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ACTIVATING URBAN PUBLIC SPACES SURROUNDING HERITAGE RIVERS; AL ASHAR RIVER IN BASRA-IRAQ AS A CASE STUDY

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Abstract

The Heritage Rivers in Iraqi cities have suffered from neglect at the level of water quality. Their activation as a river frontage reflects the history and culture of the city as a whole. This research tries to shed light on the most crucial level of the development of rivers, which are the surrounding urban spaces and their activation in a way that reflects the riverside that has a role in reflecting the level of cultural socio-economic. It also reflects the environmental conservation and aspects related to sustainability. Al-Ashar River is considered one of the most important rivers contributing to the history of Basra's city due to its location in the middle of the city. In addition, it has importance, especially as a heritage, economic, residential, and commercial attraction. Because of the neglect that affected the river, this research investigates the factors that contribute to activating the surrounding spaces and making them tourist attractions. Thus, the research structure consisted of evaluating the efficiency of these spaces efficiency by defining the research problem (knowledge deficient of the role of activating the urban areas surrounding Al-Ashar River in Basra city). The structure also included a group of studies on which a vocabulary group was extracted based on the evaluation process. (Uses of water space،percentage of connected public spaces ،Accessibility to the river ،organizing spaces ،Visibility ،Characteristics are cultural-heritage. Al Ashar River was divided into three zones according to the type of use and the characteristics of each zone. These zones were evaluated according to the indicators determined from previous studies. The results varied according to the characteristics of each area. Based on the results, recommendations were reached for developing the spaces surrounding the Heritage Rivers.

Keywords: Heritage rivers, Riverbanks, Urban spaces, Visibility.

1. Introduction

The Al-Ashar River is considered one of the rivers that took its importance from its location within the city of Basra, by classifying it into two parts, as it is the primary artery branching from the Shatt al-Arab [1], in addition to its history extending with the emergence of the city.

However, the surrounding spaces lack active areas with social, ecological, and environmental impacts and aesthetic dimensions that reflect the city's image [2]. The research sheds light on spaces and how to activate the areas after assessing the state of the existing spaces. Similar cases were looked at based on essential criteria, and indicators were determined to look at that river and its spaces. The case presented by the research looks at the spaces surrounding the river within the city of Basra in particular.

Although the importance of the local, commercial and historical river, the uses overlooking it, and the different levels of movement, the surrounding spaces suffer from neglect resulting from the lack of consideration of the authorities and society, in addition to the loss of green spaces, which are the basis for activating the urban facade of the city.

Some treatments were considered unilateral and partial in dealing with these spaces. This research investigates the factors contributing to starting the surrounding spaces and making them tourist attractions. The research problem shows the absence of the role of urban spaces surrounding heritage rivers in Iraqi cities.

2. Literature Review

This paragraph includes a set of studies dealing with activating urban spaces in general and urban spaces surrounding rivers in particular. A group of vocabulary was identified that each study dealt with. An essential vocabulary that most or all studies focused on, given that it is crucial and necessary in the process of activating spaces, and the following is an explanation for each study:

Andini [3] discussed how to activate the public space at multiple levels. The most fundamental level is related to the public space's type of use. In addition, it discusses the way how to qualify the ground floor of public buildings for social activities. Using display screens and signs that attract people, entrances, and people coming and leaving can enhance these buildings.

Avoid visual blockages to maximize accessibility and visual communication. Just as residential use reduces the possibility of activating public space, prioritizing mixed, functional, and social usages of these spaces is preferable. Ease of public access is a prerequisite, as spaces must be physically and visually accessible. Public spaces must be constructed of high quality to allow intensive use, and streets to be reclaimed to support a more extended stay. Utilize the river's importance, heritage, and culture to stimulate widespread interest in public space. Create a unique sense of place. Lastly, activate historic buildings adjacent to the river by making them a shared space for public usages, such as holding seminars or exhibitions [3].

(Place Activation) shared the opportunity to create a sense of place and generate cohesion, safety and security, streets, and public spaces in Maitland, as the study indicated public spaces in Maitland, running multiple events that stimulate the place over time [4] as shown in Fig. 1.

