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Evaluating effective strategies on the efficiency of worn-out urban fabric with an urban Resilience Approach (case study: Sisabad neighborhood of Mashhad)

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ABSTRACT

Throughout the 20th century humankind have sought to create a better quality of life for residents living in poor urban spaces. The purpose of this research is to evaluate the inefficient rural fabric of Sisabad with an emphasis on urban resilience and the information collected from field observations, library documents, interviews have been analyzed using GIS software, also to analyze the results of the evaluation of strengths and weaknesses, opportunities and threats have been done using the QSPM method. In conducting this research, interviews with experts in this field were scored using the Delphi method, and the analysis was done using the QSPM method. variables of the urban resilience components and the ineffectiveness of worn-out tissues together in all dimensions of resilience, especially in the physical and environmental fields, such as the incompatibility of uses, access, and the level of quality and permeability of the fabric of the Sisabad neighborhood all are reviewed in this section. In the end, it has been adopted to create strategies to improve urban resilience in Sisabad village such as land use location with the aim of organizing incompatible lands using vast brownfields. From the results of this article, it can be pointed out that the use of brown lands in providing per capita and creating mixed uses to ensure security, as well as the location of incompatible uses, are strategies that were used to improve urban resilience.

Keywords: Urban Resilience -Worn texture -Sustainable Urban Regeneration - Inefficient urban texture

1. Introduction

One of the most important challenges of big cities today is the existence of disorderly urban neighborhoods in the urban context. Improving the desirability of spaces means their acceptance by the people and influencing the users, one of the important goals of urban regeneration. A part of the urban space that we know as dilapidated lacks favorable living conditions, mainly in terms of housing and additional services, and moving towards its improvement and renovation is an attempt to restore the basic rights of citizens who are at risk of the society. Informal settlements are often inhabited by the lower strata of society whose bedrock suffers from physical exhaustion and so on. Residents in this neighborhood face low levels of income, literacy, spatial and environmental decline, the decline of business spaces, declining social status, and quality of social and physical life of residents. Understanding urban flexibility and sustainability is a pressing matter to confront dangers within the quickly urbanized world and details that urban versatility and maintainability center on a city's helplessness and constancy, and implications cover, in spite of the fact that covering debilitates them. [1]. Urban textures can be categorized in terms of their functional quality, which are called under different titles due to their weakness or lack of certain qualities in their body or function. The urban texture consists of two parts: body (form) and function (role). Parts of the urban fabric in which physical, functional, or both qualities are reduced and disturbed are called worn

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texture. with this interpretation, burnout is of two types, physical and functional. When the body is damaged but the activities and uses meet the need or vice versa, we are faced with relative burnout, and when both types of worn- out occur, we face complete burnout. [2]. These days, urban recovery could be a unclear term showing cases of urban development or particular urban approach, but it incorporates a long history related to redevelopment approaches within the 1980s and a comprehensive approach created within the 1990s. In fact, within the final thirty a long time, in Europe, a multi-dimensional and coordinates approach were connected to denied regions through particular instruments and activities, to progress the physical, socio-economic, and natural conditions of cities due to changes within the EU reserves administration and the consideration and talking about outskirts and denied urban areas and the episode of the worldwide financial emergency, the prime of urban recovery blurred, getting to be a term utilized to show a wide set of urban hones regularly situated towards physical instead of Financial and social change. [3].Dysfunctional urban contexts are areas of the city that, compared to other areas of the city, are lagging in the development process, separated from the evolutionary cycle of life, and have become the focus of problems and inadequacies. Nevertheless, these textures contain a high percentage of the urban population and at the same time have many latent capacities and capabilities for future urban development. Lack of proper economic approach in the development of urban spaces caused some areas to be deprived and low access, unstable bodies, and poor infrastructure are among the characteristics of these deprived and worn areas that greatly contribute to their deterioration. Social and economic decline and functional and physical disorder of these textures, along with a severe decline in the quality of the urban environment, has doubled the need to pay attention to these areas. This study seeks to answer the main question of what factors in dysfunctional tissues affect the promotion of resilience.

