

Traditional Orchard in Qazvin

An Urban Edge with Efficient Nature

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Abstract | Edge of the city of Qazvin, formed from an artificial nature and is a historical species of the edge of the city. An artificial nature made by human, called traditional orchard of Qazvin rooted in millennia of Iran's history. Traditional orchard has a multi-layered communication with the city, but its physical confrontation with the city forms at the edge of it. The aim of the present study is to introduce a piece of performance depth of a unique Iranian sample for a good edge of the city by analyzing and assessing the characteristics of traditional orchard in Qazvin. The research method is interpretive-historical in identifying the research topic and features of the research topic explored, analyzed and summarized through the phenomenological method. At first glance, the subject of the edge of the city, seems to be a formal challenge, but it is influenced by the various layers of the city. Functions of the edge of the city, has a great impact on its reliability and shape; thus the main challenge in the present study is rooting functions of the edge of the city of Qazvin. The main function of the orchard is supplying the needs of the city of Qazvin in different ages. Providing stable conditions for the city, by inhibiting the natural amenity, such as floods, annoying winds, draught and providing suitable conditions for water supply and livelihood of citizens, and even creating social-cultural features are among functions of the orchard.

Keywords | Traditional Orchard, Qazvin, City, Stability, Urban Edge.

Introduction | Climate compatibility, is the basis for the formation of cities. Although Qazvin Plain has the precedence of thousands of years in human hosts settled in his heart, but there has always been existed climate incompatibilities to create permanent settlement there. The existence of annoying and dry winds blowing from desert plains of the south of Qazvin, and the lack of perennial rivers, rainfalls that due to the natural slope of the land cause flood, are the difficulties of the climate of this land. Civilized human beings discovers ways for their survival to first stay safe from the damage of the nature, then make them to serve him. The Holy Quran says: "الم تر و ان الله سخر لكم ما فى السماوات و ما فى الارض" Did you not see that Allah conquered you out whatever is in the heavens and the earth? (Holy Qur'an, 2011: 413)

Conflict with the nature and harnessing it in Qazvin Plain, takes more than seven thousand years for sedentary people, but its result is creation of a sustainable civilization called the city of Qazvin. Restless nature for human life, turns into the domestic nature for survival of humanity by the wise of sedentary mankind other words, the main way of humans settled in Qazvin Plain was enjoying nature for taming itself. One of the unique examples of such efforts was creation of Qazvin traditional orchard, an artificial nature to create stability in Qazvin (Pics. 1-3).

Hypothesis | Natural edge of the city, would become sustainable by providing vital part of the city needs.

Orchard and its Date

From the perspective of historical written sources of the fourth century A.D "Ibn Huqal" in "Surat al-Arz" or "Nasir Khosro" in his travelogue in the fifth century AH have provided descriptions of Qazvin orchard. But in the seventh century A.D, "Zakaria Mohammed bin Mahmud Qazvini" in "Asar al-belad and Akhbar al-Ebad" In addition to descriptions of Qazvin and its orchard, has also drawn the map of the city (Pic. 4). "And that city [Qazvin] has two periods of development, one is in the middle of another, the minor city, which captures another city is called town, and it has a surrounding castle, and the gates of the major city located around it, and it also has a castle and doors, and the grove and gardens are located around the major city and its surroundings are to every direction and the fields of environment Besatin (traditional orchard)." (Al Qazvini, 1994: 217-216)

Paying attention to traditional orchard has also seen in most of historical texts in later periods. Nowadays, the orchard is no longer annular and became horseshoe-shaped (Pic. 5). Because in contemporary times due to the expansion of the city to the north, orchard in the northern part has been replaced by urban fabric, but fortunately in parts of East and West, and particularly the

