

Urban-Oriented Studies and Identification of Target Areas and Neighborhoods in Need of Urban Regeneration: Case Study in Abbas-Abad City

Hadi Faghihmaleki^{1,*} , Akbar Deilampour¹¹Department of Civil Engineering, Ayandegan Institute of Higher Education, Tonekabon, Iran; h.faghihmaleki@gmail.com; dylami64@gmail.com.

Citation:

Faghihmaleki, H., & Deilampour, A. (2023). Urban-oriented studies and identification of target areas and neighborhoods in need of urban regeneration: case study in Abbas-Abad city. *Computational algorithms and numerical dimensions*, 2(3), 148-162.

Received: 02/01/2023

Reviewed: 05/02/2023

Revised: 09/04/2023

Accepted: 11/05/2023

Abstract

A wide range of cities in the country and especially big cities are facing complex issues and problems in the areas of urban poverty, lack of safety, lack of infrastructure and services, structural instability of buildings and identity crisis. So far, many efforts have been made to change the existing conditions of these areas and neighborhoods by the country's government and municipalities, but unfortunately, the process of their environmental, social and economic decline has continued or has been raised in other status. The necessity of applying the urban regeneration approach to the highest levels of urban development planning (comprehensive urban development plans) was taken into account due to the existing gaps in responding to the issue of improving the quality of life in these plans, and the lack of alignment of their content with the plans for organizing inefficient urban areas due to the existing gaps in responding to the issue of improving the quality of life in the current development plans and programs of the government and municipalities (comprehensive urban development plans) and also the lack of alignment of their content with the plans for organizing inefficient urban areas. According to this necessity, the Iran urban development and improvement company has put on the agenda to revise the conventional master plans by conducting applied research by compiling the service description of "comprehensive urban regeneration plan". The urban regeneration approach with a comprehensive and specific view of the city should guide the development of human, financial and material resources in the city towards social development (sustainability and identity of societies), by using economic and institutional capacities and in a context of actualized capacities. natural and environmental and by using the published guidelines and localizing it according to the unique characteristics of the city under study by creating an environment that can be rationalized and by avoiding stereotypes and preconceived encounters and by relying on the city's exclusive database derived from the capacities its environmental, social, economic, cultural and institutional.

Keywords: Urban-oriented studies, Urban regeneration, Inefficient neighborhoods in terms of construction, Comprehensive urban development plans.

1 | Introduction

The necessity of applying the urban regeneration approach to the highest levels of urban development planning (comprehensive urban development plans) was taken into account due to the existing gaps in responding to the issue of improving the quality of life in these plans, and the lack of alignment of their content with the plans for organizing inefficient urban areas. According to this necessity, the Iran urban development and improvement company has put on the agenda to revise the conventional master plans by conducting applied research by compiling the service description of "comprehensive urban regeneration plan".

Urban regeneration refers to a comprehensive and integrated attitude and measures to solve the urban problems of the target area, which will ultimately lead to an economic, physical, social and



environmental sustainable development. This definition includes all the basic features of urban regeneration.

MacDonald et al. [1] conducted a research entitled "urban regeneration for sustainable communities" with the aim of trying to implement interpretive regeneration projects or creating sustainable communities through participation. According to the results, the sustainability of communities also has the support of CRP and other experts of this policy and academic environment.

Ezidi [2] in an article analyzed urban regeneration as a comprehensive policy in facing the challenges faced by managers and urban planners and shows that in the new approach, protection, comprehensiveness in attention to values and also attention to the historical environment is considered as an economic wealth and social as well as a huge cultural resource as central principles. Akbari et al. [3] during a study identifies the sustainability indicators of the projects that stimulate the development of the renovation of worn-out city tissues, they believe that the indicators of the sustainability of the development actually form the basis of the sustainability assessment models that can be used in choosing the most sustainable projects that stimulate the development or identifying their strengths and weaknesses. Shahkahi et al [4] have investigated the role of social capital in the renovation of worn-out urban structures in Juybar city. According to the results, physical interventions in living environments are considered as a factor to improve the social capital of residents. Also, the motivation to continue living also increases the social capital in context.

2 | Research Agenda

The general activities related to urban regeneration can be summarized in these few steps:

Step 1. Typology.

Step 2. Separating areas of target neighborhoods and areas.

Step 3. Prioritizing and determining the methods of action compatible with the upstream plans.

Step 4. Preparing comprehensive document for the regeneration of target areas and neighborhoods - managerial plan.

Step 5. Carrying out the steps of approving the comprehensive reconstruction document and dividing tasks in the reconstruction headquarters.

2.1 | Necessity of Project Implementation

The localization of sustainable urban regeneration guidelines in a general sense means putting on the agenda the comprehensive regeneration plan with regard to the neighborhood-oriented, restoration-oriented and revitalization-oriented projects and historical buildings, and reviewing the upstream plans with regard to the determination and approval of the city's boundaries in an acceptable time frame that contributes to the real participation of the local people in the future development of their city, whether private or public, they should use the government to achieve their ultimate goal, which is to improve the quality of life for all.

Three specific points are given more attention in the studies of the inner city: 1) sensitive urban areas, 2) vulnerable urban areas, and 3) areas that have lost their prosperity.

Urban regeneration is a comprehensive policy that includes the five key dimensions: 1) livelihood and economic issues, 2) physical and environmental views of the city and logic, 3) social and cultural issues/heritage related to people, 4) employment, education and training, and 5) housing.

