Identification and Prioritizing the Sustainable Urban Landscape Design Factors: Case Study of District 22 in Tehran

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ABSTRACT

This research conducted to Identify and prioritize the sustainable urban landscape design factors indistrict 22 in Tehran. FuzzyAHP method has been used foridentifying and prioritizing the sustainable urban landscape design factors. Based on the literature review seven qualitativecriteria were identified. These factors including: sustainability, aesthetic, safety, connectivity and accessibility, legibility, desirability, dependency, adaptability, biodiversity. Inthe research process, firstly the criteria are compared together and given suitable weight to them based on experts opinions. The results showed that comparison between six sites based on criterions, Site 2 has priority and site 3 and site 1are next in priority respectively. The biggest difference among these was "Biodiversity" with a difference of approximately 0.20. Site 2 was superior to site1 on 6 factors as well, with the biggest difference being "Biodiversity" with a difference of 0.123. Site 3 was superior to site 1 in 5 factors, with the biggest difference being "Safety" where the difference was 0.112. In this analysis, different perspective and experts' choice are used. Due to the diversity of opinions, the analysis of prioritize of the factors should will be done in various aspects. Also this analysis, potentially, shows the unspecified relations of use of integrated and formulated strategies in different time intervals. In fact, it operates as a determining route for the location decisions using the urban landscape designers. Also it increased ability to identify factors, priorities, and ultimately it leads to a suitability choice among various alternative.

Keywords: Fuzzy theory, Green Spaces, qualitative factors, Fuzzy AHP, Tehran.

1. INTRODUCTION

It focuses on the analysis of Tehran in its landscape features due to improve environment quality. The dissertation concentrates on descriptive analysis of distribution of green spaces and it's per capita to reach the target of description of analysis as well as environmental design, compositional theory and other landscape issues in the city and its surrounding. Arrangement of selection model has direct impact on function of city as the diversity and proper distribution make to increase authority and power of choice that is not only analytical method, but also technical computing. There is no doubt that green spaces have significant environmental values in our cities. Places with less dense settlements and more open space and abundant vegetation are usually more comfortable environments especially in the summertime.One of the current problems in cities, such as Tehran, is heat islands which are created when natural ventilation system are replaced by heat absorbing surfaces such as building's roofs and walls, parking lots and streets. Creating green areas and effectively micro climates can be an important determinant in coping out of these heat islands of Tehran. They can increase wind and ventilation and also shade urban surfaces. This becomes more tangible in the urban context where dominating the wind direction is not so reliable, as inner city areas have their own micro climates. Urban vegetation such as street trees, lawns, parks, urban forests, cultivated land, and wetlands can have considerable role in making an urban micro climate. The easy

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approach is to ask what life would be like without any parks and green spaces. Imagine if you lived your life without seeing a blade of grass. Green spaces are probably the best form of community facility any city has.Having daily contact with green spaces creates different social effects and reducing the crime and vandalism. In a study conducted in Chicago, researchers found that the residents of the buildings with surrounding green spaces had a stronger sense of community, better relationships with their neighbors and reported using less violent ways of dealing with domestic conflicts. A common criticism on the development of green space in neighborhoods is the 'danger' and issues surrounding 'safety' which result from the hidden places.