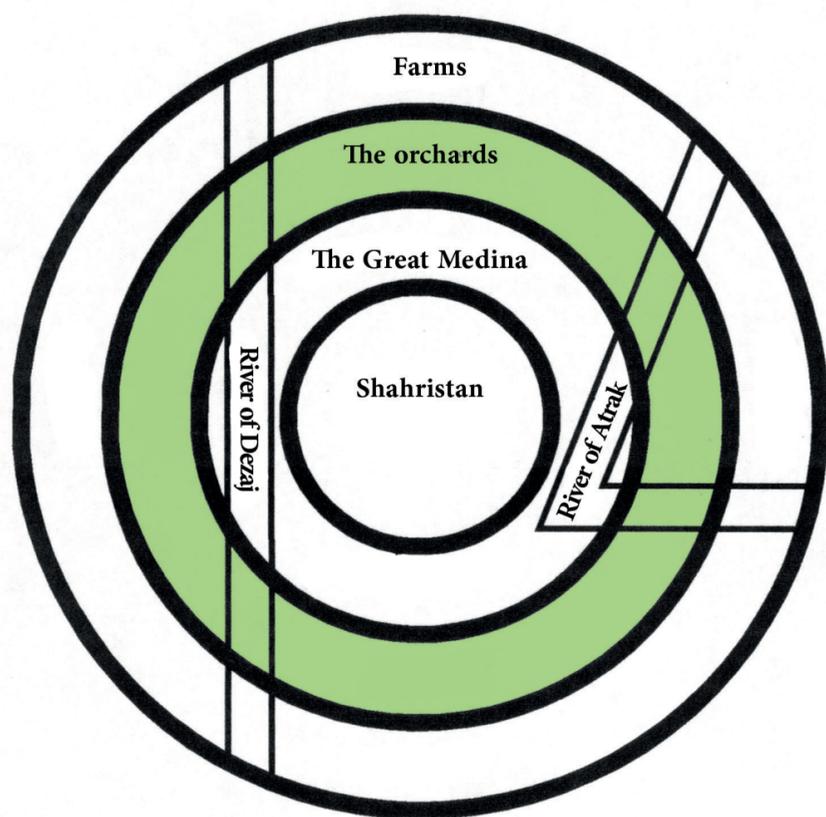


Pics 1, 2 & 3: Different seasons in traditional orchard in Qazvin from the end of one of the edge streets in the eastern part of the city. Photo: Ehsan Dizani, Winter and Spring 2017.

South orchard continues to exist (Pic. 6) .

Orchard and water

Traditional orchard has been ancient approach in controlling and enjoying nature in the city of Qazvin.



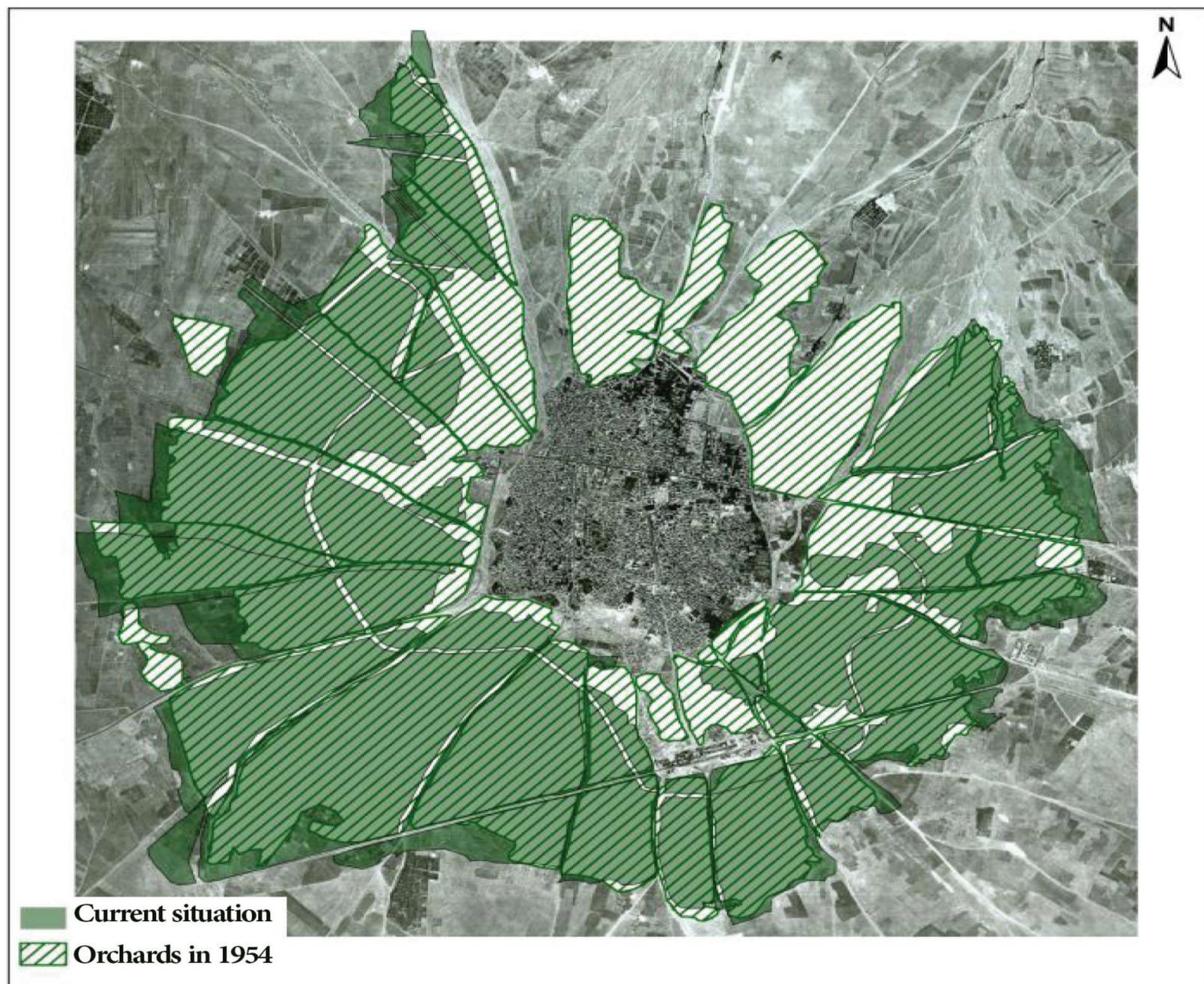
Pic 4: Map of the city of Qazvin in 7th century in which the traditional orchard, called "Al-Basateen" forms the natural edge of the city. Source: Al Qazvini: 1994, 127.