2. Literature review

Resilience and Resilience in the City: Resilience from the 1970s by Holling, 1973, A well-known Canadian ecologist and associated with ecological systems, the term resilience is often used to refer to "Resilio" from the Latin root "Resilio". The meaning of going back is taken.[1]. Holling believes; Resilience determines the continuity of relationships within a system and is a measure of the ability of that system to absorb changes in fixed and moving parameters and variables and maintain survival.[2]. According to Holling, resilience and sustainability are two important features of ecological systems. Allen Weberiant (2010) defined resilience as the capacity of a system to respond to a disturbance in it and emphasizes that in resilient systems, the structure and function of the system do not change after stress and disturbance. Despite the differences in lexicography, in 1994, Mastan stated that resilience should be understood as a process.[3].Characteristics of urban resilience: Urban resilience usually has seven key characteristics to protect itself against the vulnerability. Natural hazards: reflective, redundant, robust, pervasive, integrated, content, flexible, an urban system. Reflective Resistance: redundancy, flexible, pervasive, integrated, resourceful. Flexible is one of the characteristics of urban resilience. Dimensions and characteristics of urban resilience: Since resilience includes all sectors and urban considerations, the dimensions defined for this purpose are also considered in all social, economic, physical, and planning dimensions, each of which is briefly discussed. Economic resilience: In fact, economic resilience is closely related to the standard used for balance in the mainstream of the economy. Social resilience: The social resilience approach is a way to understand the dynamic systems that relate to interactions between people and the environment. Social resilience is a useful perspective for understanding managerial decisions and changes related to natural resources. In particular, social resilience is known for having three characteristics that include how people respond to unforeseen events. These three aspects are: resilience, recovery and social creativity. High resilience can display all three characteristics mentioned above. [4].The concept of social resilience has the same concerns as the concept of resilience and is also complex due to differences in the definition of society. For example, a community is an entity that shares geographical boundaries and a common destiny. Communities are made up of built-in natural, social, and economic environments that interact in complex ways. Just as resilience can be analyzed and understood at different levels, social resilience also has levels.[5].

- Institutional resilience
- Physical-environmental resilience

Global experiences in urban resilience:

For urban planners and designers, safety has many dimensions, and paying attention to it in the form of short-term, medium-term, and long-term plans will save people's lives and property. Lisbon's urban reconstruction after the 1775 earthquake is an example of harmonizing the principles of urban planning in the form of risk reduction. One of the most important projects being pursued by Tokyo experts is the earthquake damage forecasting program, which is based on the assessment of possible damage and the identification of fire areas and temporary accommodation spaces with the help of computer imaging. In the UK, controlling the development of land adjacent to or on active faults is part of the Resource Management Act. The Urban Resilience Campaign was launched in 2009 to reduce the risk of natural disasters. The campaign was hosted by the metropolitan area of Incheon, South Korea, which also hosted the first All-Cities-Local Government Cooperation Summit in October 2009. The overall goal of the campaign was to achieve resilient and sustainable urban communities with an increasing number of local governments taking action to reduce the risks of natural disasters, to the extent possible, allowing the campaign to reach the most vulnerable in urban, poor, and vulnerable communities. The high risk of adverse effects is concentrated. [6].

Urban regeneration (urban revitalization):

The word Regeneration comes from the root “Regenerate” meaning to revive, to grow again. The term became widely used after 1995 as an alternative to urban renewal in the field of urban planning literature. [7]. Dilapidated urban fabric refers to an urban area or block in which more than 50% of its buildings are unstable, "its passages" impenetrable, and "its properties" fine. [8].the term sustainable urban regeneration is used as a general term, concepts such as improvement, renovation, reconstruction, empowerment, and urban psychosis. [9].Urban regeneration has emerged as an important emerging area of a public intervention designed to support less developed areas. [10].Urban regeneration is one of the approaches that has emerged as an important emerging area of public intervention and is intended to support less developed areas.[11]. Urban regeneration is a comprehensive and integrated approach and measures to solve urban problems in the target area, which ultimately leads to sustainable economic and physical, social, and environmental development. The above definition is in line with Hussner's views, which emphasizes the fundamental weaknesses of past tendencies that do not provide any strategic and integrated framework for the proper development of the whole city; this definition also responds to Danison's call to think about problem-solving through coordinated approaches, as well as focusing on the main focal areas of problems.[12]. Urban regeneration is also known as urban regeneration, urban renewal, and the urban renaissance. It has arisen from urban issues. [13].