Developing green spaces has both short-term and long-term economic values. A well designed public space can raise property values, enhance economic vitality and increase the tax base. It also can have long-term values through health benefits as well as attracting commercial land-use. A study in Scotland shows reducing the level of inactive people by %1 in the next 5 years benefits £85.2 million. Today, landscape designers can do this duty. Landscape design is an independent profession and a design and art tradition, practiced by Landscape designers, combining nature and culture. In contemporary practice, Landscape design bridges between landscape architecture and garden design.On the other hand, the importance of green space to our quality of life is enormous and there is much evidence to back this up. Green spaces break down social barriers and help pull communities and people together. They are free of charge and reasonably accessible - neighborhoods are better places because of this. Green spaces are probably the best form of community facility any city has.Main goal is to identify and analyze urban green spaces of Tehran in order to promote urban environmental quality. In this paper a new methodological approach to the distribution of green spaces in Tehran has been prepared and the combination of qualitative factors with quantitative factors to determination of model has been done. Moreover a model offeredby using of the Fuzzy AHP method to choose between options helped to increase the confidence of design decisionsdevelops and implements.According to the paper, novelty comes to the following: For the first time, in this dissertation, distribution of green spaces in Tehran city as analytical has been done that resulted sustainable urban landscapedesign development. For the first time, a new methodological approach to the distribution of green spaces in Tehran has been prepared. For the first time, the combination of qualitative factors with quantitative factors to determination of model has been done by computer – assisted For the first time, model offering with using of the Fuzzy AHP method to choose between options helped to increase the confidence of design decisionsdevelops and implements. According to usage of new method, location of urban green spaces is suitable. All of the organizations can use this method to obtain the real result. The results of this study are used by the municipality, ministry of urbanism and housing and science centers. The Main aspects of the dissertation are published as articles in different scientific issues.

2. THEATRICAL BACKGROUND

2.1. Concept of Landscape

Edmund Bacon believes that making the city is one of the greatest human achievements that its form will be symbol of the merciless understanding of degree human civilization. He knows decisionsofthe peopleliving inthecity as determining the shape of the city. His opinion on certain conditions, the impact of this decision is so clear and stylish that would be born noble city. Bacon in the book "Cities Design" as "the city, thepracticalresult of voluntary" disproved the notion that cities are a kind of huge event that happen outside the human and just obey immutable laws. The urban landscape as a symbol of civilization quality and collective spiritual of each nation and ethnic is result of decisions and perceptions of city people and result of the voluntary act and not the product of accidental or outside of the rules of human understanding. Although, image, the city is outside from will of the human being , is not persistent and almost everyone agrees with the bacon, but supposition which analysis and interpretation of the city and the urban landscape

without regard to the man manufacturer as well as the perception of it still remains (Jamalzadeh, 2002).

Landscape history is the study of the way in which humanity has changed the physical appearance of the environment - both present and past. It is sometimes referred to as landscape archaeology. It was first recognized as a separate area of study during the 20th century and uses evidence and approaches from other disciplines including archaeology, architecture, ecology, aerial photography, local history and historical geography. In England, landscape history emerged as an academic discipline following the publication of The Making of the English Landscape by W. G. Hoskins in 1955, although some topics that are now considered part of landscape history had been identified earlier. Darby, for example, gives many early examples of regional characterization of landscapes.

2.2. Understanding of the urban landscape

The first step, understanding of the urban landscape is evident perception that causes pleasure, joy, irritation, fear and other emotional reactions of human. In fact, the main effect of urban image quality emerges in range of emotional reactions. Tangible perceptions of the urban landscape are not only in visual elements, but environmental noise, odor and other factors influencing on the human senses have role to form it. In other hand, landscape doesn't limit to perceptible data of our around world. But can be individuated by joining with the mentality of the observer which is more than the ordinary visual look. In the urban landscape, looking to the urban and the urban environment is not done only by human eyes but with the heart or mind's eye and the combination of the two look. So, surveying of landscape is except the environment morphology.

The human mind forms the image of city and the urban landscape based on the effects of sensory, experiences and personal memories, astatic judge, collective memories and collective experiences, historical events, cultural framework of values and ideals and the ideal, Because creation of mean is not passive process that receives sensory information mentality and joins it according to the association rules. But it is the active and creative process and object and subject combine and create global mind which sense perception. Namely, the mean includes the physical reality and understanding mind.

Urban landscape is objective at first which will exist due to the quality of the environment physical factors. But urban landscape has type of a mental existence gradually and due to the presence in historical conditions and repeating in front of people who percept it, and changes to the common element linked into the community. In this situation, landscape is the objective – subjective inventory that has existence in universe, reality and mind and it is not possible to cut any of them.