The solution comprises of humans' main reasons of being sedentary which is plantation. Location of citizens surrounded by fields and orchard so that the orchard

has created a margin of safety for citizens from natural disasters. After continuous rains, flood reaches first to the fields because of natural slope of plain of Qazvin and



Pic 5: Aerial photo of Qazvin which shows its horseshoe shape of orchard in the contemporary era. Source: National Cartographic Center.



Pic 6: The process of changing the area of the orchard from 1954 to 2001.

Source: Sharestan Consulting Engineers, 2009: 103.

usually passes farms by and reaches gardens providing large amount of flooding, and the orchard is a good way to inhabit the flood. The solution of the orchard is in the kind of using and terracing land. Embankment of the edge of the terraces in gardens of the orchard are around or more than the common man's torso and parts are located in different altitudes according to the natural slope of the land.

After reaching each of these parts, Flood fills them and flows to another piece. Before contemporary period, orchard level has been almost five times larger than the city and it contained the city in its heart with its circular shape. Thus, flood of every direction of the city, has been controlled by orchard and throughout 2000 years history of Qazvin, there have been few floods that could cross the natural barrier of the city. Orchard is not just a natural barrier against flood, its civilizing solution comes also for the help of maintaining the most important factor of

human life. Qazvin Plain has no permanent rivers and also the amount of its annual rainfall is low. Orchard and farms around it with a broad surfaces are responsible for maintaining the watershed aquifer water. Orchard which prevents floods, saves it drought days of the city. Advanced system of water supplying by aqueducts in the city of Qazvin was dependent on the water performance of orchard (Pic. 8).

Orchard and Wind

Since ancient times, sedentary people have been seeking a solution to deal with annoying winds of Qazvin plain. So that the orientation of the houses on the slums hillside (related to the end of the eighth millennium of B.C) are in such a way that their inputs don't locate against the winds. "In the slums region about 21 homes have been obtained. The longitudinal direction of these rectangular homes, is from the northeast to the southeast, or vice versa on the

map. Selection of this direction has been due to the “Raz” and “Meh” constant winds (Raz wind is a hot desert wind and the Meh wind is a cold wind) of Qazvin Plain (Malek Shahmir Zadi, 1987). Here the width of the houses have been located against the wind, which had a lower surface. Such a direction became a barrier against the penetration of winds”. The strategy of traditional orchard of Qazvin to harness the winds is different from the houses of the hill slum. The orchard harnesses dust, wind speed and dryness of the Raz wind (hot desert wind) by surrounding the city of Qazvin in its heart, and transforms it into gentle and subtle breezes for the city. In the season of blowing Meh wind (cold wind), Orchard also causes its burning speed and blowing it gently to the town.

Orchard and Culture

Orchard has been the basis of many social and cultural interactions over time. From people management for the kind of division of water to the farmers' special literature and celebrations that hold every year bring people of the

city to the orchard. Ancient celebrations that have been remained to this day and have been civilization effects of the Orchard on the stability of traditions. The "50 Be-dar" ceremony which is rooted in ancient, holds in twentieth day of Ordibehest month or the fiftieth day of spring in the Feast prayers to ask for rain in the mosque of the Orchard to seek rain by the people of the city. Then the people spend a spring afternoon with their families. The aforementioned example is an obvious example of social features of traditional orchard, which fortunately has remained to this day (Pic. 9).