2.2 | Outcomes of Comprehensive Regeneration Plans

2.2.1 | Studies and programs related to action for urban brand registration

The comprehensive renovation program is as follows:

- *Pulse: this section will focus on an activity or event or related history.*
- *Potential opportunities: which will focus on results related to economic studies (income generation/livelihood) and educational opportunities.*
- *Space/place: which deals with the objective things available to the public.*

We can consider each of these chapters as a function of multifaceted (spider) diagrams like Fig.1.

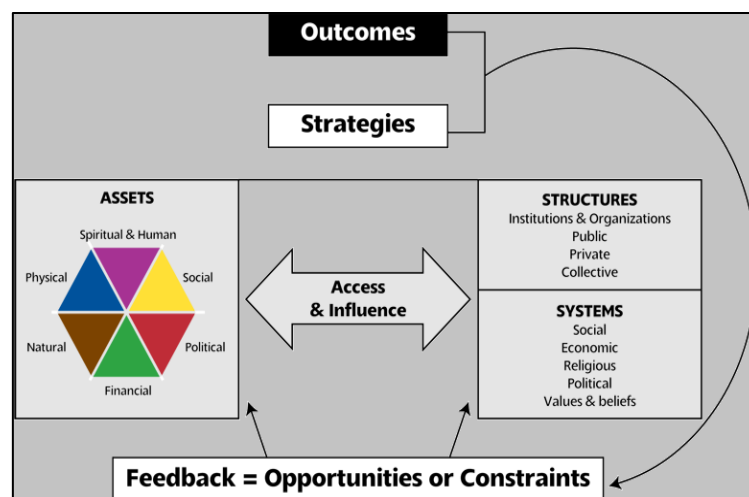


Fig. 1. Spider diagram for study and action plan for urban brand registration.

And therefore, the characteristics of the city brand will be explained in conducting these studies by exploiting the conducted research (documentary studies) and quick assessments in the following headings:

- *Identifying the physical characteristics (physiography) of the studied area.*
- *Identifying the geomorphological and geological characteristics of the studied area.*
- *Identifying the hydrological status and water resources of the studied area.*
- *Investigating the climate of the study area.*
- *Investigating the effects of climate change (increasing greenhouse gases) on different sectors such as: basin water resources, environment, agriculture, economic and social.*
- *Investigating the existing land uses in the region and the natural capabilities of water and soil facilities and its studies for the development of agricultural, industrial or service activities to achieve sustainable development.*
- *Economic and social studies of the city, taking into account seasonal fluctuations in the region.*

2.3 | Methodology

The study process plans urban regeneration based on demand-oriented and based on the identification of the region, which is verified through interaction with the city, citizens and city managers. "Participation-oriented" is an important part of developing a regeneration plan that will be possible based on trust building. Building trust at the current stage means avoiding unnecessarily raising the



expectations of citizens and city managers and drawing a realistic road map that identifies the priorities before the realization in its path. One of the ways to create this interaction and transparency is based on the theory of change [5], [6] and the roadmap to sustainable development [7].

2.4 | "Transition to Sustainable Development" Design Method

Having the method of transition to sustainable development is considered as a useful tool to achieve operational solutions that are used with the participation of stakeholders and future beneficiaries of development to solve multi-issue deficiencies and cross-sectoral activities. In the micro dimensions, this "transition method" can connect the micro and mid-term goals to the macro and long-term achievements of the intervention plans. If the design of this transition roadmap is done carefully, empathy and one voice (which requires the same language) regarding crystallization and explanation will be considered as presuppositions that either prevent or allow access to change in the living conditions of the target audience of the intervention program. The following concepts are known to be useful for integrating this design method:

- *Transition road map to sustainable development.*
- *Outputs and requirements.*
- *Indicators and their operationalization.*
- *Intervention.*

The following steps have been taken in this direction:

- I. The MUDIM model, which is based on the "Pressure-State-Response (PSR) framework" (in terms of thematic components, indicators, indices and sub-indices) and a multi-component and flexible model, has been used to identify inefficient areas (the main goals of the plan); and this model can include aspects of inefficiency at different levels from part to whole, including variable or representative variables of each index and similarly at the level of indicators or thematic components. In this model, the process of achieving the standard/civil or customary law/regulations and finally the intended purpose, goal and perspective in solving the inefficiency based on the relationship and sequence of its constituent elements becomes possible by measuring each variable with the determined criteria.
- II. The required data and information have been collected in the following way to identify the city's potential and actual limitations and capacities, as well as for the identification indicators of neighborhoods and inefficient areas of the mentioned model:
 - *Through library studies (documentary research) by extracting information from the Statistical Center of Iran, development and urban development documents, specific documents of organizations and institutions, books and resources related to the history and growth and developments of Abbas Abad city, the city proper, population and its developments and etc.*
 - *Through field studies including visual impressions (photographs), unstructured and centralized and decentralized interviews (interviews with residents, managers of organizations and departments and collecting their opinions, holding meetings, telephone inquiries, etc.) which in addition to collecting information also considers the verification of the collected information.*
- III. The data and information extracted from the city have been analyzed by SWOT analysis method; which is used to evaluate the internal and external status of an organization including strength, weakness, opportunity and threat.
- IV. The method of measuring the indicators for the existence of inefficiency and measuring it is determined based on local documents (development and construction documents specific to the city), national (laws, national standards and national rules and regulations: by-laws, circulars, approvals, etc.) and international (standards, etc.), and the condition of the ranges has been recognized through the distance of the index size with its corresponding measure. The variable average of that index in the city has been used in cases where there was no index to determine the measurement criteria.

