total).

Today, many cities of Iran are experiencing migration of rural people. These cities are the places of new job, recreational facilities and beautiful buildings that attract many migrants from rural areas and smaller cities. These cities are characterized as a set of interlinked systems of physical flows linking air, land and water. They are plagued by environmental problems, waste, and pollution that deplete natural resources, damage the environment and reduce the quality of life of their citizens.

Several studies in different parts of the world have shown that there is a strong positive correlation between development and the level of urbanization. Urbanization and population growth are not necessarily bad, because urbanization in itself forms part of a natural evolutionary process. The problem is bad coordination and poor organization.

There is no doubt that population studies play a big role in the development process. Many important factors of future situations facing the community which the planner must consider are derived directly from the population trends. The issue of population growth is often raised in connection with concern about environmental protection and the quality of life.

Ibn khaldun (1332) recognized that the fortunes of cities were closely associated with the strengths and weaknesses of the supporting political structure. He believed that building and city planning are features of a sedentary culture brought about by luxury and tranquility. Even though Ibn khaldun did not clearly develop his original insights in a systematic way, his thoughts and ideas about cities and phenomena were used as bases, comparison and corroboration for many studies around the world in the field of history and social structure and urban and city planning.

The basic ideas of Christaller have shown that, under an ideal uniform population distribution, the location of central services will produce a hexagonal form and a functional hierarchy of sizes.

The destruction of trees for urban use is a major explanation of degradation in many region (Shepherd, 1989). Unfortunately in 20th century many part of Shiraz green lands are changed to residential buildings. Trees are lost mainly because of the expansion of building construction.

Green areas, parks and open spaces have great value to city population, especially to those unable to afford private facilities. Treats to urban amenity are a cost to psychic well-being, recreation, health and tourism. For this purpose, this paper is organized to study the dwindling of Shiraz green areas. While each city of Iran is unique with its own geography, history, culture and climate, this paper will identify the importance of green areas.

1. Dwindling of Green Areas

The purpose of this paper is to provide advice to architects and urban planner in applying values to the environmental effects of green areas in urban development.

The term 'environment' has been defined as follows:

The conditions, circumstances and influences under which an organization or system exists. It may be affected or described by physical, chemical and biological features, both natural and man-made. The environment is commonly used to refer to the circumstances in which man lives. (Brackley, 1988).

The environment contains ingredients essential for life, health and human welfare. Some of these are being lost or modified by dwindling of green areas (e.g. the ozone layer, the composition of the atmosphere, natural beauty), while others are, finite, and subject to irreversible loss (biodiversity).

The realization that much urban activity may damage the green areas is one important tenet of environmental impact assessment. Another basic is of the environment as a form of natural capital, analogous in some ways to physical or financial assets. Damaging the environment is therefore akin to running down capital, which sooner or later reduces the value of its recurrent services. Economists have sought to identify a level of environmental use that is in some sense 'sustainable' and consistent with preserving environmental capital. Although, sometimes, the construction of green areas, such as parks, requires re-location of people previously living in the area, traffic inconveniences during construction, air pollution from dust particles from the demolition of old constructions, etc. It is still considered worth the effort because green areas help improve the mental and physical conditions of city people

The major adverse environmental impact of the dwindling of green areas can be classified as in the following checklist:

Natural vegetation; changes in predominant land use, Public health, Amenity; loss of public recreation areas, alteration to natural landscape, Cultural property.

Thus we need to be concerned not only with the expansion and restoration of preserved green spaces but also with enhancing the value of ecosystem remnants scattered throughout our cities and suburbs.

Greening of urban development follows a trend well established in Europe according to recent research by associate investigator Timothy Beatley. According to this, should light up social awareness and campaigning the environmental conservation and other activities. Also, improving use of remaining land within city boundaries, including the development of green spaces should be in priority by the policy makers.