Urban landscape is whole that remains on human mind even after leaving the area[1], it is result of the interaction between human (observer) and his environment, the relationship between person and place. Urban landscape is a collection of Gestalt. When the whole become mentality which give the steady mean is derived cultural or regional capacity. Urban landscape indeed is the whole interconnected of symbols and signs that means to the concepts, values,

The main features of the urban landscape is discussed as a phenomenon of objective – subjective, human being - physical and spatial - social structure .in other words, urban landscape is emergence that reveals through human experience in the interaction between humans and the environment. This concept is not spatial concept or three-dimensional of space and regarding to meaning dimension, a framework mutation from a space paradigm to place paradigm. Place is space that be added meaningful and architecture give body to mean , then the task of the designers who create urban landscape, can be defined to seek and discover the meaning of historical, natural, cultural means in the urban environment and give them objective in a physical and visual formats. Totally, the issue of urban landscape has two dimensions: first, the tangible and visual components of space creator, and second, it appears the space mental conditions included aspects of history, memory, identity (Maciocco, 2002).

2.3. Landscape process

Landscapes are dynamic, shaped by ongoing physical, biological, social, and spiritual processes: motion, growth, and exchange; birth, death, and decay; communication, building, learning; dreaming and worship.Processes connect the organic and inorganic, the animate and inanimate, the physical world and the organisms that inhabit it. Processes create patterns, link scales of space and time: from the intimate scale of touch to the vast scale of continents and planets, from moments to millennia. Patterns of landscape's material, shape, and structure are clues to ongoing processes and to processes which ceased long ago. Landscape context is a place where processes happen, a setting of dynamic relationships, a weaving together of many patterns(Harper, 2009).

2.4. Different perspectives on the essence of the urban landscape

Briefly, three ideas on the theory of state of existence of the quality of the urban landscape exist: The quality of the urban landscape is as an adjective in city framework environment innately and exist independent of the human body as an observer and evidence. The quality of the urban landscape as well as a subjective category is made by the observer and is no interface to the structure and properties of the physical environment.The quality of the urban landscape as a phenomenon with current events in physical and tangible characteristics of the environment on the one hand and cultural patterns, symbols and Observer's mental abilities on the other hand is formed. Considered in the phenomenological, concept of the urban landscape is interpreted.

Today, the first two ideas have questioned with deep philosophical examining and studies of human perception of the artifact space. The most experts agree on the bilateral relationship and interaction between humans and the environment. For example, the presence of Christian Schulz will be interpreted the city based on deep presence of human for understanding of space and a triple relationship between humans and existence and artifact space. In this vision, human trying to mean to the environment with its conditions is Thoughtful. The human living in universe with understanding it, create or give consistency to universe. Two stage process can be drawn for process of create by human with focus on Schultz idea. The first stage understands of human of the universe. The second stage is creation based on the perception and understanding of the universe. After the creation, artifact body affects on human subjective perception and built the interaction of humans and the environment. Thus, urban landscape is the outcome of human tangible perceptions and his mentality of urban environment. At first, tangible perception which is result of affecting of the factors on human senses are obtained. The next stage, the sensible understanding of environment in combination of physical- spiritual creates new inventory with the memories people called landscape(Mansouri, 2009).

2.5. Urban green space

Urban green spaces which are type of urban land use with human made vegetation cover can be categorized three basic forms; recreation, ecology, and aesthetic value. Gary Mull used term of green space for cities green cover. It can be said that the green space is area covered by green plants in cities and around which has the two important functions for cities to regulate air temperatures and gentler weather and beautiful creation. Green space of ecological can improve the environment unlike green surface (such as a decorative park) and has affected on reducing of noise pollution and temperature.

According to The evaluation definitions, two parts for green space can be considered. First, the complex of green coverage including trees, shrubs, flowers, herbs and grass induce meaning of green space. Second, the expectations and duties including to improve the environmental quality of human, esthetic and ecological needs as a target is hidden in the construction of green space. The most comprehensive definition for urban green space can be defined (Heckler Serena, 2009).

Urban green space is part of urban open spaces that in the natural or synthetic fields under the trees, shrubs, flowers, grass and other plants which preserve ore are built under the supervision and management of people with regard to rules, regulations and related specialties To improve the living conditions, habitat, and welfare of citizens and non-rural population centers.