- V. The Analytic Hierarchy Process (AHP) (multi-criteria technique) has been used to prioritize the indicators according to the relative importance of the indicators. The statistical population of this technique includes design experts who are aware of the city's condition and are familiar with the concepts of the regeneration approach.
- VI. Inefficient areas have been identified by overlapping and superimposing the scores of each statistical block in various indicators, components, indicators, and dimensions (which themselves have weight levels in the AHP method) in the GIS software environment; And finally, it has been determined based on consensus with city officials and managers and field survey and verification of neighborhoods and areas that need to be recreated.

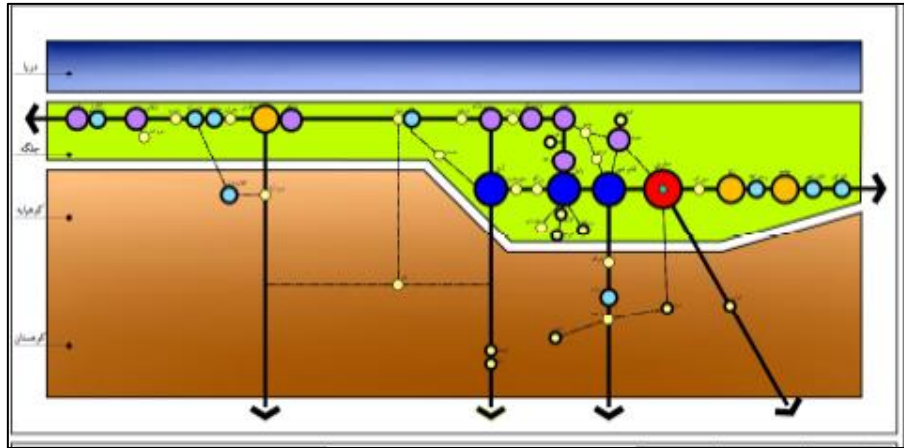


Fig. 2. Abstract model of the spatial structure of Mazandaran.

Mazandaran space organization has defined the multi-center space structure in the studies of the province. The multi-centered city-region includes two sub-regions and several potentially multi-centered converging regions, the western region centered on Nowshahr-Chalus-Abbasabad is introduced under the sub-region of agricultural plain.



Fig. 3. The spatial structure of Mazandaran.

2.5 | Identifying Inefficient Neighborhoods and Areas Targeted for Urban Regeneration

Inefficiency refers to an increasing process that has cumulative effects with a feedback relationship between the aspects of the city's functions, and it begins with a case of damage to the city and causes deterioration and crisis in the city if it continues. One of the main concerns of the management system all over the world is to recognize the inefficiency of cities and to find solutions to reduce or eliminate them, and each country adopts different measures according to the level of development and matching with the issue of inefficiency and its intensity [8].

The guidelines for "Identification of inefficient neighborhoods and areas targeted for urban regeneration" approved by the urban development and improvement company have been prepared in the following sections based on international documents and in order to overcome all types of urban inefficiencies:

- I. "Conceptual framework" for identifying and regenerating various types of inefficiencies.
- II. The model for identifying and regenerating various types of inefficiencies.
- III. How to identify inefficient urban areas and neighborhoods.
- IV. How to regenerate inefficient urban areas and neighborhoods.

2.6 | Conceptual Framework for Identifying and Regenerating Types of Inefficiencies

The structural elements in the conceptual framework of PSR can be explained as follows.

In the continuation of the report, each of the components separately by the indicator, is examined in the paragraph entitled "how to identify inefficient areas and neighborhoods" and pressure maps are presented, which show the efficiency or inefficiency of the indicators and the state maps, which expresses the intensity of efficiency or inefficiency of indicators. In the next paragraph (examination and identification of areas and neighborhoods that need to be regenerated), "status" maps are prepared based on "combined indicators", which include maps representing the state of inefficiency based on all indicators (spectrally), thematic maps and organizational maps. In the final part, which will be presented comprehensive joint action plans, responses will be given to the "status" caused by the "pressure" of human activities. In this way, the conceptual framework of PSR is completed in the process of regeneration plan of Abbas Abad city [9].

2.7 | Model of Identification and Regeneration of Various Inefficiencies

The appropriate model for identifying and evaluating inefficiency must have two characteristics, first, it is compatible with the hierarchical structure of the conceptual PSR framework, second, it covers the variety of inefficiency cases that have different aspects with different intensities. Therefore, the "MUDIM" multicomponent model, which has a hierarchical cluster structure, has been used to ensure the comprehensiveness of dealing with various aspects of the problem of inefficiency.

Due to the compatibility of this model with the stated needs, this model can provide city officials and managers with a comprehensive image of the inefficiency of urban blocks for policy making and preparation of executive measures (including the provision of human, material and financial resources) in order to rationally eliminate inefficiencies or prevent them.

2.8 | How to Identify Ineffective Urban Areas and Neighborhoods

As mentioned earlier, the implementation of the following process is on the agenda in order to identify inefficient neighborhoods and urban areas:

- I. Using the conceptual framework of PSR and the multi-component model of "MUDIM".
- II. Implementation of the following guidelines to identify inefficient neighborhoods and urban areas, including:
 - Instructions for determining indexes and indicators.
 - Instructions for determining the type of information, sources and references, the method of data collection and information related to indexes and indicators.
 - Instructions on how to identify ineffective areas and neighborhoods.
 - Instructions on how to prioritize indicators.
 - Instructions on how to determine target areas and neighborhoods.

