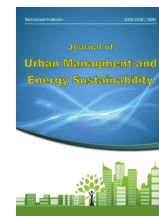


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## CASE STUDY RESEARCH

### Reviewing and evaluating the indicators of landscape-oriented and ecological urbanism to achieve sustainable development (case study: Shahmirzad city)

Mahkameh Fattahi\*, Milad Zolfaghari

Department of Urban Design, Faculty of Technical Engineering, Azad University of north Tehran, Tehran, Iran

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#### ABSTRACT

Growing urban environments, as a basis of complex relationships between the economy, politics, society, and culture, require a broad and complex range of approaches, perspectives, and solutions to respond to today's conditions and the consequences of the continued development process. People and nature affect each other positively or negatively. Considering the topic's importance, this research aims to investigate and evaluate three models of ecological urbanism, landscape urbanism, and sustainable development. The research method is based on adapting these approaches to human needs in nature in the form of these views. Regarding the research method, urban planning experts who are familiar with the study area have been selected as the statistical population of this research, and 147 people have been selected as the sample size. Information collection has been done by identifying indicators in the thinker's opinions and the survey of the study area (questionnaire). The results have been done through factor analysis using SPSS software; Also, the research framework is affected by a coordinated table and integrated analysis of existing concepts and their matching with the components extracted from Shahmirzad city. The research results show that among the seven main features taken from the theories and scope of the study, ten main factors are influential in all three views. Among the ten factors, suitable climate factors, the spatial relationship of the artificial and natural environment, quality of life, and minimizing the use of green and natural areas for construction and development are considered the main issues in all three theories.

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\*Corresponding Author:

Email: [mahkame.fattahi@gmail.com](mailto:mahkame.fattahi@gmail.com)

Phone: +989125062960

ORCID: <https://orcid.org/0000-0003-1460-668X>

## 1. Introduction

Almost 30 million people and more than 48% of the world's population live in cities, and human activities and energy use are concentrated in cities. Urban areas have become the main factor in society's orientation toward mass production, mass consumption, and mass use of waste. To solve global environmental issues such as global warming, the leading cause of human activities, we should know it is necessary to change society from excessive energy consumption to a recycling-oriented community to save energy and resources. This concept means providing solutions against the traditional physical, social, and economic development model. This can prevent issues such as the destruction of natural resources, the destruction of ecosystems, pollution, excessive population growth, the prevalence of injustice, and the lowering of the quality of human life. The energy crisis in the 1970s is one of the factors of attention to the global issues of environment and development. Sustainable development creates a balance between development and the environment and requires attention to capacities, limitations, and environmental impacts. In a vast country like Iran, observing climate diversity in one season of the year in different parts is possible. For example, one can record different climatic conditions in a region as large as Semnan province, extending from one side to Alborz mountain and the other to the wide desert plain. (Arghan and Jahangir, 2015)

Regarding climate, Shahmirzad, located at the hills of the Alborz mountain range, has different weather conditions from Semnan's. The ecological potentials in the city include the river flow in the city's center, pristine and beautiful natural landscapes, garden alleys and the most extensive walnut orchards, agriculture-based economy, location on the border of two climates, desert and mountain forest, rich and organic historical context. The importance of identifying suitable models for the development of this city has increased.

This research examines and evaluates landscape-oriented and ecological urbanism indicators to achieve sustainable development. The study will explore the components extracted in Shahmirzad city and their relationship with

the concepts in the research approaches, consider the factors Effective in each of the three theories, and give suggestions in the scope of the study.

## 2. Theoretical Framework

### 2.1. Urban ecology

Between 1890 and 1925, Patrick Geddes researched and theorized the concepts of urban ecology. His ideas about the correlation and dependence between "city and district" in the city and the use of urban land became popular. Patrick Geddes's views on the "necessity of coordination of social life in cities" strongly attracted the opinion of urban theorists, and various aspects of urban ecology gained more credibility. The sequence of Patrick Geddes' studies is continued by famous researchers such as Mark Jefferson, Patrick Abercrombie, and Louise Mumford. New paths are shown in urban studies and urban ecology.