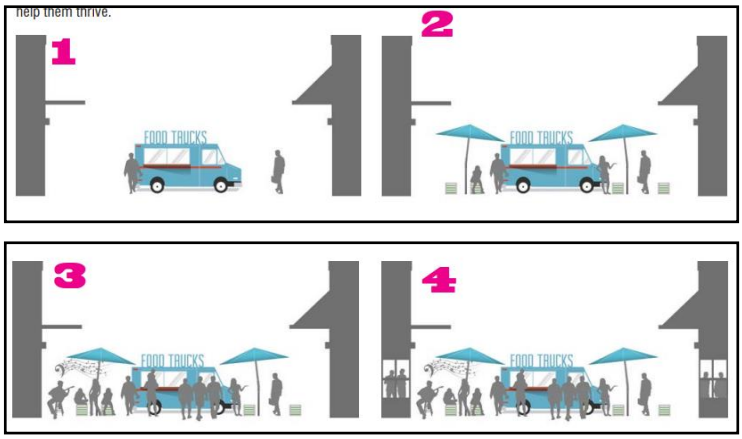

Fig. 1. How to activate space automatically, by enhancing use and reshaping the space, and thus activating the space [4].

Al-Ani [5] proposed the principles based on rivers' urban spaces in the center of historical cities. Each river in the city or waterside area has unique functional requirements and cultural characteristics. This means that the design takes those requirements to meet the features of different cities. From a cultural level side, the method includes urban landscapes based on the plausibility of the visual aesthetic of landscapes. Examining the values must also be guaranteed, as they are associated with that area's local history, including the river. Urban waterfront areas should re-examine values based on new ideas. As for the cultural principles, the city's expansion changes the urban fabric structure and isolates people from nature. Thus, people would lack contact with nature. As a result, the waterside design would provide an opportunity for city residents to be in touch with nature. Protect the city's existing water culture. Fully excavate and continue the historical and cultural characteristics of the city. Move forward against the deep human background forming new images of the city. An ecological principle guarantees the role of spaces in controlling the environmental aspects of the area by providing green spaces, besides its role as a physical carrier of recreational activity for the city's residents. This happens by determining the importance of the landscape space of the waterfront, which is considered a link to be in touch with nature and vegetation. Water can improve the city's physical environment, create a good atmosphere, and bear the responsibility of modifying the environment in the city. Thus, it is considered a green corridor of the city and a substantial "base" for preserving and establishing the city's biodiversity. The activation of the riverside areas should be within the limits of protecting the local attributes to display the regional spirit, including the type of jobs existing in the riverside and the attempt to adopt local materials. Land use through activities related to the city's history, such as the old events occurring at the edge of the river and the old buildings and their functions and their particular sites.

Hradilová [6] emphasized the importance of urban spaces under multiple uses. We must find a way to implement all functions in a sensitive space that contributes to the spatial organization of the riverfront. The frequency of jobs, continuity, and consistency of each part with other urban spaces leads to an efficient and integrated riverfront were transportation, industry, and entertainment. Many of the current

cultural events (educational trails, exhibitions, performances, concerts, discussions, etc.) are directed towards urban waterfronts, and we look for them naturally and subconsciously. The good architectural design of these spaces would be capable of assisting them to contribute to city life. It is necessary to look for new, current opportunities to use waterfronts that meet the contemporary era's aesthetic, spacious, operational, and functional requirements.

Providing public access to water in various forms is an essential part of activating the waterfronts spaces. Also, consider the design of landscapes and the design of gardens and open green spaces to various plantations to the establishment of sports and recreational facilities along waterways. For example, to restore the natural conditions of water and the ecosystems of wetlands while reviving the natural character and semi-natural appearance of urban rivers to make them vital spaces [7].

In a study by Abidin et al. [8], the river corridors of heritage river cities in Malaysia have contributed to the livelihoods of the diverse communities within those cities. By the rapid progress in city development in Malaysia to accommodate the modern cultural heritage economy, severe climate change, and lack of community consultation in designing and developing river corridors ference in the landscape settings of these places. The study emphasizes assessing landscape nature in relation aboutnce of working communities in heritage urban river corridors in Malaysia. This study brings out a new approach by Malaysian urban design teams to assess landscape settings that are critical but important to diverse working communities via experimental landscape surveys. In particular, this study reveals the dependency of working societies on the nature of landscapes to earn a livelihood in urban river corridors of heritage cities [8].