2.9 | Using the Conceptual Framework of PSR and the Multi-Component Model of "MUDIM"

It is necessary to be careful in choosing and classification the components of the structural pillar in the conceptual framework of PSR to achieve reliable results. In this classification, each "pressure" factor (motivators that cause inefficiency) is defined as a "variable" and must find its appropriate place in the general stratification. The structure of the multi-component model MUDIM is categorized based on the leveling of the conceptual framework of PSR, that is, in terms of dimensions, thematic components, indicators and sometimes sub-indices.

The indicators for identifying and measuring inefficiency are classified into the following three groups in the multi-component model of MUDIM:

- I. block-oriented indicators: in this category, the base unit has been used to identify and measure the inefficiency of "urban block".
- II. Element-axis indicators: in this category, the base unit has been used to identify and measure the ineffectiveness, natural, historical and cultural elements or their identity-giving textures and privacy.
- III. City-oriented indicators: in this category, the base unit has been used to identify and measure inefficiency, management system, management characteristics of local managers of each city.

The effectiveness of the multi-component model of MUDIM is achieved only if its structure is set correctly, both in terms of the constituent elements and the sequence and relationships between them in the conceptual framework of PSR. The order and content of the model elements should be as follows in this structure:

The content of the model be categorized from the highest to the lowest level; It is categorized from the level of "dimensions" to the level of "indexes and sub-indexes".

2.10 | Preparation of Database and Computer Folder

Databases and computer folders of data and information are formed in order to systematically produce "pressure" and "status" maps of inefficiency and electronic documentation of data and information. It should be noted that some indicators lack documented information collected by relevant institutions and organizations, and the consultant has collected information and then systematized the data with field observations.

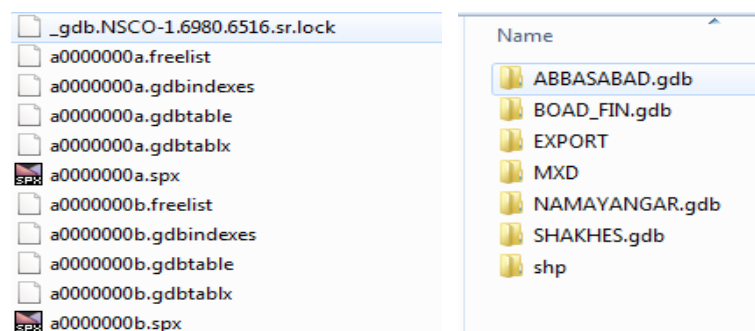


Fig. 4. Created computer folder of Abbas Abad regeneration plan.

2.11 | How to Identify Inefficient Areas and Neighborhoods

On the one hand, the most important problems mentioned by the managers of urban institutions and on the other hand, the views of the people of different neighborhoods have been presented.

On the one hand, the field surveys conducted by the consulting engineer, and on the other hand, the documents obtained in the city and neighborhoods also show that the facilities in the city are properly distributed, and if there is a deficiency in the infrastructure or superstructure levels, it is due to 1) the lack of economic benefits for locating and placing the required services, or 2) the low quality of service provision.

Economic benefits mean the justification of construction or non-construction action based on the user population. In other words, the population covered by an activity must be correctly estimated and justified.

However, one of the goals of these studies is to identify the areas required for urban regeneration, which is presented in this paragraph.

The following maps should be produced for each of the "block-oriented, element-oriented and city-oriented" indicators in the form of two structural pillars of the conceptual framework of PSR, i.e. Pressure (P) and Status (S):

- I. Maps based on block-oriented indicators.
- II. "Pressure" maps: in order to show the presence or absence of "pressure" (efficiency or inefficiency) of each of the urban blocks and how they are distributed, we use each index.
- III. "Status" maps in order to show the "status" (severity of inefficiency) of each urban block and how they are distributed among each index.
- IV. Maps based on element-oriented indicators.

2.12 | Assessing the Current Status and Identifying the Problems, Capacities and Potentials of the City in the Field of Regeneration

Extensive studies have been carried out in this section from the macro level to the level of the neighborhoods of Abbas Abad city in different dimensions:

Abbasabad city is located in the western half of Mazandaran province, the center of Abbasabad district and the only city of Langarud district. This city reaches the shores of the Caspian Sea from the north, the Alborz foothills from the south, Salmanshahr from the east with a distance of 13 km and Nishtarud city from the west with a distance of 10 km.

The climate of Abbasabad is influenced by the latitude, being located in a lowland and plain area, humidity from the Caspian Sea, the proximity of the mountains to the sea, the Alborz mountain range with the west-east direction as a moisture protector of the humid western and cold northern winds, forest vegetation and Pasture in the foothills and northern mountains of Alborz and the benefit of moist western and cold northern air masses. In general, the general characteristics of the city's climate are influenced by the Caspian Sea, which includes moderate weather throughout the year, high relative humidity, abundant rainfall, and sea and land breezes.