Residents are dissatisfied with the living conditions in the area, and their basic needs are not met; therefore, burnout is not limited to the

Inefficient urban fabric:

Today, with the increasing growth of cities, urban issues have been considered more than ever. Significant differences in the capital, income, employment, labor productivity, GDP, and living standards at the national, regional, and intra-regional levels lead to an unequal distribution of economic well-being over time and space. [14].Inefficient urban contexts are one of the main issues for urban planners. In recent years, the use of the potential of dysfunctional tissues in cities is one of the strategies mentioned in the urban development literature to achieve sustainable development. [15]. Dysfunctional urban contexts, as part of the city's body, are considered areas vulnerable to natural hazards that require coordinated planning and intervention to regulate. These tissues are characterized by instability and a set of economic, physical, social, and other deficiencies. Urban regeneration is one of the approaches that has emerged as an important emerging area of public intervention and is intended to support less developed areas. [10]

Urban worn texture:

The worn-out and old textures of the country's cities, which often form the core of those cities, are considered part of the cultural and historical heritage of those cities, and their preservation, physical improvement, and functional empowerment are inevitable. On the other hand, most of these textures over time lack proper attention and maintenance, they suffer from physical and functional wear and tear. [15]. Development and regeneration of inefficient neighborhoods and urban areas is an intervention to increase the quality of urban life in such areas. Organizing dysfunctional tissues, while maintaining the existing tissue with the least cost and least destruction, eliminates the existing imbalances and inadequacies. Worn-out fabric refers to a fabric of the city whose citizenship acceptance values are diminished,

body; rather it represents the existence of conditions that threaten human life from various dimensions. Dilapidated urban fabric refers to

areas within the legal boundaries of cities that are vulnerable due to physical deterioration, lack of proper access to roads, facilities, services, and urban infrastructure, and have low spatial, environmental, and economic value. Due to the poverty of the residents and their owners, these structures cannot be renovated spontaneously and investors have no incentive to invest in them. Burnout is one of the most important issues related to urban space that causes its disorganization, imbalance, disproportion, and unease. Burnout is a factor that helps erase collective memories and the decline of urban life [16]. Urban burnout is a process in which the city, or part of it, loses its former function or becomes incapable of performing it. This can be due to a variety of reasons, including economic reconstruction, declining industry, declining population and change, urbanization, high unemployment, political deprivation, crime, and an unbalanced urban landscape [17]. In the diagram below, the underlying factors of inefficiency are introduced, which are included in all social, economic, physical, environmental, legal, and managerial dimensions.