Riad [9] proposed methods based on which the spaces were activated. The most important one of these methods is the traffic movement represented by activating the internal nodes in terms of planting them with trees and maintaining them in a way that does not obstruct the view, organizing the spaces, providing the areas with appropriate furniture in terms of patterns and shapes and their resistance to weather conditions.

Timur [10] proposed three basic principles for activating urban spaces. Public accessibility, an increasing proportion of landscapes, and type of land use along the river's edge. Water accessibility can be assessed in three forms that include the city waterfront connection, the continuity of the spaces surrounding the riverfront, and the waterfront connection with the water. The approved type of use is classified into three levels (i) water-related uses represented by ferries, marine stations, ship repair, and construction works, (ii) water-related uses such as industrial production, some storage facilities, and public places; and last (iii) the usages that are independent of water, as they are neither dependent nor linked to the waterfront. Examples of the third level are the public parks and commercial and service complexes. As for the most general principles of activating urban spaces, access to the river is achieved by providing a landscape on the roofs considered a link between buildings and water. In the city of Haven, Hamburg, Germany, Fig. 2. Accessibility to pedestrian spaces is maximized by connecting physical areas with urban core links. Public spaces have to be built of high quality to allow for extensive use; as technology develops, it is subject to many types of new materials. The integration of mixed-use in activating spaces, starting urban spaces emphasizes this aspect, including residential, recreational, commercial, service, and tourism

facilities. Residential, recreational and tourist uses were often the most prevalent. While applying these usages, priority should be given to those requiring water access. Waterfronts must offer a variety of cultural, residential, and commercial uses. When it comes to sustainability, it is essential to emphasize the sustainability scope that would give efficiency to the high-level spaces.

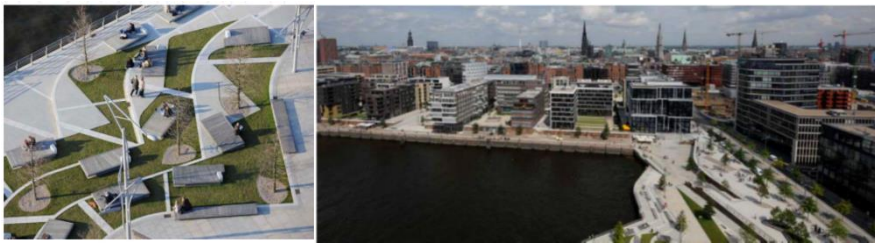

Fig. 2. River façade revitalize by providing open spaces with green spaces linking buildings and water.

Rahman [11] and Chen [12] discussed the patterns of the rivers' spaces, the most important of which are: the net pattern, which shows its effect by spreading it within the urban space, the penetration pattern: refers to the rivers that penetrate the city center. This type of ledge is characterized by various human events, an intense distribution of complex buildings and transportation, easy pollution of river water and ,difficulty in achieving optimum environmental function. The ideal way to approach this style is to enrich the edge with green vegetation, enlarge the public parks, strengthen the connection with the city, and provide environmentally friendly cultural events opportunities. Linear style: This style is characterized by the passage of the river through the city without dividing it in half. The edge of the city river in Vienna is an example of a circular pattern. The river's relationship is that the river surrounds the city in a complete circle or semicircle, as is the case at the edge of the River Traf in Germany and the edge of the Hudson River in New York City. It can be concluded that the penetrating pattern is the essential pattern in which the spaces are activated along the river, and with multiple uses, depending on the type of area it passes through.