2.6. Patterns of urban green space

Green spaces which have various forms are categorized into several types according to theirapplications. Generally, Green spaces can be divided into two groups based on the ecological view:Suburban green spaces and urban green spaces. Green spaces of city around as suburban green spaces have uncontrolled growth inhibitors in the city and the other hand, their ecological – environmental efficiency includes the entire urban environment. Public green spaces constitute only a small part of all urban vegetation. So we have to survey all green spaces in the city. After counting the green spaces, they were classified, in terms of application, nature or area for each stage and or geographical region. Green space as a city asset, regardless of public green spaces that are managed by municipalities, constitute private spaces, small spaces with plants and land owned by government or a special interdepartmental. The more green spaces within urban are built as a park and add to the beauty of the urban environment. Moreover urban parks, squares, sports complexes, children amusement parks and vegetable gardens should be considered among this group. Suburban green space is divided into several categories; surrounding green belts Green arcs, green axes, national parks, forest parks and botanical parks.

3.   RESEARCH BACKGROUND

According to literature relating to urban landscape evaluation and visual simulation factors (Litton, 1974; Jones & Jones, 1977; Kaplan & Kaplan, 1978; Ho & Wang, 1986, 2000; Sheppard, 1989; Booth, 1990, Farenc et al, 2000; Bishop &Rohrmann, 2003; Fukahori& Kubota, 2003; Boian et al, 2004), affecting qualitativefactorsin locating of appropriateurban green space are drawn up. Layer 1 contained 9 items: Sustainability,Aesthetic, Safety, Connectivity and Accessibility, Legibility, Desirability, Dependency, Adaptability, Biodiversity. In the next step, 30 questionnaires are distributed among experts to collect their ideas. In this questionnaire, the comparisons between the sites as for the considered factors have been proposed. Then, according to MCDM theory, the pair comparison between sites is done and optimum site is suggested. In complex systems, the experiences and judgments of humans are represented by linguistic and vague patterns. Therefore, a much better representation of this linguistics can be developed as quantitative data; this type of data set is then refined by the evaluation methods of fuzzy set theory. On the other hand, the AHP method is mainly used in nearly crisp (non-fuzzy) decision applications and creates and deals with a very unbalanced scale of judgment. Therefore, the AHP method does not take into account the uncertainty associated with the mapping. The AHP's subjective judgment, selection and preference of decision-makers have great influence on the success of the method. The conventional AHP still cannot reflect the human thinking style. Avoiding these risks on performance, the fuzzy AHP, a fuzzy extension of AHP, was developed to solve the hierarchical fuzzy problems. It is due to emphasize that in the mentioned researches aren't any models to locate green spaces with approach to quality and quantity factors and only referred to quantity factors emphasis on GIS. Therefore, we intend to show that some Policies should return an understanding of how green spaces are integrated with the built environment; of the wide range of types of green space and the suitability model for various uses. Local policy should take account of the quality of green space as same as the quantity. So the qualitative factors are combined with the quantitative factors, the result for location of urban green spaces is more effective and suitable.In the dissertation are used references derived from Iranian reality and international parallel studies, specially the research based on site selection and analysis with Fuzzy AHP. For historical geographic studies, the dissertation bases on "Tehran: Geography, History and Culture"(Nasr, 2009), "Glance to Tehran"(Shahriari, 2007), "Tehran's cultural-social History:

from beginning to Naseri's caliphate home"(Takmil,2006) For periodization well enough used the references from Iranian historic such as "The Arts of Persia" (Ferrier. R.W, 1989), "The Persian Garden" (Khansari et al, 1998). For landscape architect, studies bases on "The Essex Landscape: A Study of its Form and History" (Hunter, J, 1999), "Ideas of landscape: An Introduction" (Johnson, 2007), "Landscape, Process and Power: Re-evaluating Traditional Environmental Knowledge" (Heckler, 2009).

3.1. Hypothesizes

1. Will urban green spaces away from the desired standard according to the current per capita?

2. Distribution of urban green spaces in the city is good?

3. Location of these spaces has been done based on quantitative factors such as: place of green spaces, the area and qualitative factors such as: accessibility, Character and distinctiveness, sustainable, legibility, safety, biodiversity and adaptability?