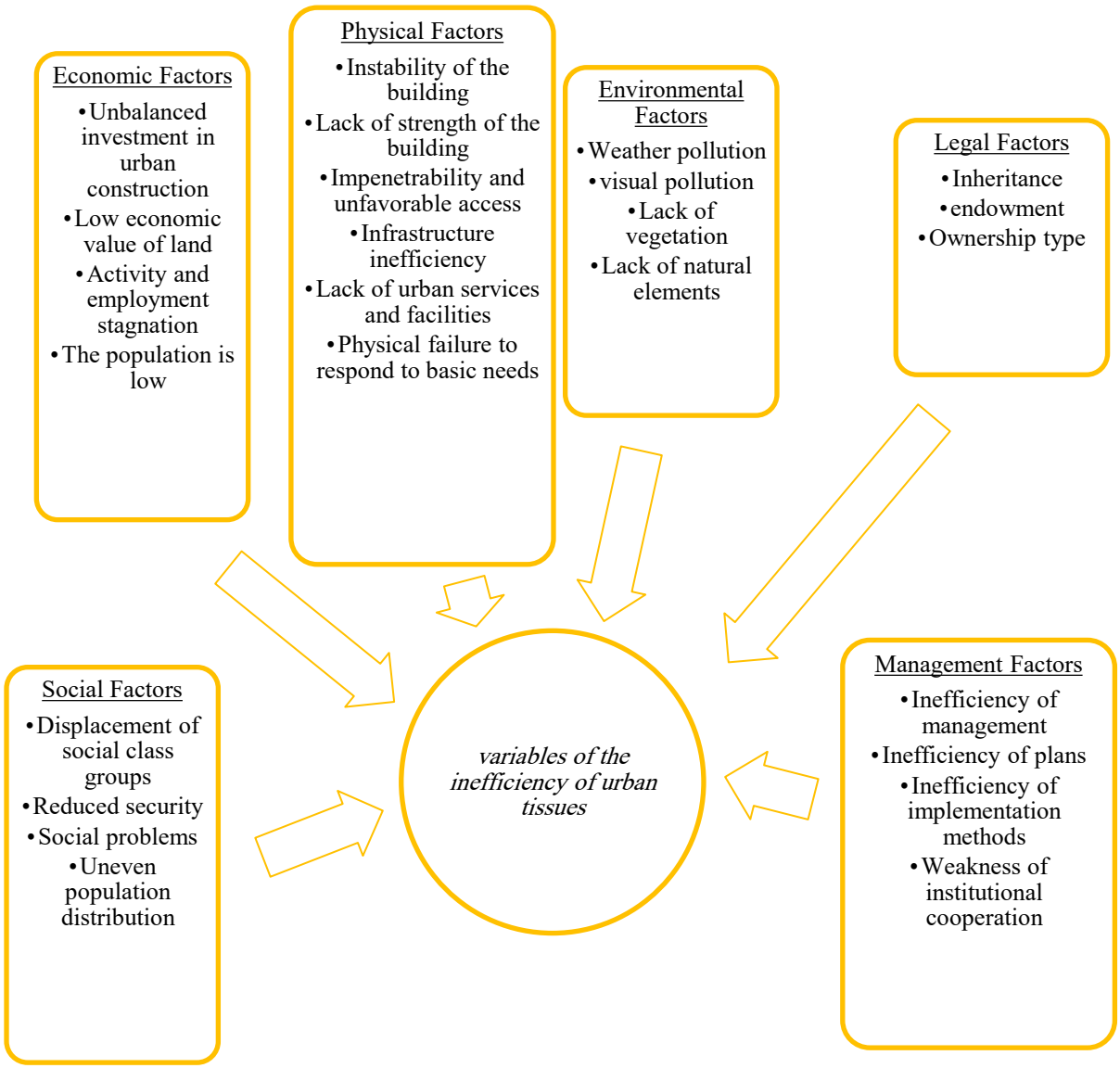

Figure 1. The underlying variables of the inefficiency of urban tissues [18]

3. Methodology research

Sisabad neighborhood is one of the suburbs of Mashhad in the northeast, which is almost the last neighborhood on the northern border of Mashhad. This neighborhood is located next to the Dehroud from the north and south of Dehroud, which is a village. And this valley is in the south. Sisabad neighborhood is located in Mashhad. The village is a city that is considered one of the metropolitan neighborhoods of Mashhad with the expansion of the city. It is a village with more than 400 years old and its name was based on the 30 literates who lived there. And the executive changes have turned it into Sisabad. Also, it has a long cultural and historical background. In terms of social connection, in terms of social affiliations, there are many natives and there are few immigrants in the neighborhood. We have less than 10% of immigrants. Ten rivers are attached to the Sisabad. The population in the Sisabad neighborhood is often affected by the birth rate and natural population growth. The population of Sisabad neighborhood is about 13 thousand people. Most immigrants are from Kalat. In the economic field, since it is a village, there is a lot of agricultural land in the neighborhood and a large part of the people of Sisabad cultivate, but the level of skills in Sisabad neighborhood is low, that is, they traditionally do agriculture. In terms of physical structure, the passage network is completely local and has very low permeability. Communication between the main thoroughfares is done through the cement road. We do not have internal communications in the main network and they move from the neighborhood border. And it is worn-out buildings and fine-grained texture which is one of the indicators of wear and tear. Building density: Most parts have a density of less than 20% and after that most floors have a density between 60 to 90%.