From Table 1, it is possible to identify the most important vocabularies that all or most studies emphasized in their role for activating the urban spaces surrounding the rivers. These vocabularies can be determined as follows:

- The use of spaces in the area: This term refers to determining the type of usages, which are classified into two types, single uses. This did not appear in any range of the three areas. As for previous studies, it indicated the importance of mixed uses for making these spaces more active.
- Accessibility: This is essential in the communication of society and organisms with the river edge, so providing access at multiple levels, providing visual permeability and enhancing the possibility of a security pedestrian road achieves a rich diversity of aesthetic experiences. Accessibility is linked to local social activities, where their achievement depends on the services provided in the development of the river edge, as well as the provision of various uses. The offshore projects of the river edge should provide all public access to the edge [11]. The degree of accessibility to spaces is an important aspect for activating

them at the level of access to all residents near them. This confirms the importance of the humanitarian side in assessing the state of the spaces.

Table 1. The most essential vocabulary confirmed by some studies.

	accessibility	Mixed land use	The role of neighboring uses	Activating the economic aspect	The role of green spaces	Connectivity	Aspects of sustainability	Cultural aspects	Activating the humanitarian	the penetration pattern
Timur [10]	●	●		●	●		●			
Al-Ani [5]	●				●			●		
Andini [3]	●	●	●				●	●	●	●
Khalaf [2]	●	●				●				
Hradilová [6].	●	●				●		●		
Abidin et al. [8]	●	●	●	●		●				
Lange, et al. [7]	●	●		●		●				
ARUSCAPE [4]									●	●
Chen [12] Rahman [11]										●

- The ratio of separate and connected spaces: This characteristic is represented by the presence of a high percentage of open spaces that can be designed compared to buildings. As the presence of buildings can cause blocking of vision or reduce the possibility of activating open spaces that make spaces capable of achieving human existence.
- Visibility: visibility is a measure of the distance at which an object or light can be clearly discerned. it is a useful tool for diagnosing and evaluating inclusive public spaces, which are understood as open spaces accessible to all people, regardless of social, cultural, and economic differences. The concept of visibility refers to the visual perception of the observed features of distinct urban groups in public spaces, which provide evidence of how these groups interact with, shape, and construct public space.
- Organizing spaces: This feature means the importance of street furniture, through the presence of spaces designed according to the type of usage overlooking them with the presence of movement corridors and axes between the two banks of the river for pedestrians and vehicle movement. This feature also emphasizes the existence of a contract as movement points and is preferred to be designed by having green spaces and fountains.
- Cultural heritage characteristics: This characteristic is the evaluation of the river according to the heritage buildings that are located on the banks of Heritage Rivers. The existence of these buildings gives the sensation of belongingness to the place, as there might be spaces for exhibitions and carnivals that reinforce the availability of these buildings.

3. Importance of Rivers and Public Spaces Surrounding them in Cities

Urban spaces are seen as a part of the city that must be characterized by visual continuity, openness and integration between urban parts and rural areas. They are significant because they provide the first visual impression of the metropolis with high possibilities to achieve attraction. Moreover, they work to achieve a distinct recreational atmosphere through recreational events, and the presence of designed spaces that improve the environmental quality and interspersed with public hubs to link the movement paths [13]. They are dynamic, which changing biologically, distinct areas of production, ecological diversity and natural areas of defences that protect vegetation [10].

In addition, the spaces surrounding the river and beaches of wetlands and water bodies open to the sky and have the opportunity to maintain biodiversity, entertainment and enjoyment. Besides, the yards of the ports, the slopes of the beaches, banks of the rivers act as open spaces along the waterways and their development encourages people to visit [14].

The spaces surrounding the river are points of contact between the river and the city, and accordingly, they are subject to the rules of spatial planning, as they can be activated as environmentally friendly environments. In addition to their role in activating river activities as sport, and the creation of elements that enhance the process of preserving the urban heritage of the city, such as monuments and landmarks [15].

Urban projects on how to activate urban spaces are considered an important goal, which is how to make them as a communication system between urban elements, as they work as an environmental path for pedestrians and bicycles [16].

Nowadays, people themselves were looking for a way back to the river and its banks. They themselves yearn to fill bridge spaces with a host of activities related not only to the presence of water but also to human existence in general. Thus, public spaces on riverbanks would serve several functions such as the social, recreational, residential, industrial, and especially transportation means (walking, cycling, road and rail). The river has always acted as a communication element and has always been representing a crossroad between different cultures [6].