4. Will a suitability model be able to appropriate feasibility of urban green spaces according to criteria and standards?

3.2. Research Method

For this purpose, we can use all classic and traditional methods in the study, in the line of documentation of subjects, Such as: survey of studies and scientific literatures, computer studies and studying field that used in each section placed of research.Survey of texts: one of the data collection methods is to refer to the research and scientific Resources. Such documents include reading books, articles and texts of computer networks.Survey of field: In order to achieve the required information and reference to the city maps and making it consistent with the current status, we need to survey field. At this stage, in according to the current urban plans and survey field, some quantitative factors and qualitative factors is examined.AHP method methodused to obtain suite analysis for esoteric and inconsistent in related to research object and if it's necessary, we use some optimize methods like neurotic algorithm for more literal affects which can obtain a suitability method for analysis.

4.   DISTRICT 22 OF TEHRAN

District 22 of Tehran Municipality is located between the East longitude 51 5' 10" to 51 20' 40" and the north latitude 35 32' 16" to 35 57' 19" in the North West of Tehran and in the downstream river basin and Vardij. The degree angle of sunshine in highest annual status according to location of district 22 is 78 and in lowest annual status is 32 degree. This area is surrounded with central Alborz Mountains in north, Kan River in east, Tehran Freeway in south and the range of planted forests –Vardavard- in west.This area is contiguous with district 5 and 21 of Tehran Municipality. The extent of this district is 54,000 hectares approximately and its length and width are 26 and 17 km. District 22has 4.8% of atotalarea of Tehran compared to otherregions. This shows that district 22 has important position in the future of Tehran physical structure especially in the West. Distance of the west of this area to Karaj is about 11 km. The Ken River, which flows from north to south stretches across the east of the area. Also Vardavard River flows along the north-south and parallel with the Kan River and extends down the middle in the North West region. The average distance between the two rivers is about 10 km.This area is located in Tehran Dashtsar of Chitgar plain. In terms ofgeological, this area is composed of Non-dense deposits of southern slopes of the Alborz Mountains. Also there is a vast underground aquifer. The general slope is from north to south, and lands of this area are on the privacy second earthquake zone. The highest altitude is in Straight lineofthe northerncatchment of Alborz mountains in east of Kyga village with 3840 meter and the lowest altitude is in exit of Peykanshahr with 1220 meter. District 22 of Tehran Municipality has 4 regions. Generally, dominant wind during the day or night blows from the west(Thacker, 1997). The total amount of annual rainfall in

this region is 281 mm .its maximum is 43% in winter and 36% in spring. Approximate amount of district population, according to 2005 census report is 138,970 people.

5. RESULTS

After the introduction of District 22 as a case study to locate urban green space, six sites (alternative) are specified. According to the views of experts in the municipalityand universityrandomly 6 vacant spaces for implementation of the optimal model was selected. These sites, regardless of location, proximity and access have been allocated in the comprehensive plan of Tehran as a green space to them. In fact, vacant space as first option to start the process of choice of superior alternative is considered. Then six sites and their proximity are determined.

Address of Site 1: Olympic Dene, the end of Varzesh St (5800 Sq meters)(Address of Site 2: Kaj Blvd, Sixth sarvestan St (6300 Sq meters)

Address of Site 3: HashemZadeh Blvd, Sharestan St (7400Sq meters)

Address of Site 4: Golha Blvd, Amir Kabir Blvd (6100 Sq meters)

Address of Site 5: Golfam Blvd, Eighth Banafshe (5200 Sq meters)

Address of Site 6: Havanirooz Blvd, East Shayan St (6700 Sq meters) After identify of alternatives for the location, the qualitative factors affecting the location will be introduced. The number of qualitative factors according to the frequency of their usage in articles and books of researchers in recent years has been extracted and their details will be introduced. After the criteria have been determined, a question form has been prepared to determine the importance levels of these criteria. To evaluate the questions, people only select the related linguistic variable, then for calculations they are converted into the following scale including triangular fuzzy numbers developed by Chang [14, pp. 43-51] and generalized for such analysis (table 1)