2. Overview on the Shiraz City

Shiraz, one of the most beautiful, historical cities in the world, is the center of Fars province in the south of Iran. It is located at longitude 32-52'E, latitude 29-37'N. and 1,540 meters above the sea level. It is 895 kilometers away from Tehran and its area is 220 square kilometers. Shiraz now is honor to have the cradle of royal civilization of the world and of Persian history

Shiraz has moderate climate. There are lush gardens all over the city that moderate its atmosphere. Most of the gardens for which Shiraz was once famous are now long gone, but it still has a number of parks and gardens, which are particularly pleasant to wander through in the summer. One of the most popular gardens is Bagh-e Eram (Eram garden) in the northwest of the city, which is famous for its cyprus trees. The 19th century Qajar palace lies in the middle of this garden, with its own reflecting pool.

The average annual temperature stands at 17.3 degrees centigrade. The maximum temperature mounts to 43.2 degrees centigrade in the hot season and the minimum temperature drops to 14 degrees centigrade below zero in the cold season. The average annual rainfall tops 307 millimeters, with the freezing season lasting 54 days. According to the 1996 census, Shiraz's population stands 1,053,025 having increased from 170,656 in 1956.

Shiraz has two different structures, old and modern. The old structure consists of different gates and districts at different times. The modern structure has been chiefly set up around the old districts in suburbs.

Fig. 1 shows the map of Shiraz.



Fig. 1 Map of Shiraz

3. The Green Areas of Shiraz

While Shiraz population has grown by 1.03 million. In the next 20 years, the Bureau of the Census projects, coincidentally, that Shiraz may add another 0.3 million inhabitants. It indicates increasing of private means, rebuilt dwelling units and associated infrastructure.

Researches show that green areas help improving the mental and physical conditions of urban people. Statistical data of shiraz shows that, Shiraz public green field such as Parks, street-center gardens and squares has changed from 9.07 square kilometers in 1997 to 9.86 square kilometers in 2001. It means that the per capita public green field was about 9 square meters. About 103000 Hectare of Forest around city and nearby agricultural areas give residents easy access to surrounding rural and natural areas. There are lush gardens all over the city that moderate its atmosphere. Unfortunately, in last decades, many private gardens have changed to residential areas. There is few data of this change.

From 1991 to 2000, nearly 64 thousand new homes and apartments units have been constructed in Shiraz. The floor area of those new homes and apartments are 11,739,546 square meters.

As it was written, Shiraz is Best known as the Tourist city of Iran. Tourists come to shiraz for two reason, historical sits and its green areas. Tourism is an important source of income for Shiraz city. Unfortunately in last century many part of its green lands are changed to residential buildings. In the case of tourist attractions there could be direct productivity losses to tourism visitors income.

Figures number two to five show the dwindling of Shiraz green areas in last century.