4. Type of Spaces Surrounding the Rivers

Spaces surrounding the rivers are divided into three types [17] as follows:

- The space of the water surface: determined through the rows of buildings or land on the two banks, penetrated by either a marina or badges. This is the basic visual sight of the other elements located on land. It is likewise employed as a means of water transport through docks, ships, or boats. It dramatically affects the visual and mental image of those areas.
- Land spaces extending within the water are the parts of the spaces that extend vertically in the water and are sometimes called headlands, or capes, depending on the size, shape, and nature of use. They are either natural or man-made. These spaces are used for recreational and entertainment purposes.
- Water-enclosed spaces are one of the most complex and varied parts of the water mass. They are based on a set of design criteria or principles that guarantee the best possible use of their sites and the best visual reflections of their water. These spaces are located between the water surface and the buildings, Fig. 3.

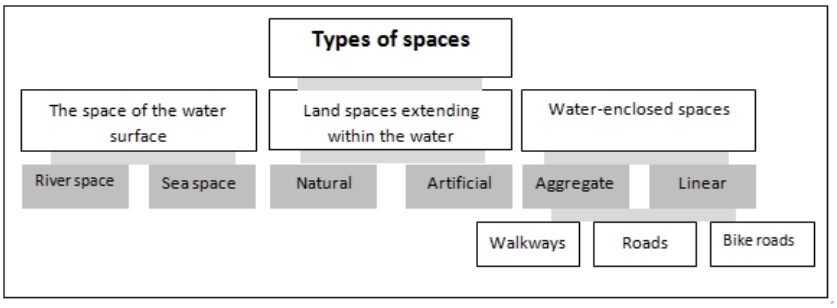

Fig. 3. Types of spaces.

5. Values of Heritage Rivers:

Rivers are chosen as Heritage Rivers according to the following criteria [18]:

- Economic, natural, agricultural, and tourism characteristics, historical, cultural, and recreational resources, along the banks of the river, all make it unique or exceptional.

- The effectiveness of the community to determine its plan of action and the degree of addressing this plan, either through established procedures, past achievements or through the strength and diversity of community support for the nomination (nominating any rivers to be a heritage river or not).
- The desire and ability of society to build partnerships and arrangements to implement their plan to achieve the goals and targets [19].

6. Research Methodology

The research relied on a qualitative, descriptive analysis method for the vocabularies that were identified in the theoretical framework. These vocabularies are (uses of area spaces, presence of general and connected spaces, possibilities of access to the river, and clarity of visual vision). In addition, the identification of indicators and possible values for each item of these indicators is provided. They were applied to the reality of the river's condition to assess the efficiency of the spaces surrounding Al-Ashar River on the reality of the situation in order to diagnose the weaknesses and then provide recommendations for activating them.

The aim of this research is to conduct this diagnosis. The areas surrounding the river were divided into three zones along the river and according to the zones where the river passes, as each zone was determined according to the uses surrounding the river. The researchers used a questionnaire that represents the vocabularies that will be evaluated on reality. This can be done by determining a relative standard according to the importance of each vocabulary and assessing the extent of its achievement. The extent to which each item was achieved was evaluated in the three zone, according to Fig. 4 that represented by a digraph from (4-0). The (0) represents the weakest evaluation while (4) represents the very high evaluation.

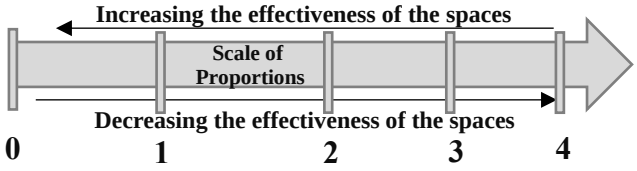

Fig.4. How spaces are evaluated according to the indicators specified in Table 1.

6.1. Items of the theoretical framework

The items of the research that will be applied to the sample study (Ashar River in Basra City as one of the city's heritage rivers), Table 2.

6.2. The location of the practical study

The study is considered the role of the spaces surrounding Heritage Rivers. Thus, the Al Ashar River was chosen as a case study for its significant purpose as a heritage river in Basra City. Al Ashar River is classified as one of the Heritage Rivers, hence using it as a model for the penetrating river pattern that passes through multiple areas in the city (Al- Ashar, Al- Jazaer, and Old Basra).