Urban ecology is a prerequisite for cities to be able to provide a suitable environment for the lives of their citizens, and technological advances can only serve the city together with ecology, and this is also the case today in the big and wealthy cities of the world that can finance it. It has been put into practice after many tests. (Shekoyi, 14: 1391)

### 2.2. Ecological city

It is a sustainable city that can give residents a meaningful life while preserving the ecological base on which it relies. This vision should be used to reconstruct existing urban structures and new developments around new cities and towns. The ecological landscape creates multifunctional landscapes. (Woodley; Kay & Francis, 5339)

### 2.3. Eco-city

In recent years, there has been a global movement to create ecological cities (cities in balance with nature). The ecosystem approach is one of the emerging approaches that was introduced to the urban planning community by Richard Register. The Conference of World Leaders on Sustainable Development in Johannesburg (2002) determined that eco-city planning will be part of the government's response to global efforts towards sustainable development. Urban

ecology was a term in transportation and land use research, and researchers believe it includes sustainable urban transportation and land use, as well as environmental issues. The term is used to achieve sustainable development goals and the necessity of saving and optimizing energy consumption. It connects. [Gaffron, Philine, Eco-city – how to make it happen, Hamburg, Utrecht, Vienna, 2008](#))

It has been stated in the Eco-city vision that what is most noticeable is attention to nature and sustainability in urban design. In the following, the components of development and goals in the eco-city approach have been examined.

*2.4. Changing the paradigm of ecology*

As the form and body of our artificial and physical environment change with the social, cultural, political, and economic forces resulting from globalization, decentralization, and post-

industrialization, the context of the contemporary metropolitan area has also changed the paradigm of ecology. The ecological paradigm has moved from a mechanical model of stability and control to an open-ended, flexible, resilient, and adaptive organic model. In this model, humans are not defined outside the ecosystem but participate in it. Recently, the concept of ecological urbanization has been promoted to formulate an approach that can establish a link between the inherently conflicting conditions of ecology and urbanization. The research about urban ecology reveals a problem; humans interact with each other and other biological species, natural and artificial environments. ([Mathnavi, Deliri: 5, 2014](#))

*2.5. Urban landscape*

The urban landscape is one of the most critical issues affecting the pleasantness and satisfaction

Table 1: Development components and goals in the eco-city approach

Development components	Main objectives
Sociocultural issues economy	Increasing mental peace and social comfort Creating a framework for urban governance
Natural Landscape, urban climate	Increasing awareness of sustainable development Maximum respect for nature and the context of human connection with it
Water, sewage, waste	Minimizing the shortcomings of the environment and human health
energy	Minimizing fossil energy consumption
transport	Minimizing energy and raw materials Minimizing transport demand in the city
Urban structure	Minimizing the use of green and natural areas for construction development

Table 2: Conceptual dimensions of the urban landscape from different researchers' viewpoints

Scientists	The presented dimensions of the urban landscape
<a href="#">Lynch 1960</a>	Perceptual, physical, functional
<a href="#">Cullen 1961</a>	Visual, structural
<a href="#">Sharifian Thani 2001</a>	Natural factors, artificial factors
<a href="#">Pakzad 2005</a>	Form, function, meaning
<a href="#">Golkar 2006</a>	Objective factors, mental factors, emotional factors
<a href="#">Mahmoudi 2006</a>	Stability, identity, beauty, unity
<a href="#">Abdullah Khan 2006</a>	Visual, physical, spatial, activity, identity, environment
<a href="#">Rezazadeh 2007</a>	Visual, functional, semantic
<a href="#">Behzadfar 2008</a>	Physical factors, non-physical factors, human activities
<a href="#">Mansoori 2009 and Karimi Moshaver 2010</a>	Aesthetic, cultural, functional, identity
<a href="#">Farhoudi and Teimoori 2010</a>	Natural factors, artificial factors
<a href="#">Kiani and Sardari 2011</a>	Physical, cultural, visual
	objective (natural and artificial factors), subjective (cultural events, historical events, memories, relationships, human interactions)