In terms of block chain, most of it is higher than 850,000 meters.

Table 1: Blocking of parts in the neighborhood

Blocking	Area	Percentage of Area
Less than 100,000 m2	22370	6/38
Between 10,000 and 50,000 m2	80841	23/06
Between 50,000 and 100,000 m2	67018	19/12
More than 100,000 m2	180366	51/45
Total	350595	100

Land use system: Most land uses are residential and also in terms of area in the residential intervention of farms and orchards have the largest share.

Table 2: Level and per capita of service uses in the neighborhood – 1398

Land use	Population: 10574 people	
	Area (m2)	Available per capita (m2)
Educational	4101	0.388
Health	855	0.081
Religious	2261	0.214
Cultural	48	0.005
Sports	0	0.000
Administrative-disciplinary	0	0.000
Green space	0	0.000
Total	7264	0.687

In the form below, all the physical factors that are effective in reducing urban resilience, such as age, quality, building life, etc., are overlapped in the gis software and can be seen in a spectral form in gold maps, which as you can see, this range is in terms of the existence of large-scale industrial and workshop uses in the vicinity of the residential context, as well as in terms of age, life and physical skeleton, it is very weak, and for this reason, in the face of the smallest natural disasters such as an earthquake, it will incur irreparable damages.

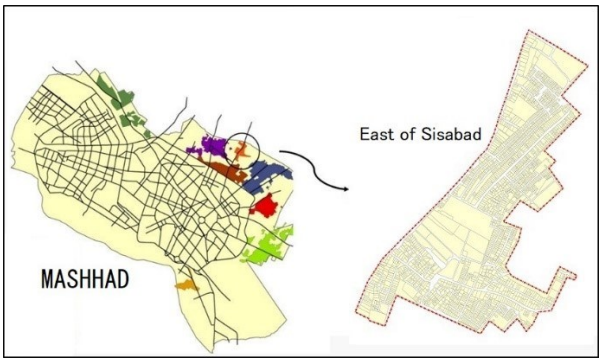

Figure 2. Location of Sisabad

Figure 3. Resilience rate

Figure 4. 3D Resilience rate

The information collected in this research has been collected using library documents and field observations, as well as interviews with experts in this field who have complete knowledge of the scope of the study, also, because all the underlying factors of inefficiency are very high. It is not possible to study them in one research, for this reason, by using the Delphi method, these inefficiency factors were scored by experts, and in the end, the data analysis was done using the QSPM method, which is very suitable in this field.

4. Data Analysis

Underlying factors of inefficiency of the Sisabad neighborhood:

- Social factors and contexts:
  - Problems and social anomalies of the neighborhood
  - lack of safety
- Economic factors and contexts:
  - Accommodation of low-income groups in the Sisabad
  - Recession in employment and activity
- Physical factors and contexts:
  - Instability of the building
  - Existence of damaged parts in the tissue
  - Impermeability and unfavorable access
  - Infrastructure inefficiencies
  - Lack of proper infrastructure
  - Lack of physical response and basic needs
- Environmental factors and contexts:
  - Noise and visual pollution in the Sisabad neighborhood
  - The low quality of pedestrian crossings, which creates a problem for pedestrians, will cause environmental problems.
  - Selling live cattle in the Sisabad neighborhood
  - Existence of stagnant water next to trash cans
  - Lack of vegetation
  - Lack of natural elements
- Management factors and areas:

– Inefficiency of management, plans, executive methods, weak cooperation of institutions.

Due to the existence of numerous problems in all aspects of the Sisabad neighborhood, the Delphi method has been used to adopt a better approach.