Table 1
Fuzzy number Values (Chang, 1996)

	Statement	*Values*
1	Absolute	(7/2,4,9/2)
2	Very Strong	(5/2,3,7/2)
3	Equal	(1,1,1)
4	Weak	(3/2,2,5/2)
5	Very Weak	(2/3,1,3/2)

In this paper, a decision making process is handled in fuzzy analyses , about analyzing the selective criteria for suitability location. Firstly 30 questionnaires were obtained to determine a suitable site for locating of urban green space. These questionnaires were distributed among experts. In this questionnaire, the first, photographs of the studied sites and their proximity was given. Then paired comparisons between sites on each of the factors will be done emphasis on the qualitative factors. These comparisons with Fuzzy scale are done based on above table.

The sample question is given as follows:

Question 1: What importance is "factor1" to compare with "factor 2"?

Question 2: What priority is "Site1" to compare with "Site 2" With respect to Factor1?

The presented questions are arranged in a table and given to experts. These questions are asked for both classical and fuzzy AHP methods, but the calculation of the importance weights are handled according to the methodology given for each process.

For example, compared between site 1 and site 2 on connectivity and accessibility is written very weak. According to the table, score has been assigned (2/3, 1, 3/2). This means that comparison between sites, in terms of accessibility, site 2 is more appropriate to location than site 1. Similarly, results from all 30 questionnaires has been surveyed and assessment with using the formulas of Fuzzy AHP. Collection of questionnaires data has been estimated a week in order to visit the sites by experts. Subsequently data were analyzed by the AHP method. The results are shown in below tables.

In result gained following conclusions:

1. District 22 is surrounded with central Alborz Mountains in north, Kan River in east, Tehran Freeway in south and the range of planted forests –Vardavard- in west This area is contiguous with district 5 and 21 of Tehran Municipality.

2. The cause of formation of District 22 is an extensive reflection on Tehran physical transformation due to Grow of population and the wide range of developments in the economy. This district was formed in Tehran with the aim of eliminating of the deficiencies in services of the West of Tehran and the settlement of the part of Tehran population.

3. Study of land use of district 22 shows that 1,265 hectares of parks and green space, 62 hectares of educational space, 168 hectares of Higher Education, 238 hectares of services, 327 hectares of sports, 355 hectares of lakes and 1,162 hectares of residential are determinate. Density of residential is divided to low density area (100 units per hectare), medium density area (135 units per hectare) and high density area (200 units per hectare).

4. Population studies in District 22 indicate that this District has 138670 population based on 2006census. District 22 of Tehran Municipality has 4 regions. District 22 has unique cross accessibility in Tehran and extra-urban. District 22 of Tehran's is the last hope of Tehran for preparing the best pattern of suitable urban living. This District is part of the continuous development of the city based on master plan criteria.

5. Qualitative factors as well as required principals to locate the green space have been discussed. According to previous studies in Locating and examining of the used factors, these criteria were introduced: Sustainability, Aesthetic, Safety, Connectivity and Accessibility, Legibility, Desirability, Dependency, Adaptability, Biodiversity

6. The used method to evaluate sites with respect to the mentioned factors has been introduced. This method is the subset of general method faced with qualitative factors. Presentation of questionnaire in classical and Fuzzy AHP technique is the same. But Assessment methods are different and the

Table 2
The degree of importance of the criteria

Criteria	Result
Sustainability	0.262
Safety	0.253
Aestatic	0.167
Connectivity and accessibility Legibility	0.095
Legibility	0.086
Dependency	0.079
Biodiversity	0.028
Desirability	0.012
Adaptability	0.02

Table 3
The degree of priority of the Alternatives

Alternatives	Result
Site 2	0.243
Site 3	0.233
Site 1	0.205
Site 4	0.159
Site 5	0.111
Site 6	0.049

final result in studied technique is closer to reality. In this method, firstly the criteria are compared together and given suitable weight to them based on experts opinions. The presented result shows the degree of importance of the criteria (Table 2):

This table shows that in comparison between six sites based on criterions, Site 2 has priority and site 3 and site 1arenextinpriority respectively. (Tab 3).