6.3. Al Ashar River description

Al Ashar River is considered one of the four main rivers in Basra City. The river divides the Ashar sector into two halves. In former times the river was known for its pure beauty water, trees, houses, and workshops on both its banks and the many loaded boats sailing in it, in addition to the large fish wealth that it held [19]. The river suffered from neglect after the occupation of Iraq, as did most of the rivers in Basra City that made the city lose much of its beauty because of contamination of the rivers by sewage water. On both sides, there are commercial, service, and residential activities [20]. Figure 5 shows the Al-Ashar River throughout history, as it is related to Basra's heritage through its role in navigation and fishing.

Table 2. Theoretical framework items.

Design indicators	Possible values			
Uses of water spaces	Mono use	Not use		0
		residential		1
		educational		2
		commercial		3
		Entertaining		4
	Mixed use	Overlapping uses	Only two uses	2
			Several uses	4
Percentage of connected public spaces	The lack of open spaces compared to buildings			1
	Balance between open and built spaces			2
	A high percentage of open spaces compared to the building			3
Accessibility to the river	There is no connection between the two sides of the river			1
	There is an indirect link between the two parties			2
	The presence of pedestrian traffic lights			3
	The presence of direct axes of the river from all parts of the city, signs and guide signs			4
Organizing spaces	No design spaces (neglected spaces)			1
	Open areas designed in terms of furniture and organization	Partially designed		2, 3
		Totally designed		4
Visibility	Very high buildings surrounding the river			1
	Medium rise buildings close to the river			2
	The presence of very tall trees obscures the view			3
	The presence of a low level of trees that gentle the atmosphere and do not block the view			4
Characteristics are cultural-heritage	There are no heritage buildings			1
	The presence of heritage elements at the level of the façades			2
	The presence of individual heritage buildings			3
	The presence of heritage landmarks at the scale level as a whole			4

Fig. 5. explains the stages of the Al Ashar River over the years [19].

The river from beginning to end was divided into three parts [19], Fig. 6. Al Ashar Area: This part represents commercial areas, which exist on both sides of the river. Al Jazaer Area: This part includes commercial, educational, and administrative areas. Old Basra Area: This part consists of heritage and residential areas. This part is characterized by the following: The ethical (intangible) heritage: The site is distinguished by its cultural and intellectual heritage. This is reflected by its many heritage buildings, which are living pieces of evidence linking the past to the present. Cultural heritage: heritage buildings, many of which are still in good physical shape, characterize this area. Environmental heritage: What distinguishes this area is the presence of the Al Ashar River, which penetrates the region from east to west, giving it tourist possibilities that must be developed [1].

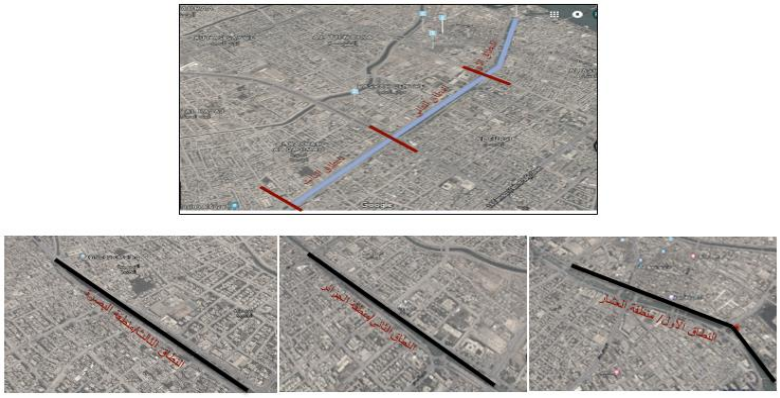

Fig. 6. Limits of domain.