Table 3: Prioritizing Sis Abad problems using Delphi method

Prioritization of the Sisabad neighborhood problems using Delphi method								
sum	Expert 6	Expert 5	Expert 4	Expert 3	Expert 2	Expert 1	Physical factors	
3.6	4	3	3	4	4	4	Instability of existing buildings	Physical field
3.8	4	4	4	3	4	4	Vulnerability of the building	
3.6	3	3	3	4	4	4	Understanding permeability and access	
3.4	4	4	3	3	3	4	Lack of urban services and facilities	
3.6							Total sum in the Physical field	
Environmental factors								
2.7	3	2	3	2	4	3	All kinds of air, sound and visual pollution	Ecological field
3.3	3	2	4	4	4	3	Lack of Plant cover and natural elements	
3.0							Total sum in the Ecological field	
Legal and managerial factors								
2.0	2	1	1	4	3	3	Type of ownership	Legal and managerial
3.6	4	3	3	4	4	4	Management inefficiency (weal cooperation of institutions)	
2.7							Total in the Legal and managerial field	
Economic factors								
3.6	4	3	4	4	3	4	Living in Low-income groups	Economic field
2.9	4	4	2	3	3	3	Employment	
2.9	4	4	2	3	3	3	Land price drop (construction decline)	
2.7	4	3	3	2	2	4	Unblanaced investment	
3.0							Total sum in the Economc field	
Social factors								
2.9	2	2	3	4	3	3	Heterogeneous dispersal and loading of the population	Social field
3.8	3	4	4	3	4	4	Decreased security and social anomalies	
3.1	4	3	3	2	4	4	Displacement of social class groups	
3.3							Total sum in the Social field	