7. The results of the calculation showed that site2 (0.243 points) was slightly superior to site3 (0.233 points) and also site1 (0.205 points) and superior to site 4 and site 5 and site 6. The fuzzy evaluation results of the factors in each site showed that out of the 9 factors evaluated, site2 was superior to site 3 on 5 factors. The biggest difference among these was "Biodiversity" with a difference of approximately 0.20. Site 2 was superior to site1 on 6 factors as well, with the biggest difference being "Biodiversity" with a difference of 0.123. Site 3 was superior to site 1 in 5 factors, with the biggest difference being "Safety" where the difference was 0.112.

8. Designing of site 2 according to criteria- Environmental context and Environmental Visual- has been done. Thisdesignincludes thefollowing cases:

Special attentiontogreen architectureand sustainable developmentwithminimalinterferenceinthe site and observing sky line.

6. CONCLUSION

The results based on the dissertation have been shown as following:

1. Creating of urban green space can't be discussed independently without a link with the needs of urban society and culture. Today, the possibility to enjoy leisure time is considered pillar of the development. Construction of urban green spaces and their location provide convenient access for people; help the possibility of achievement.

2. Landscape urbanism is not simply a theory in discourse among academia, but currently a method of practice influencing the urban form. Its success in design competitions has begun the implementation of principles, which will further inform theory.

3. Tehran metropolitan is deficient conducting the following 5 benefits. Environmental benefits, Health benefits, Social benefits, Economic benefits, Aesthetics benefits

4. The distribution of urban green spaces in the city and its regions has a direct effect on the desirable model and the function and performance of the city. Thus the desirability of living in the city increases. Considering to routine projects as urban green space in urban land use maps of Tehran for useless pieces shows that the location of green spaces has been done without any logic and scientific planning.

5. Studies of per capita green space in world and Tehran show that this has been determined between 20 to 25 square meters per person - according to international standards. This per capita in Tehran is between 7 to 12 square meters. However, the per capita of green space depends on the features of urban climate. But lack of green space is visible with comparison between the climates of similar countries and cities. So the Tehran's per capita of green space deficit is evident.

6. Just per capita- quantitative factor- is not important as the main factors. Per capita minimum requirements are considered for spaces and lateral facilities for the person's leisure. This is based only on quantitative factors without regard to quality aspects. New policy on urban design, which is based on as quantitative factors in the range of types of green spaces along with the diversity of users, is involved the qualitative factors.

7. Selection of sites based on certain appropriate criteria is necessary in green spaces location planning. The criteria and indicators for sustainable green spaces management can be considered as the common standards for green spaces location among global community because the criteria and indicators target the achievement of green spaces location as well as human oriented green spaces functions and recreational use in a sustainable way.

8. The developing theory of landscape urbanism has touched upon many projects such as location of green spaces on system theory. Systems theory is the Trans disciplinary study of systems in general, with the goal of elucidating principles that can be applied to all types of systems in all fields of research. The term does not yet have a well-established, precise meaning, but systems theory can reasonably be considered a specialization of systems thinking and a generalization of systems science.

9. Location of urban Landscape space is a fuzzy decision making question that involves making a judgment from numerous fuzzy factors. A new multiple objective decision-making method that uses fuzzy math theory and methods was shown to be feasible. Using this evaluation method, the reliability of decision-making to locate the urban Landscape space was improved.

10. In this analysis, different perspective and experts' choice are used. Due to the diversity of opinions, the analysis of prioritize of the factors should will be done in various aspects. Also this analysis, potentially, shows the unspecified relations of use of integrated and formulated strategies in different time intervals. In fact, it operates as a determining route for the location decisions using the urban landscape designers. Also it increased ability to identify factors, priorities, and ultimately it leads to a suitability choice among various alternative.

11. Usage of the system analysis method to investigate the relationships between influencing factors, layers and component factors in Location of urban Landscape space so as to establish an evaluation model is feasible.

12. Location of urban Landscape space is an extremely detailed undertaking. To accomplish the project objectives, thorough experts and planning by using other methods to create a representation of the design can help improve efficiency and results.

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