Orchard and Economy

It is obvious that agriculture and horticulture has long been practicing by humans for providing food and livelihoods. The economy of traditional orchard of Qazvin is not an exception, but its effects on the city of Qazvin are remarkable. Because of its geographical, political, cultural and etc. features, the city of Qazvin experienced a lot of ups and downs during its history. Throughout its history



Pic 7: Type of land and terracing parts at a corner of traditional orchard
Photo: Erfan Dadkhah, 2011.

has been a lot of ups and downs. From Locating between two natural walls of Alborz and Zagros, that made it a strategic point of Iran plateau and caused the affluence of trade in it to being Safavid capital and etc. which caused urban abundant changes. Urban developments have been followed. Like its young neighbor city of Soltaniyeh, the results of each of these ups and downs could cause destroying and stagnation in every corner of Qazvin. This is where the role of food suppliant and livelihood of the traditional Orchard becomes highlighted to the city, where the city loses its economic sources during the political-economic or even natural damage. Because a large number of residents of the city have been directly and indirectly dependent on the Orchard and always have been enjoying the advantage of the orchard; so for any reason in urban economic stagnation, at least supplying food and livelihoods have been existed for a large part of the citizens.

Non-market value of traditional orchard of Qazvin: It seems that one of the major problems associated with

traditional orchard of Qazvin is the lack of calculation and determining its non-market functions and non-use values, because today what is considered as the benefits of this Orchard is only the value of its product, while the existence of such functions like production of oxygen, absorbing carbon dioxide, temperature adjustment and balancing climate, preventing soil erosion, increasing soil formation processes, absorbing pollutants, retention and water storage, flood control, aesthetic vision and perspective and values of entertaining, as the habitat, its existence and heritage value, and the possibility of calculating people willingness of payment to the benefit from these services and values, manifests the actual value of this Orchard and prevents changing and destruction of the Orchard in cost-benefit analysis. The results of the calculation of 8 ecosystem service values in the traditional orchard of Qazvin indicate the annual value of 840/546/5 Rials per hectare and 710/386/1 thousand Tomans per hectare for the whole of traditional orchard [year of report 2011).



Pic 8: The traditional orchard of Qazvin and controlling flood and saving it for drought days.
Source: www.kojaro.com.

Orchard and Fences

Although the historic city of Qazvin has always had fences and walls throughout the history, the function of these walls and fences were not for limiting orchard because the orchard has been shaped within the fences in different periods and these parts replaced with urban areas by physical development of the city (Mansouri & Dizani, 2016: 90); for instance, by becoming Qazvin as the Safavid capital, the population of the city grows quickly and it is followed by expanding physical areas. When the

city becomes capital and expands, its gates and fences pushed back. By moving the capital to the city of Isfahan, Qazvin goes through recession and its population reduce and during hard times urban spaces decrease, become abandoned and the city space reduce. However, the range shift of the fence around the city before and after Safavid period is not significant; this is where as the soft urban area, the orchard retreats in the period of expanding hard urban spaces and comes back within fences in the period of decreasing physical city.

Conclusion | The traditional orchard of Qazvin, is the experience of creating an efficient nature on the edge of the city. The proof of its effectiveness is the persistence of the orchard and the city of Qazvin for centuries. Soft orchard is a space which has always been flexible against the hard physical space of the city of Qazvin. Orchard is a natural edge of the city which retreats against the growth of the city and places back in hard regression of abandoned urban spaces; hence, the basic role of defining edge has been disposal to the traditional orchard.

Curbing climate inconsistencies such as floods, annoying winds, drought, and exploitation of natural barriers to urban growth and development, such as utilizing flood water for water supply, converting annoying winds into light and refreshing winds, are among the climate effects of the orchard. Of other features of the orchard is the formation of social and cultural interactions in its context. Orchard has a self-help and non-government economy and has always been considered as an independent place and has always been managed by people. Livelihood of the



Pic 9: People of the city presence at 50 Be-dar ceremony in traditional orchard of Qazvin. Photo by: Mahdi Mojtahed.

citizens are among the reasons of stability of the orchard and always in recession of other economic sources of the city, the economic mainstay of the city's orchard has been the economic point of reliability for the city; in other words, long-term famine is meaningless in the city, thanks to the traditional orchard.

Artificial nature created on the edge of the city of Qazvin,

and removing climate inconsistencies and protection and renewing living resources of the city is the deep functional characteristic of the traditional orchard. Qazvin traditional orchard is a successful experience of the natural edge of the city which the result of this domestic nature has been stability for the city of Qazvin and its edge.

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