The city of Abbasabad has various potential and actual environmental characteristics. This city has a network of many streams and rivers flowing in the city. Also, in addition to the effects of the weather, the Caspian Sea has increased the environmental, economic and tourism potential of the city. Also, the plains and coastal plains of the city create favorable conditions for agricultural, tourism and residential activities. The city of Abbasabad is considered as the most suitable area for the growth of valuable and robust commercial forests of Hyrkani region, including maple, beech, boxwood, alder, mulberry and tall-mazo trees. Despite all these environmental features, these potentials are being lost, the most important of which are as follows. It is appropriate to think about measures to prevent the current trend and turn these weaknesses and threats into strengths and opportunities for the city.

The change of agricultural land-use to residential, and the formation of residential settlements with temporary and seasonal population, the disproportion between the capacity of pastures and the number of livestock, the indiscriminate cutting of forest trees, the replacement of citrus groves and tea plantations in forest lands, the development of residential and activity centers and recreation in agricultural and forest lands, intensification of erosive processes such as soil washing, sliding, falling, creeping in the slopes, and consequently the flooding of rivers and waterways, significant pollution of the streets located in the city and its territory due to the improper disposal of solid waste, the blockage of the irrigation network (wells, etc.) in the area due to the abandonment of a significant part of it (lack of dredging).

2.13 | Identifying and Determining the Areas and Localities that Need Urban Regeneration with a City-Oriented Perspective

After forming a database in the descriptive-analytical GIS software in the second part, maps of the degree and intensity of inefficiency by criteria, indexes and indicators in two categories of plate-based and block-based indicators have been produced according to the table of locality identification indicators or ineffective ranges. Inefficiency maps have been spatially analyzed using the AHP hierarchical analysis method. The indicators have been weighted according to the relative importance of the indicators based on expert meetings of the study team of the regeneration plan and based on the knowledge of the city of Abbasabad. In matching the inefficient areas identified with traditional neighborhoods, the neighborhoods of Kolahdoz, Shariati, Ghafari, Kazem Rood, Shiroudi Madani, Rajaei, Asb Chin, Gile Ser, and Pasande Sefali have the most compatibility with the inefficient areas.

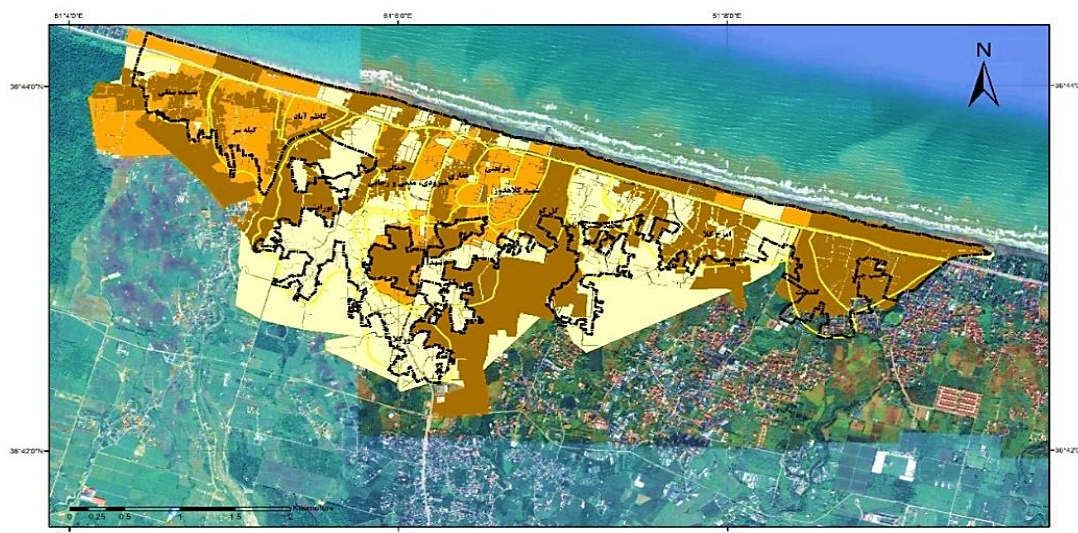


Fig. 5. The status of traditional neighborhoods according to the weight of the indicators.

Target areas and locations have been prioritized based on the table in paragraph 3 of article 3 of the guidelines. Therefore, Kolahdoz, Kazemroud, Ghafari and Jamali neighborhoods are in the first priority, and Shariati, Shiroudi Madani and Rajaei neighborhoods are in the second priority, Asb Chin and Gileh Sar are in the third priority of regeneration.

Table 1. Prioritization of target areas and neighborhoods.

Low Quality of Life	Criteria		Priority
	Low Environmental Quality	Natural Hazards	
✓	✓	✓	First priority: Kolahdoz neighborhood
✓	✓	✓	First priority: Kazem-Abad
	✓	✓	First priority: Ghafari
✓		✓	First priority: Jamali
✓	✓		Second priority: Shariati
✓	✓		Second priority: Shirodi Madani Rajaei
✓			Third priority: Asb Chin
✓			Third priority: Gileh Sar