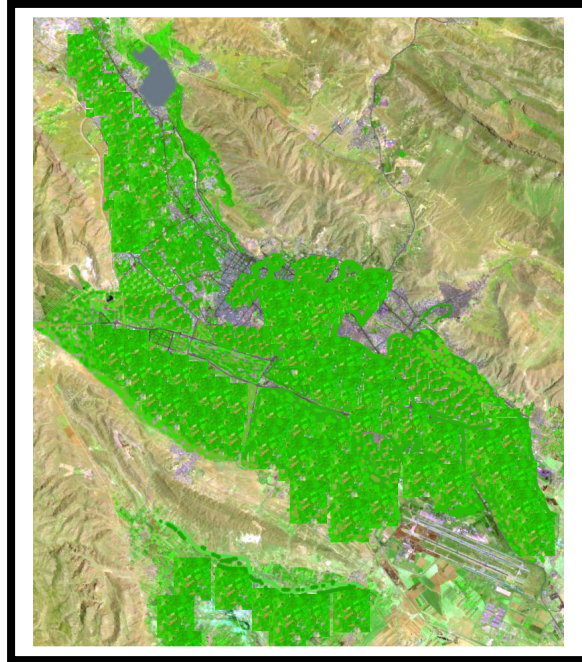


Fig. 2 Shiraz green areas in 1920

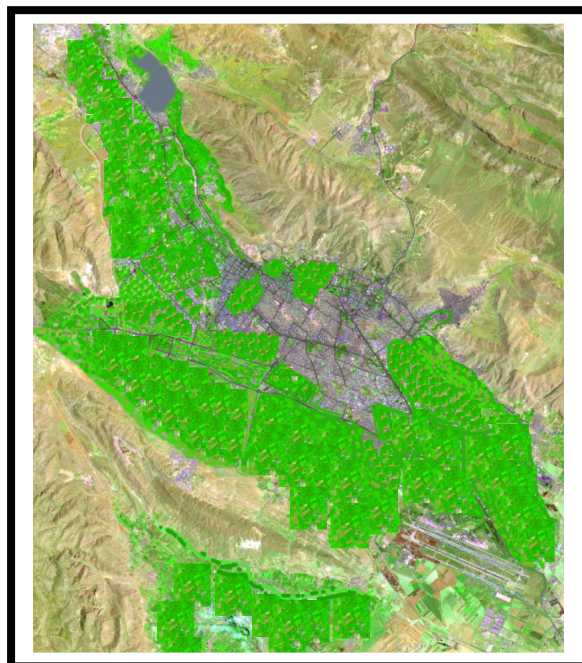


Fig. 3 Shiraz green areas in 1955

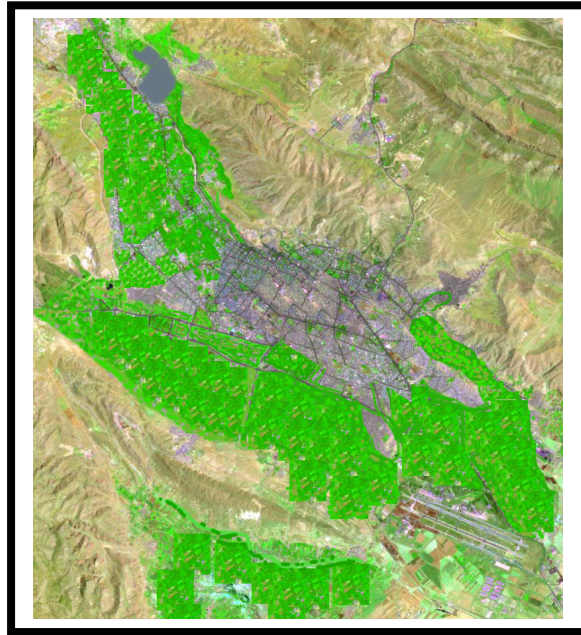


Fig. 4 Shiraz green areas in 1975

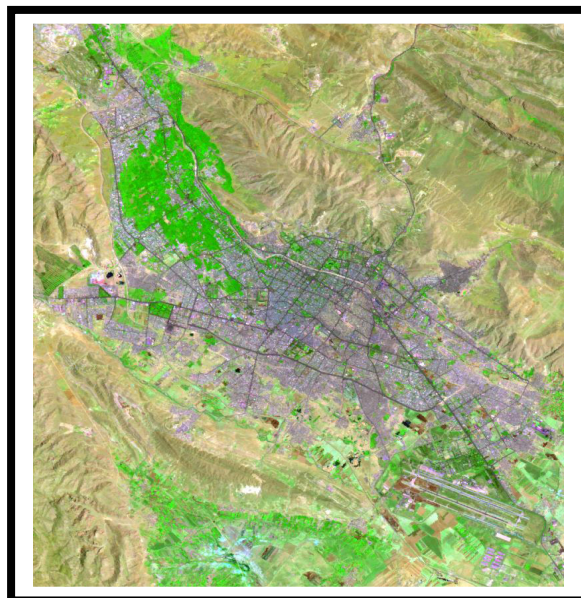


Fig. 5 Shiraz green areas in 2000

4. Growth of Different Sized Cities in Fars Province

Urbanization is the fundamental change and radical shift from a rural to an urban pattern. It is the outcome of the physical, social and economic development and the political regimes. Urbanization in developed and developing countries has followed different patterns and courses in response to the mix of factors.