of the place and the city for the citizens. Cities, the most significant human-made products, are changing rapidly. These changes happen in all spatial, social, functional, and physical structures. An important dimension of urban design is the image and landscape of the city, which is present at all levels of the city, from macro to micro. The appearance and landscape are the external reflections of everything inside the city. It reflects the attitude towards the world, nature, and the creator, the events inside the body, social and cultural relations and norms, economic power, and government laws and policies. A city's landscape indicates many internal characteristics of the society. It tells the hopes and dreams, weaknesses and strengths, priorities, and the story of the life of the people of that city throughout history. (Salman and Sajjadzadeh, 2014)

According to researchers' definitions, the dimensions of the urban landscape classes are according to the following table:

#### *2.6. Urban landscape ecology*

Landscape ecology is an emerging field of ecology that developed after World War II in Eastern and Central European countries and then grew in America and Asia. As a new interdisciplinary concept, landscape ecology presents many concepts, theories, and conservation methods humans can use in the natural environment. (Ahmadi, Haj Ghani, 3:1394)

In fact, on the one hand, landscape ecology is a fundamental factor and contributor to landscape architecture attitudes; Such attitudes lead the designer to a landscape that is both environmentally and culturally, and artistically suitable. It is between ecosystems. This science explicitly studies the landscape's composition, structure, and function and moves towards improving the relationships between ecological processes in the environment and specific ecosystems. As an interdisciplinary knowledge in systems science, landscape ecology combines biophysical and analytical methods with the holistic views of humanities in natural and social sciences. (Wu, 2008) In the landscape ecology approach, ecological evaluation, and analysis, the landscape mosaic is considered by studying and examining the structural elements of the

landscape, the formation form, and the patterns of these elements in the explored areas. (Ahmadi, Haj Ghani, 4:1394)

#### *2.7. landscape urbanism*

Heterogeneous harsh conditions, the passing of traditionalism, the uncontrolled growth of cities, and the occurrence of natural disasters have put significant challenges in front of the usual design rules and norms, which require an approach that goes beyond quick repair or local solutions. In such circumstances, landscape-oriented urban planning emerged in North America and Europe as a new design system to respond to these conditions' specific needs and unique capacities to organize the city and enhance urban experiences about 15 years ago. (Kerbatian, Neda, 2013) The basic assumption in landscape-oriented urban planning is that landscape should be urban design's central infrastructure pillar. Through landscape urbanism, natural and cultural processes help designers organize the urban form. At the same time, scenic urban planning is more than new urban planning because it faces problems beyond the urban structure and focuses on more complex issues. (Masnavi, Deliri: 4, 2014)

#### *2.8. Sustainable urban development*

According to the definition of sustainable development, the meaning of sustainable urban development is as follows: it is a development that responds to the people's needs of the city while guaranteeing its survival and durability. At the same time, water, soil, and air - i.e., the three essential elements for human life, should not be polluted and unused. Sustainable urban development requires reducing the consumption of raw materials, having a small and coherent urban fabric and producing energy from non-polluting sources, growing plants and developing green spaces, and recovering waste on site. Cities with less dependence on automobiles and their land use patterns are denser, meaning that more population and employment per unit area are more concentrated. In these cities, people walk, bike, and use public transportation. This condition has been provided for humans today due to vehicles' comfort, ease, and speed. Still, if the criteria of sustainable urban development are

neglected, it can endanger man's future. (Kohn G., 2016: 210) According to the existing studies and from the perspective of landscape architecture, the increasing importance of environmental and cultural values and the practical aspects of the natural environment in Iran, the need to examine integrated landscape and ecological studies has become more apparent.

According to the viewpoints raised in this research, the common indicators among the views are as Table 3.