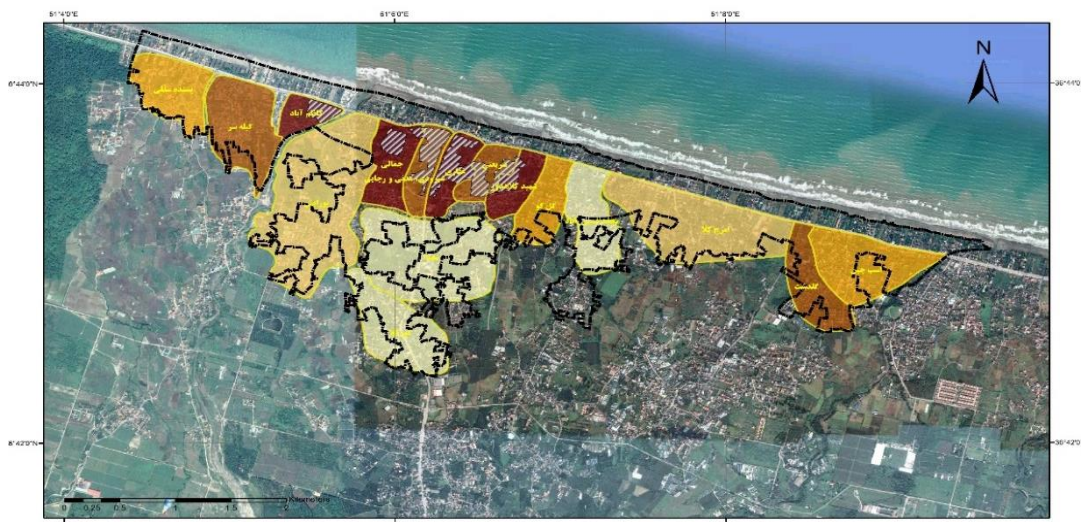


Fig. 6. Prioritization of traditional neighborhoods according to the weight of indicators.

The areas approved by the article 5 commission as worn-out texture with an area of 41.62 hectares are located in Shahid Kolahdoz, Shariati, Ghafari, Shiroudi and Kazemroud neighborhoods, which corresponds to the target areas identified as ineffective areas. The area of the identified target areas (59.8 hectares) has increased by 23.52 compared to the area of the approved worn-out tissue. Also, according to the conducted studies, the city of Abbas Abad lacks informal settlements and historical texture.

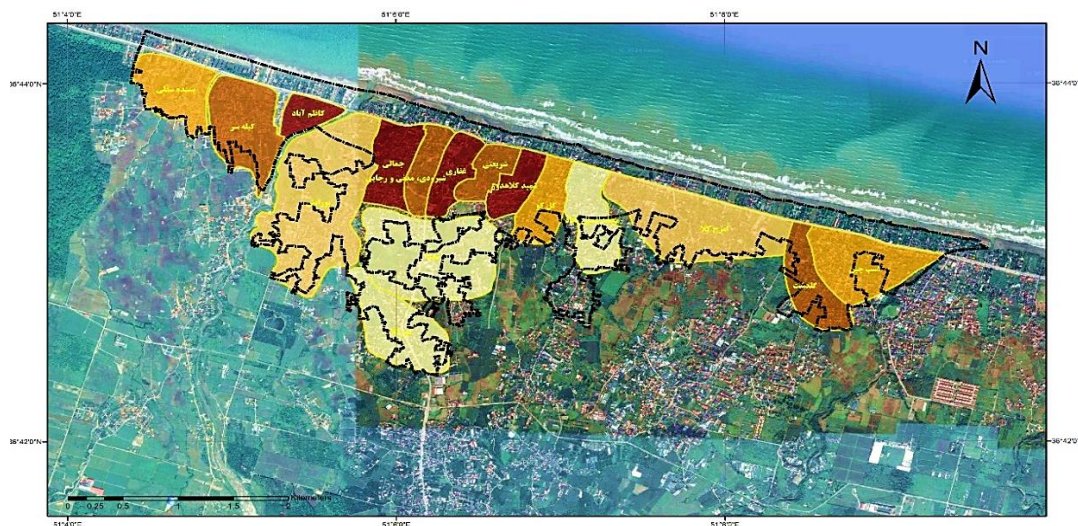


Fig. 7. The position of worn-out approved texture in the prioritization of traditional neighborhoods.

Table 2. Determining the exposure approach and general lines of the intervention guide by the identified species.

Intervention Priority	Target Areas	Species
Resettlement	Kolahdoz neighborhood Kazemabad neighborhood Ghafari neighborhood Jamali neighborhood	Inefficient neighborhoods or areas in terms of natural and man-made hazards
Physical renovation and strengthening	Shariati neighborhood	Inefficient physical areas (worn out)
Functional improvement	Shirodi Madani Rajaei neighborhood	
Social and economic empowerment	Kolahdoz neighborhood Kazemabad neighborhood Ghafari neighborhood	

Then, a managerial meeting was held between urban service providers on 14/10/2018 to collect the opinions of the representatives of these institutions, and finally to clarify the limits of the identified areas. According to the results of these studies and managerial results in the meetings of the regeneration headquarters, finally the neighborhoods of Kolahdoz, Shariati, Ghafari, Shiroudi, Jamali and Kazemabad have been identified as regeneration action areas, and part of the worn-out blocks in them as intervention regeneration areas. Although, the attention of the city planner will be on the city of Abbasabad according to the information obtained from the city as a result of the final results of these studies in the next section, in addition to paying attention to the target neighborhoods. It should be noted that green spaces have been removed from the final map of areas and neighborhoods targeted for regeneration. The scopes of separate action and intervention are specified on the map in the following two maps.