By the year 2005 about half of the population of Fars province will be classified as urban. One of the major concerns connected with the problem of urbanization relates to urban regions with a population of a million or more is expanding both in terms of population and area.

Table 1 shows the population growth of Shiraz, Fars province and Iran from 1956 to 1996.

Table 1. Population Growth of Shiraz, Fars Province and Iran from 1956 to 1996

Year	Iran	Fars	Shiraz
1956~1966	3.1	3.63	4.69
1966~1976	2.7	2.54	4.67
1976~1986	3.9	4.61	7.14
1986~1996	2	1.8	2.18

Table 1 shows that population growth in Shiraz is more than Fars and Iran population Growth rate.

Table 2 shows the growth of different sized cities in Fars province from 1956 to 1996.

Table 2. Growth of Different Sized Cities in Fars Province from 1956 to 1996

Year	<25000	25000~100000	100000~500000	>500000	Total
1956	122969	59810	170659	0	353438
1966	199985	103492	269865	0	573342
1976	229100	207690	425813	0	862603
1986	207262	553710	0	848289	1609261
1996	403363	603152	103579	1053025	2163119

In most of the developed countries, competition has led to a pattern of settlements in which there is a recognizable hierarchy, with a few very large cities, a substantial number of medium- sized ones, and relatively large numbers of small towns and rural villages. The small and medium sized cities tend to be spaced fairly evenly in relation to the size of the rural population between them, so that cities of a given size tend to have roughly equal populations living closer to them than to other cities of that size. Settlements are linked by transportation routes to several other settlements of a similar size, or larger, giving access to a wide variety of goods and services.

Cities will increase their importance as the place for economic activities. They will also play more important roles in the future in Integrated Local settlement Areas which are the basic

living area as the place to provide urban services such as those of commerce, culture, education, medical care, etc., and also the place to provide job opportunities.

It is unclear, however, what spatial strategy for settlements development would best promote a growing and equitable national economy in the developing countries of the world. In particular, there remains the critical and so far unresolved issue of the extent to which an attempt should be made to provide better services and employment opportunities in or near the existing rural settlements as opposed to the long-standing practice of providing them mainly in the larger cities.

5. Conclusion and Recommendations

The study has showed that, as city function plays increasingly important roles for regional development, during the last decades and perspectives for the future middle sized cities will have a key role in the vitalization and providing places for interaction. Especially, province middle size cities, which have population and function plays central role in management of human settlements. A suitable conclusion to the ideas introduced in this paper, present an actual problem of defining the human settlements.

Also, for greening the City, the per capita public green field should be raised. The Shiraz municipal should give its priority to increase the green space per inhabitant from nine square meters to fifteen square meters. Parks, street-center gardens and squares should be reconstructed so the inhabitants can enjoy the natural scenery everywhere.

Some conclusion and recommendation can be written as Follows:

The people needs to be concerned not only with enhancing the value of ecosystem remnants scattered throughout their cities and suburbs but also with the expansion and restoration of preserved green spaces.

However, we find that the effort of many urban park programs to expand or sustain trees and garden is justified in terms of a few fairly simple dimensions of their significance to urbanites, such as beauty, shade, and cooling. We recommend a broader perspective, one that takes into consideration the deep psychological ties between people and urban trees and gardens.

To make streets and public spaces to be more desirable places by different actions such as, tree planting, increase places to sit, and emplacement o public sculptures and other forms of art.

Each city should have Greening Plan. The plan should consist of a number of broad scale maps showing vegetation across the City. Planner should identify key areas for protection and revegetation as well as providing information on vegetation management for the area.

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