**2.9. Research background**

According to the literature review, each researcher examined the issue from a perspective. In an article titled "Comparative Review of Ecological Urbanism, Landscape Urbanism, and Urban Ecosystems" written by Elnaz Javadi et al. in 2013, they examined the case examples in each approach in detail and at the end, goals of all three perspectives in a tabular format in a comparative manner. An article entitled "From urban development to landscape-oriented ecological urbanism," written by Maryam Dabiri and Mohammad Reza Masnavi in 2014, examines the influential concepts in the evolution of the ecological paradigm to the urban landscape and further changes concepts including "Urban Landscape Ecology" and "Landscape-Oriented Ecological Urbanization." Hataminejad and Sharifi, in 2014, examined the role of expanding tourism in sustainable development in Sanandaj city. Statistical tests show that urban tourism in

Sanandaj has made the city more sustainable in an efficient way.

Tourism in Sanandaj city has had the most significant impact on sustainable economic development and the least on sustainable environmental development. (Hataminejad and Sharifi, 2014). An article titled "Recognition of the Functional Concept of Landscape," written by Hasan Taqvaei et al. in 2015 examines landscape theories and the emergence of these theories. The methodology is based on a comparative study of landscape approaches and existing activities using the help of research results and phenomenology of recent trends in this field.

**2.10. Research objective**

This research aims to investigate and evaluate three models of ecological urbanism, landscape urbanism, and sustainable development and examine ecology and landscape theories and their relationship with sustainability. Ultimately, the study will investigate and evaluate indicators of landscape-oriented urbanism and sustainable development in the study area (Shahrmirzad).

**3. Materials and Methods**

The research method is the comparative study of approaches related to landscape-oriented urban planning and their relationship with sustainable development. The type of research is applied-developmental, and the research process is descriptive and analytical. The required studies have been collected by reviewing the

Table 3: Extraction of prominent indicators from the views

The indicators in the views raised	Components in indexes
Economic	Creating a framework for urban governance Economic Growth Poverty Reduction
Sociocultural	Increasing mental peace and comfort in society Economic efficiency in achieving social goals Increasing awareness of sustainable development
Ecology	Maximum respect for nature and the context of human connection with it Minimizing the use of green and natural areas for construction development
Transportation	Minimizing transportation demand in the city The propensity for walking and cycling Use public transportation
Material and energy management	Minimizing fossil energy consumption Minimizing energy and raw materials Minimizing the shortcomings of the environment and human health

Table 4: Measuring the status of the study area

SWOT	
<ul style="list-style-type: none"> <li>- The presence of pristine and natural areas around the city (Chashem region);</li> <li>-The diversity of minerals and the existence of active mines;</li> <li>-Many natural attractions and diverse agricultural products;</li> <li>-The most extensive walnut garden in the world;</li> <li>-The presence of historical areas such as Shirkala, Sheikhi Castle, and Dejohol;</li> <li>-Model city of international tourism;</li> <li>-Existence of critical heights and location with a significant height difference from other places;</li> <li>-Existence of facilities and natural conditions in terms of water resources, soil, and climatic conditions;</li> <li>-Taking advantage of mountainous and foothill characteristics;</li> <li>-Having two types of weather (humid and rainy north with many pastures and forests) and south (dry and mountainous air) due to the presence of nearby mountains;</li> <li>-The presence of abundant water due to the river passing through the city;</li> </ul>	S
<ul style="list-style-type: none"> <li>- Limitation of agricultural ability due to high and variable slope and rocky bed;</li> <li>- Existence of active and semi-active faults;</li> </ul>	W
<ul style="list-style-type: none"> <li>-Importance of export of many agricultural products such as plums and walnuts and its international reputation;</li> <li>-The possibility of irrigation of aqueducts and the source of rivers and springs due to the snow-covered heights;</li> <li>-The possibility of concentrating life centers and activities in it due to the existence of facilities and natural conditions;</li> <li>-The right opportunity to enjoy nature due to the presence of many peaks and heights in the form of mountains, valleys, biological diversity, and beautiful and unique landscapes;</li> <li>-The possibility of controlling the air temperature and preventing the penetration of humid air due to the presence of mountains;</li> <li>-The possibility of expanding the forest areas in the northern regions due to the fertile soil;</li> </ul>	O
<ul style="list-style-type: none"> <li>-The possibility of reducing the thin layer of soil with a suitable thickness for agriculture due to the variable and sometimes high slope;</li> <li>-The possibility of the city's physical development limitation for being surrounded by mountains, gardens, and steep slope</li> <li>Possible earthquake due to high-risk area of geological movements;</li> <li>-The possibility of contamination of underground and surface water due to urban and industrial activities;</li> </ul>	T