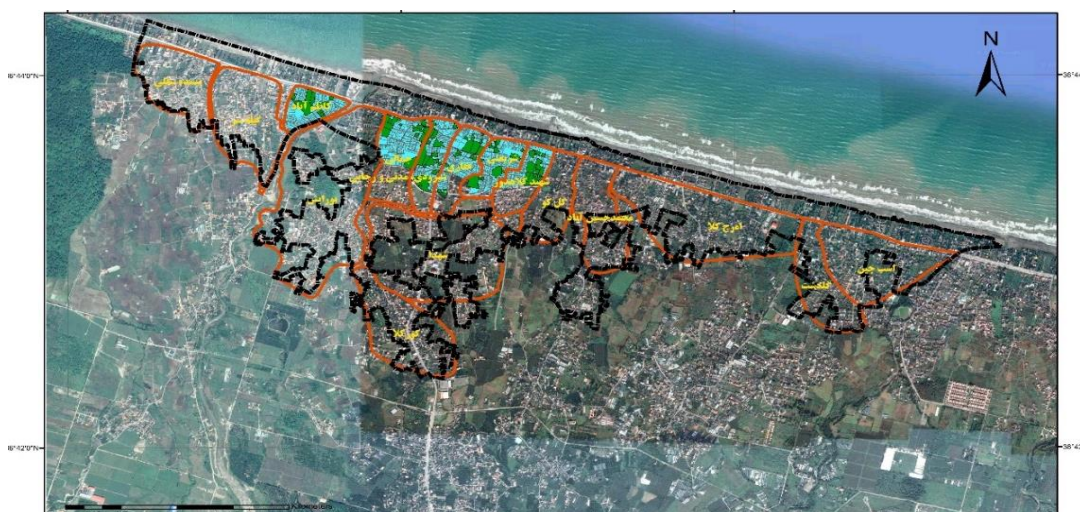


Fig. 8. Areas of regeneration action.



Fig. 9. Regeneration intervention limits.

2.14 | Compilation of a Strategic Document for Regeneration Planning and Prevention and Foresight for Neighborhoods and Areas

The results of the investigations show that Abbasabad city has two types of inefficient structures in terms of natural hazards and physical inefficiency. According to the table in paragraph 2 of article 3 of the guidelines for identifying inefficient urban areas and neighborhoods, the priority of intervention in such inefficiencies includes resettlement, restoration and physical retrofitting, functional improvement, social and economic empowerment. The specifications of the intervention areas in the target areas are listed separately in the following table.

Table 3. Identification of the target areas that require regeneration interventions in Abbas Abad city.

Type of Inefficiency	Number of Residential Units	Number of Households (2015)	Population (2015) People	The Number of Blocks	Area (Square *Meter)	Target Neighborhood	Target Area by Priority
Natural hazards, physical	121	207	653	2	66.569	Kolahdooz	1
Natural hazards, physical	550	567	1703	12	226.078	Shariati and Ghaffari	2
Natural hazards, physical	132	136	384	1	101.780	Kazem Abad	3
Natural hazards, physical	400	412	1212	9	203.667	Shiroudi and Jamali	4
-	1203	1322	3952	24	598,094	Total	

*The area of gardens and agricultural green space has been deducted from the area of the whole neighborhood.



Fig. 10. Land use of the intervention areas in the areas targeted for regeneration.

Executive requirements to eliminate inefficiency should be reviewed and implemented at both city and neighborhood scales. Executive measures at the urban scale should include strategic projects to improve infrastructure and public services at the city level, projects related to the position of Abbas Abad as the center of the city, and projects related to the role of tourism in the city, which according to the issue of improvement , retrofitting and renovation of housing, preparation of plans and programs for project-oriented regeneration, promotion of economic capabilities and institutional capacity building, improvement and improvement of spaces and development of public territory, improvement of infrastructure, development of superstructure facilities and services. At the neighborhood scale, measures

should be taken in each neighborhood to eliminate inefficiency, according to the status of inefficient areas. The necessary measures for each neighborhood are given in the *Table 4*.



Table 4. Executive requirements of regeneration in order to eliminate inefficiency.

Requirements	Scale
Strategic projects and improvement of infrastructure and public services in the city	Implementation requirements at the urban scale
Projects related to the position of abbas abad as th center of the city	
Projects related to the role of city tourism	
Kolahdoz neighborhood: defining thecenter of the neighborhood,creating an office to facilitate the improvement and renovation of housing,street lighting,furniture suitable for the elderly and disabled,imporoving the streets in order to preserve the valuable fabric,a center for primary education and improving literacy,building a park.	Implementation requirements at the neighborhood scale
Shariati neighborhood: defining thecenter of the neighborhood,creating an office to facilitate the improvement and renovation of housing,street lighting,furniture suitable for the elderly and disabled,imporoving the streets in order to preserve the valuable texture,building a children's park.	
Kazemroud neighborhood: defining thecenter of the neighborhood,creating an office to facilitate the improvement and renovation of housing,street lighting,furniture suitable for the elderly and disabled,imporoving the streets in order to preserve the valuable texture,building a children's park.	
Ghafari neighborhood: defining thecenter of the neighborhood,creating an office to facilitate the improvement and renovation of housing,street lighting,furniture suitable for the elderly and disabled,imporoving the streets in order to preserve the valuable texture,building a children's park.	

Requirements

Strategic projects to improve infrastructure and public services in the city.

Projects related to the location of Abbas Abad as the center of the city.

Projects related to the role of city tourism.

Kolahdoz neighborhood

Defining the center of the neighborhood, creating an office to facilitate housing improvement and renovation, street lighting, furniture suitable for the elderly and disabled, improving streets in order to preserve the valuable fabric, a center for primary education and improving literacy, building a children's park.