Table 4: Quantitative Strategic Planning Matrix

Strategy 13		Strategy 12		Strategy 11		Strategy 10		Strategy 9		Strategy 8		Strategy 7		Strategy 6		Strategy 5		Strategy 4		Strategy 3		Strategy 2		Strategy 1			
B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	Relative importance factor	
0.31	4	0.31	4	0.08	1	0.08	1	0.08	1	0.16	2	0.08	1	0.08	1	0.08	1	0.08	1	0.23	3	0.2	2	0.3	4	0.08	Localization of land uses with emphasis on incompatible uses	
0.30	4	0.30	4	0.30	4	0.30	4	0.22	3	0.22	3	0.30	4	0.22	3	0.22	3	0.15	2	0.07	1	0.3	4	0.3	4	0.07	Improving the quality of residential buildings	
0.21	3	0.21	3	0.07	1	0.14	2	0.14	2	0.14	2	0.14	2	0.21	3	0.14	2	0.07	1	0.14	2	0.2	3	0.2	3	0.07	Investing in creating educational and residential spaces	Opportunities
0.21	3	0.14	2	0.28	4	0.21	3	0.07	1	0.07	1	0.21	3	0.14	2	0.28	4	0.07	1	0.21	3	0.1	2	0.1	2	0.07	Improve the safety of pedestrians by designing sidewalks and urban thoroughfares	
0.26	4	0.13	2	0.20	3	0.07	1	0.26	4	0.26	4	0.07	1	0.07	1	0.07	1	0.20	3	0.07	1	0.2	3	0.3	4	0.07	Existence of development potential spaces	
0.20	3	0.07	1	0.07	1	0.07	1	0.07	1	0.20	3	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.1	2	0.2	3	0.07	Strengthen cultural spaces	
0.19	3	0.06	1	0.06	1	0.12	2	0.25	4	0.12	2	0.06	1	0.06	1	0.06	1	0.25	4	0.19	3	0.1	2	0.2	3	0.06	Possibility of creating green space and public open space	
0.31	4	0.31	4	0.08	1	0.08	1	0.23	3	0.23	3	0.08	1	0.08	1	0.08	1	0.08	1	0.08	1	0.2	2	0.3	4	0.08	Inadequate placement of land uses	
0.08	1	0.08	1	0.08	1	0.08	1	0.08	1	0.08	1	0.08	1	0.08	1	0.08	1	0.08	1	0.08	1	0.2	2	0.2	3	0.08	Risk of contamination due to the Cemetery's location in the vicinity of the residential fabric	
0.22	3	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.15	2	0.3	4	0.1	2	0.07	Risk of the destruction of buildings due to location on the fault	Threats
0.30	4	0.15	2	0.15	2	0.07	1	0.22	3	0.22	3	0.07	1	0.15	2	0.22	3	0.07	1	0.15	2	0.1	2	0.2	3	0.07	Lack of social justice in terms of dispersion of urban facilities	
0.14	2	0.07	1	0.28	4	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.1	2	0.1	2	0.07	Risk of environmental damage due to lack of urban sewage system	
0.14	2	0.28	4	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.1	2	0.1	2	0.07	Lack of strict supervision of constructions	
0.14	2	0.07	1	0.21	3	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.14	2	0.07	1	0.21	3	0.1	2	0.1	2	0.07	Possibility of flooding due to low quality of urban roads	
0.29	4	0.15	2	0.15	2	0.07	1	0.29	4	0.29	4	0.07	1	0.07	1	0.07	1	0.29	4	0.07	1	0.1	2	0.2	3	0.07	Existence of Brownfields	Strenght
0.26	4	0.19	3	0.19	3	0.13	2	0.19	3	0.19	3	0.13	2	0.06	1	0.19	3	0.06	1	0.06	1	0.2	3	0.2	3	0.06	Low price of residential land	
0.12	2	0.06	1	0.12	2	0.06	1	0.06	1	0.06	1	0.06	1	0.24	4	0.24	4	0.06	1	0.12	2	0.1	2	0.1	2	0.06	Existence of public transport station	
0.07	1	0.29	4	0.07	1	0.07	1	0.29	4	0.22	3	0.07	1	0.07	1	0.07	1	0.07	1	0.15	2	0.1	2	0.3	4	0.07	Lack of compatibility between residential context and neighborhood land uses	
0.15	2	0.07	1	0.29	4	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.29	4	0.07	1	0.07	1	0.1	2	0.1	2	0.07	Lack of proper permeability into the neighborhood due to the existence of passages less than 6 me	
0.07	1	0.29	4	0.07	1	0.07	1	0.07	1	0.07	1	0.15	2	0.07	1	0.07	1	0.07	1	0.07	1	0.3	4	0.2	3	0.07	Lack of suitable structure and low resilience and safety of buildings	
0.14	2	0.21	3	0.07	1	0.07	1	0.07	1	0.21	3	0.07	1	0.07	1	0.07	1	0.07	1	0.14	2	0.1	2	0.3	4	0.07	Heterogeneity of commercial and industrial uses with extra-neighborhood scale as incompatible use	
0.27	4	0.07	1	0.07	1	0.07	1	0.07	1	0.21	3	0.07	1	0.07	1	0.07	1	0.07	1	0.07	1	0.1	1	0.2	3	0.07	Lack of medical center, police, and fire station	
0.27	4	0.14	2	0.27	4	0.27	4	0.21	3	0.21	3	0.07	1	0.07	1	0.07	1	0.27	4	0.07	1	0.1	1	0.2	3	0.07	Lack of safety due to extensive Brownfields in the neighborhood	Weakness
0.26	4	0.13	2	0.26	4	0.19	3	0.19	3	0.26	4	0.06	1	0.06	1	0.06	1	0.19	3	0.13	2	0.1	1	0.3	4	0.06	Lack of existing land-uses 24-hour life	
0.13	2	0.06	1	0.26	4	0.06	1	0.06	1	0.06	1	0.06	1	0.13	2	0.26	4	0.06	1	0.06	1	0.1	2	0.1	2	0.06	Failure to comply with the Urban hierarchy	
0.06	1	0.06	1	0.26	4	0.13	2	0.06	1	0.06	1	0.13	2	0.06	1	0.19	3	0.06	1	0.06	1	0.1	1	0.1	2	0.06	Lack of proper floor construction on sidewalks	
0.24	4	0.06	1	0.12	2	0.06	1	0.24	4	0.18	3	0.06	1	0.06	1	0.06	1	0.24	4	0.06	1	0.1	1	0.2	3	0.06	Lack of green space	
0.06	1	0.06	1	0.06	1	0.06	1	0.06	1	0.06	1	0.06	1	0.06	1	0.06	1	0.06	1	0.06	1	0.1	1	0.1	1	0.06	Low axis resalat Blvd.	
0.06	1	0.06	1	0.06	1	0.06	1	0.06	1	0.06	1	0.18	3	0.24	4	0.06	1	0.06	1	0.1	1	0.1	1	0.1	1	0.06	Lack of access roads	
5.47		4.16		4.32		2.96		3.92		4.21		2.63		2.80		3.68		3.13		3.045		4.19		5.6		Total	