In the following, we have compiled a table of indicators of Shahmirzad city by considering the views raised in this research and table 3.

literature, survey, and analytical form. In this regard, after studying the theories of thinkers in all three fields, a coordinated and integrated table of indicators was refined after examining the study scope of the indicators. Experts in the field of urban planning who are familiar with the study area have been selected as the statistical population of this research. Through Cochran's formula, 147 people were considered as the sample size, and the indicators obtained in the questionnaire were evaluated and prioritized. In the next step, the KMO size was used to determine the appropriateness of the data, and the factor analysis model was used to analyze and identify the significant indicators in all three areas. Also, factor analysis using SPSS software was used to identify suitable and practical components.

### 3.1. Study Area

Shahmirzad is located 6 kilometers north of Mahdishahr (Sangsar) and north of Semnan province. Shahmirzad is a beautiful and cool city of Semnan, which attracts thousands of tourists every year to visit the beautiful scenery and tall trees. This city has fantastic natural attractions and various agricultural products. Historical buildings such as "Shirqala," "Sheikhi Castle," and "Dejohol" (one of the important centers of Ismailis) have added to the attractiveness of this area. Shahmirzad was introduced and approved as a concept city for international tourism in the first visit of government's national visits to the province in 2016. This city is important in tourism, history, and agricultural sectors. Shahmirzad has been a settlement since ancient times; despite

Table 5: Extraction of influential indicators in the study area

Evaluated indices	Main dimensions
increasing the mental peace and comfort of society; connection with the culture of the region; Social interactions; economic efficiency in achieving social goals; People's participation in the management of natural resources; cultural diversity and providing opportunities for cultural exchanges, social welfare; Emigration from the region and the return of immigrants; belonging to the area; revitalization of local culture; protection of cultural-traditional activities; Creating a framework for urban governance;	Sociocultural
Creating direct income for the management and preservation of natural resources and protected areas; supporting the local economy and involving the local community in decisions; efficient and self-sufficient economic development; providing profitability and economic benefits for society; Creating new jobs and improving income; diversity and economic development; increasing employment opportunities;	Economy
increasing awareness of sustainable development; suitable climate; maximum respect for nature and the context of human connection with it; Efforts to design in harmony with environmental and cultural conditions; protection of native plants and wildlife and unity with the natural and cultural environment of the region; Minimizing the use of green and natural areas for construction development; preservation of natural resources and natural areas; providing resources for environmental management and protection, creating incentives to maintain or improve the physical environment;	Ecology
Minimizing fossil energy consumption; Minimizing energy and raw materials;	Material and energy management
Minimizing transportation demand in the city; attention to walking and cycling; use of public transport;	Transportation
providing general and specialized educational opportunities; increasing environmental awareness; adventure tours;	Increasing the level of awareness
attention to the form; multifunctional landscapes; Quality of Life; Optimizing the pattern of land use; improvement of regional constructions; change of land use to residential and commercial required; providing a stable environment; Spatial connection of artificial and natural environment;	physic

its favorable climate and beautiful nature, it is considered an important area of Semnan province from the point of view of history and valuable architectural elements. Shahmirzad has a cold

winter and mild summer climate and is very green in vegetation. It is also usually cooler than its neighboring cities. Shahmirzad Agriculture and Industry Company was established by the

Table 6: Examining mutual goals from 3 perspectives

Physic	Increasing the level of awareness	Material and energy management	transport	ecology	Cocio-cultural	economic	opinions
✓	✓	✓	✓				Ecologic urbanism
✓	✓	✓		✓		✓	Landscape urbanism
✓	✓	✓	✓	✓	✓	✓	Sustainable development