Shariati neighborhood

Defining the center of the neighborhood, creating a housing improvement and renovation facilitation office, street lighting, furniture suitable for the elderly and disabled, improving the streets to preserve the valuable texture, building a children's park.

Kazem Abad neighborhood

Defining the center of the neighborhood, creating a housing improvement and renovation facilitation office, street lighting, furniture suitable for the elderly and disabled, improving streets to preserve the valuable fabric, building a children's park.

Ghaffari neighborhood

Definition of the neighborhood center, creation of a housing improvement and renovation facilitation office, street lighting, furniture suitable for the elderly and disabled, improvement of streets to preserve the valuable fabric, construction of a children's park.

The needs of neighborhoods are categorized into three environmental, physical and service categories. According to the sustainable development approach in the regeneration plan and the scope of influence of the environmental dimension, paying attention to the environmental needs are placed in the first priority. Physical and service-social needs are placed in the next priority. The projects defined in the form of these needs are applicable in terms of timing in the short, medium and long term.

Table 5. Thematic classification of the needs of localities according to the assessment of the status.

Priority	Needs
First	Environmental
Second	Physical
Third	Service-social
First	Environmental
Second	Physical
Third	Service-social
First	Environmental
Second	Physical
Third	Service-social
First	Environmental
Second	Physical
Second	Service-social

4 | Results

In recent years, policy makers, planners and urban managers have paid special attention to sustainable urban regeneration with the increase of worn-out textures and informal settlements. This study focuses on the capacity of sustainable urban regeneration and its comparison in two types of worn-out and informal textures (target textures in sustainable urban regeneration) in Abbas Abad city. According to the results of the research, worn-out textures have more potential to accept sustainable urban regeneration. Also, the residents of the target neighborhoods in this research are more interested in the socio-cultural dimension of sustainable urban regeneration among the considered criteria; Of course, if the environmental, physical and economic structures in the neighborhoods do not meet the needs of the residents. After the social and cultural variable, the two variables of economic prosperity and improvement of physical conditions (which are among the most important problems of neighborhoods with worn-out and informal structures), with equal weight, have great potential for regeneration. There is a connection between these two issues. Also, it can be well observed the lack of economic prosperity in the physical condition of these two types of tissues. Residents have chosen both cases as the second option due to the importance of these two cases in their lives. The fact is that with the increase in prosperity, we can expect a change in physical conditions. Positive changes in the body of these neighborhoods will also lead to economic prosperity. The last variable according to the residents is the improvement of the environmental index, which is considered as the last variable due to the severe socio-cultural, economic and physical problems that the residents of these areas are facing. In fact, residents have considered this variable as their last option considering that environmental problems are less directly affected than other sectors.

The main strategy and orientations in sustainable urban regeneration are to move towards a more comprehensive form of policy and focus on integrated solutions. It is possible to create a favorable place for citizens to live in the physical and environmental regeneration of the city, and their level of well-being and health and access to green space and other environmental indicators can be increased, which is considered as one of the challenges of worn-out and informal structures. If this becomes the norm and

public culture, the implementation of a sustainable urban regeneration plan will be guaranteed. As a result, citizens feel safe, and the sense of mental health and life expectancy increases in these settlements.



References

- [1] McDonald, S., Malys, N., & Maliene, V. (2009). Urban regeneration for sustainable communities: A case study. *Technological and economic development of economy*, 15(1), 49–59.
- [2] Izadi, M. S. (2010). Opportunities and context prepared by the new regeneration act (supporting regeneration and rehabilitation of urban distressed areas. *Haft shahr journal of the urban development and organization journal*, 3(31,32), 111-115. (In Persian). https://www.haftshahrjournal.ir/article_9887.html
- [3] Akbari, P., Habibi, K., & Ahmadi, M. (2022). Explicating and evaluating the economy-oriented recreation of the creative urban spaces prone to development with a branding approach (case study: Sanandaj). *Geography and urban space development*, 9(1), 33-52. (In Persian). DOI: 10.22067/jgusd.2021.47427.0
- [4] Shahkahi, A. K., Modanlou Joybari, M., & Samadi, R. (2013). Study the role of social capital in urban instauration of old contexture case study: Jooybar city. *Geography and territorial spatial arrangement*, 3(8), 15-26. (In Persian). <https://www.sid.ir/fileservers/jf/4016813920802.pdf>
- [5] Taplin, D. H., & Clark, H. (2012). *Theory of change basics: a primer on theory of change*. New York: actknowledge. <https://www.edu-links.org/sites/default/files/media/file/ToCBasics.pdf>
- [6] Kim, H., Kim, H., & Woosnam, K. M. (2023). Considering urban regeneration policy support: Perceived collaborative governance in cultural heritage-led regeneration projects of Korea. *Habitat international*, 140, 102921. <https://doi.org/10.1016/j.habitatint.2023.102921>
- [7] Tallon, A. (2020). *Urban regeneration in the uk*. Routledge.
- [8] Shi, M. J., Cao, Q., Van Rompaey, A., Pu, M., & Ran, B. (2023). Modeling vibrant areas at nighttime: A machine learning-based analytical framework for urban regeneration. *Sustainable cities and society*, 99, 104920. <https://doi.org/10.1016/j.scs.2023.104920>
- [9] Liu, Y., Shen, L., Ren, Y., & Zhou, T. (2023). Regeneration towards suitability: A decision-making framework for determining urban regeneration mode and strategies. *Habitat international*, 138, 102870. <https://doi.org/10.1016/j.habitatint.2023.102870>