❖ In this table:

- Columns A and B are included:
  - A: Attractiveness score.
  - B: Strategy attractiveness score
- And the strategies' reviews are:

1. Land use location with the aim of organizing incompatible lands.
2. Use and exploitation of Brown fields to create green spaces
3. Attracting people's participation and opinions to improve the quality of life.
4. Implementation of incentive programs and granting financial facilities in order to improve and rebuild worn-out tissue.
5. Improving the geometric condition of the network of passages and intersections.
6. Increase efficiency and improve public transportation.
7. Improve the quality of the wall in the neighborhood.
8. Equipping and improving the quality of mixed zones.
9. Develop and create suitable recreational spaces to spend leisure time in the neighborhood.
10. Improve proper neighborhood lighting to instill a sense of safety.
11. Increasing attention to standards in construction.
12. Increase pedestrian's orientation and maintain organic texture
13. Using vast brownfields.

5. Conclusion

In contemporary decades, the need to pay attention to crises and environmental issues, to apply preventive solutions, as well as the new approach of endogenous and sustainable urban development, the development of cities emphasizes strengthening the mechanism within the existing urban areas and extent. In the meantime, looking at run-down neighborhoods as local capital that can be increased can meet the current and future needs of city residents. Sisabad neighborhood is in an unfavorable condition due to its unfavorable physical condition and lack of a proper development plan. The existence of dilapidated and abandoned houses, the number of dilapidated old houses that do not have suitable housing criteria for living and lack the necessary safety against natural hazards. The presence of narrow and winding roads, insufficient services, and existing infrastructure are the main factors that have caused Sisabad neighborhood to be in a poor condition. The physical resilience of buildings in the studied area is relatively low. As it was said

before, resilience is multidimensional, and depending on the time and place, it has different results and one solution cannot be considered for all the issues of resilience. For this reason, in this research, with a detailed evaluation of the inefficient fabric of the village of Sisabad, which emphasizes the increase of urban resilience, after stating the necessity of the problem and examining the background of the research, the research literature was discussed, from which indicators, criteria, and components of urban resilience were deduced. Then, by determining the research method, the validity and reliability of the indicators, the analysis of these components were done, relying on the standards and sources of experts in this field. QSPM method has been used for data analysis, and in this method, by examining the proposed strategies and scoring them by experts in this field, the most important proposed solutions in this neighborhood are:

i. Land use location with the aim of organizing incompatible lands.
ii. Using vast brownfields.
iii. Use and exploitation of Brown fields to create green spaces.
iv. Equipping and improving the quality of mixed zones.
v. Increasing attention to standards in construction.

The view of resilience as resistance emphasizes that although time has eroded some physical constructs, some social constructs have remained intact. These are the characteristics of human and social life through which the resilience of cities is expressed through the continuation of urban life over time. In the form below, all the physical factors that are effective in reducing urban resilience, such as age, quality, building life, etc., are overlapped in the gis software and can be seen in a spectral form in gold maps, which as you can see, this range is in terms of the existence of large-scale industrial and workshop uses in the vicinity of the residential context, as well as in terms of age, life and physical skeleton, it is very weak, and for this reason, in the face of the smallest natural disasters such as an earthquake, it will incur irreparable damages.

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