Table 7: Bartlett's test at the significance level

significance level	Bartlett's test	KMO size
0.000	1406.24	0.749

Table 8: Total variance of explained factors

Cumulative variance percentage	Percentage of variance	special amount	factor
22.569	22.569	19.565	Efficient and self-sufficient economic development
44.818	13.350	11.105	preservation of natural resources and natural areas;
54.814	10.107	8.268	Spatial connection of artificial and natural environment
61.191	8.397	6.797	Minimizing transportation demand in the city
67.132	6.143	5.234	Multifunctional scenery
71.813	4.982	4.666	Economic efficiency in achieving social goals
75.261	4.478	3.876	Increasing mental peace and comfort in society
78.331	3.781	3.317	Suitable climate
71.155	3.826	3.374	Quality of Life
83.474	3.321	2.111	Minimizing the use of green and natural areas for construction development

collective efforts of the city's residents in 1988 under the title of the world's largest walnut orchard with an area of about 750 hectares. Many people of Shahmirzad migrated to the cities of Mazandaran during the winter and settled in Sari, Savadkooh, Qaemshahr, Babol, Neka, and Behshahr and returned to Shahmirzad in the middle of spring. Nizwa mountain is one of the famous summits of the Alborz mountains and has the third highlands of Semnan province located in this part. Finally, Zabihollah Safa is one of the most famous people in this city.

The city of Shahmirzad has had a municipality since 1331 (the year it became a city: 1306) and was promoted to the district's center in the provincial divisions of 1386. Between 1917 and 1339, Mazandaran province included the current provinces of Semnan, Golestan, and Mazandaran,

along with the cities of Kashan, Qom, and Tehran. In 1340, according to the approval of the Board of Ministers, Semnan, Damghan, Shahroud, Bastam, Sangsar (Mahdishahr), Sorkheh, Shahmirzad, and their subordinate were separated from the borders of Mazandaran, and they were named Semnan considering Semnan as the central city. ultimately in 1355, according to the government, Semnan governorate became Semnan province. (Mazandaran province spatial studies: 10)

#### 4. Finding and Discussion

##### 4.1. Examining mutual goals from 3 perspectives

After examining the viewpoints raised in this research and examining the study sample and the existing characteristics and potentials, we developed mutual goals between the views, which could use to explore the study sample



considering the possibilities and limitations;

We should note that these objectives are mutual among all three perspectives. Still, we have tried to show the importance of each goal clearly through numerous investigations due to the content similarity between the three views. Therefore, the symbols in the table show the importance of each objective in the views.

The above table shows that all three views refer to all goals, but some of the components have received more attention than earlier. The KMO test was used to check whether the selected sample size was sufficient for factor analysis. Bartlett's test of sphericity was also used to determine that the correlation between the test items in the community is not zero. Table 6 shows

the results.

KMO size should be greater than 0.6. In the present study, its size is equal to 0.749, which is acceptable. Also, Bartlett's test of sphericity is significant at the  $p < 0.000$  level. The results of the exploratory factor analysis identified ten factors that explain 71.03% of the total variance of the questionnaire. According to the test results, ten factors were identified. Table No. 7 shows the total variance of explained factors; It should be noted that the variables loaded in each factor above 0.5 constitute one factor, and the variables that do not have the possibility of accumulation with these constitute another factor. The results of reducing 43 variables to 10 are shown in Table 7.

The relationship between the indicators of the

Table 9: The relationship between the indicators of the study area and the objectives of 3 perspectives

Minimizing the use of green and natural areas for construction development;	Quality of Life	Suitable climate	Minimizing transportation demand in the city	Increasing mental peace and comfort in society	Spatial connection of artificial and natural environment	Preservation of natural resources and natural areas	Economic efficiency in achieving social goals	Multifunctional scenery	Efficient and self-sufficient economic development	opinions
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Ecologic urbanism
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Landscape urbanism
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Sustainable development

Table 10: Design suggestions related to the three views raised

Sustainable Development	landscape urbanism	Ecological urbanism
Minimize energy consumption	Paying attention to the angle and orientation of the buildings	Reducing the impact of transportation systems
Paying attention to the water issue	Proper use of daylight	Interaction with nature
Preventing energy waste with correct climate design	Directing the sunlight and paying attention to the geographical location	The experience of landscape changes by site visitors
Minimizing heat exchange between outside and inside the building	Emphasis on the indexing of the entrance parts of the city	Providing appropriate platforms and opportunities for social participation of different strata of people
Materials suitable for the climate	Emphasis on historical and religious elements and spaces	
Separation of footpaths and riding paths		
Providing security with proper zoning		

study area and the objectives of 3 perspectives

After specifying 10 influential factors, each was examined in 3 perspectives, and their influence level was re-examined in each of the proposed perspectives, shown in Table 8.

#### 4.2. Design suggestions related to the 3 points of view

suitable climate, the spatial connection of the artificial and natural environment, the quality of life, and minimizing the use of green and natural areas to develop construction are remarkable in all cases.

It can indicate the priority of the unity of the city and nature in the eyes of the designers; An issue that lacks attention in developing countries has led to urban instability and the destruction of the integrated ecological structure. In this regard, suggestions for improving essential matters have been discussed in the following.

### 5. Results and Conclusion

The various and broad approaches to landscape in theories and landscape approaches indicate its ambiguous and widely used concept. Recently, in addition to increasing the scope of Manzar's intervention in other scientific and operational fields, this issue also caused various khans from Manzar's affairs.

The key to a stable future is that humans believe in maintaining the ecology of the region and the world practically and in living conditions, limiting the destructive effects of manufactured systems and their designs in the ecosystem to the extent. Uninterrupted sustainability is the path that architecture should reach shortly. This type of architecture should evoke the feelings of humans towards nature. The design principles of sustainable urban development lead to the city's compaction and increase in density and readability. At the neighborhood scale, it creates different patterns of land use, creating safe and intimate passages, maintaining historical buildings, and using local energy sources. Living in the cities of the future should emphasize commonalities at all socio-economic levels. (Aminzadeh, Behnaz, [Collection of articles on sustainable urban sustainable development, University of Tehran, first edition, 2017](#))

In the context of the dynamics of today's metropolis, it is from the perspective of a layered and complex phenomenon and beyond a two-dimensional plane. A new typology of infrastructure will emerge if the set of analyzes of the site and substrate goes beyond the surface of the earth and includes the sociocultural and political-economic aspects of the landscape. Indeed, contemporary urban planning requires a multifocal perspective that consists of the concepts of form, function, land, and flows within the dynamic layers of the landscape. In such sensitivity, the aspects of culture and nature are neither separate nor confused; Rather, they weaved together a metropolis within the landscape. A climatic and ecological study of Shahmirzad city shows that this city, located at the foot of the Alborz mountain range, has different weather conditions from Semnan city, which has led to the creation of the city garden and fertile lands at a short distance from the desert climate. It is possible to design suitable urban spaces in this city by using the views raised in this research and the common goals between them. Also, the passage of the Shahmirzad river from the city center and providing agricultural water in the region has influenced the urban landscape by shaping the alleys of gardens and has caused the ecological development of Shahmirzad in the early formation of the city and its rich historical context. It seems that dealing with the aspects of similarity and difference in different forms of critical concepts in an integrated and adaptive way can effectively understand the landscape concept and apply it in practical and operational fields. What should be paid attention to and the point worth mentioning is the various forms that can be found in the landscape, especially landscape-oriented urban planning, as a complex issue in these theories. In these ideas, the landscape cannot be considered a single and fixed thing; Rather, we can imagine various forms. The landscape is an objective and subjective matter that sometimes implies a reality of a scene or work. At the same time, it can be called an interdisciplinary or, in the form of landscape architecture, a specialized field. Suppose it is more visible in contemporary literature. In that case, the landscape can be called a process and given a current and effective form. In addition to differentiation, these forms have overlaps and connections, and

many cases of overlap between these factors were mentioned in the research process.

The results of this research are an introduction to understanding the complexities of landscape urbanism and the integration of fields related to ecology to achieve a more precise definition of the practical concept of landscaping.

Finally, it provide the basis for the practical application of this concept in various fields to raise questions and provide more accurate views of the landscape.

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