6.4. The reasons of choose a sample

After reviewing the studies, the criteria were defined that are the basis for measuring the effectiveness of the urban spaces surrounding the Heritage Rivers Figures 7 and 8 as follows:

The picture shows a group of historical buildings represented by Basra [1]Shanashel that reflect the local heritage of Basra in general and Iraq in particular. Basra Shanashel was represented by the use of wood in the design of the facades of the dwellings, and this dates back to the sixties of the last century [21]. As for the old court, building that reflects the idea of the heritage arches, the old Basra school, the Great Mosque of Basra, and the al-Ashar is considered one of the markets that know the history of Basra, which dates back to the Ottoman period [22].

Fig. 7. A picture showing some of the important services overlooking the river in the specified area of the study [22].

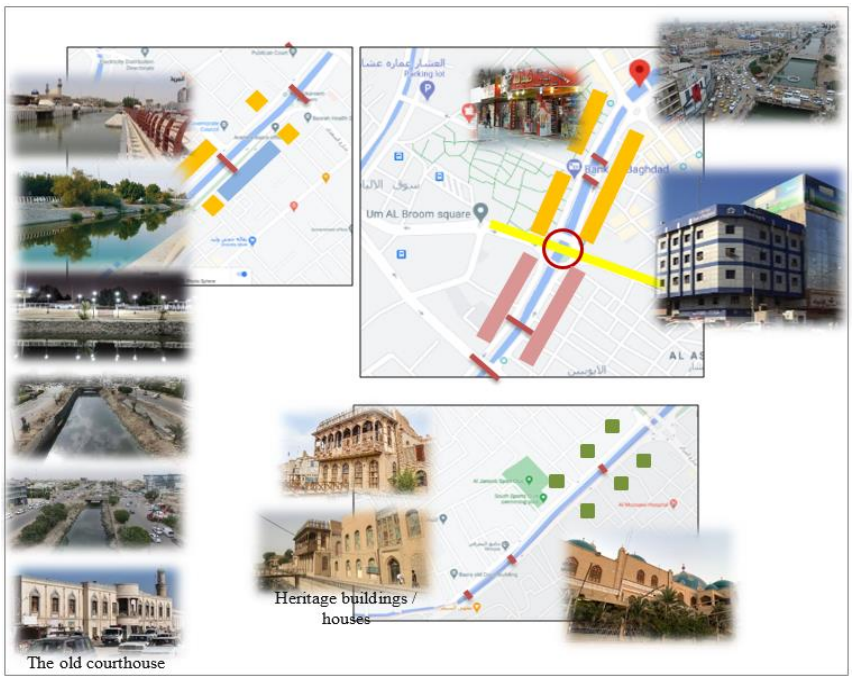

Fig. 8. The reality of the three zone [22].

[1] The Shanashel are wooden balconies, geometrically decorated with drawings on the glass, that highlight the facade of the entire second floor or a room in the form of a suspended balcony protruding to the front. The shanashel or the so-called Mashrabiya are built from carved wood, decorated and lined with coloured glass. The Mashrabiya is one of the elements of traditional desert architecture in hot Arab countries. https://www.aljazeera.net/news/lifestyle/2020/11/28

7. Results and Discussion

According to the vocabularies identified from previous studies, which highlight its importance as the most important point that must be provided for evaluating the efficiency and effectiveness of the urban spaces surrounding the Al-Ashar River in the city of Basra. Each term can be interpreted as follows:

- The first zone: The first zone appears with the presence of multiple mixed usages, Fig. 9. However, the commercial use dominates the rest of the uses, as the area is occupied by the Al Ashar market, which is distributed on both sides of the river. However, the space efficiency in terms of green spaces and their design methods is lacking in this area Fig. 10. In addition to activating open spaces such as garages for cars. In fact, this removes the spirit of the spaces as effective places that increase the value of the riverfront Fig. 11. On the other hand, this zone is characterized by the presence of multiple crossroads, which are linked between the two sides for both pedestrian and vehicle traffic, Fig. 12. The area lacks a space organization represented by street furniture, and the Al-Ashar market has the advantage of being a heritage market dating back to the establishment of the city of Basra, Fig. 13, Which act as elements that affect vision in relation to the river more than the presence of trees that may hinder vision Fig. 14.
- The second zone: shows the multiplicity of separate and independent uses, but this is based on the existence of regulation in terms of street furniture and green areas Fig. 9. In addition, there is a lack of pedestrian traffic roads compared to the bridges used for the movement of vehicles Fig. 10. This zone is also characterized by a high capacity between the two banks of the river, which gives accessibility and visibility Fig. 12. It is characterized by the presence of heritage buildings such as the old court building, Fig.13. A zone it is contains a low level of trees that gentle the atmosphere and do not block the view, Fig. 14.
- The third zone: is represented by the presence of residential usage that reduces the efficiency and activation of open spaces, as it is related to the privacy of the inhabitants Fig. 9. This zone is the most important part in the river that reflects the heritage aspect, as it is an area related to the heritage of Basra in general and the Al-Ashar River in particular Fig. 10. This area lacks the existence of wide spaces between the residence and the river, and this reduces the possibility of activating these spaces Fig. 12. The domain also achieved greater value in terms of containing heritage points represented by the Shanashel buildings, Fig. 13. This area is characterized by the presence of green areas on both sides of the river, with medium-sized trees that help in mitigating weather, but the percentage of tree coverage is low Fig. 14.

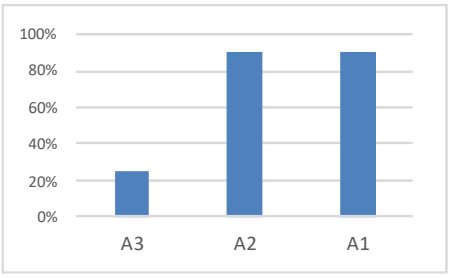

Fig. 9. Uses of water spaces.

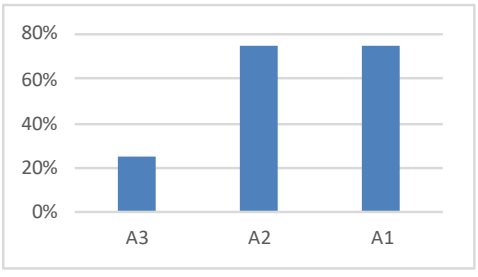

Fig. 10. percentage of connected public spaces.

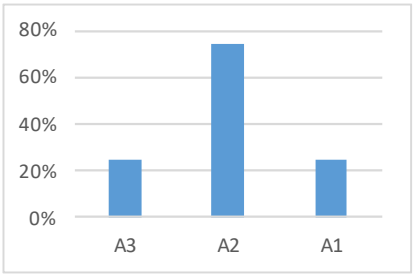

Fig. 11. Organizing spaces.

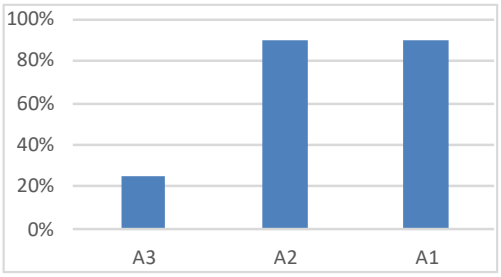

Fig. 12. Accessibility to the river.

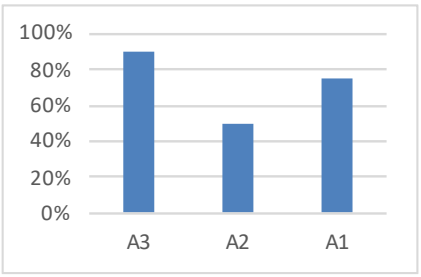

Fig. 13. Characteristics are cultural-heritage.

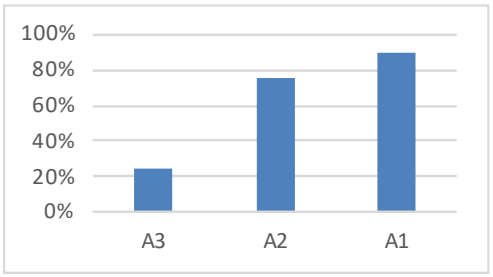

Fig. 14. showing the effect of the elements on visibility.

8. Conclusions

Some concluding observations from the investigation are given below.

- Indicators of the efficiency of the spaces surrounding the Al-Ashar River are fluctuating. The second zone is considered effective in providing mixed usages and methods designed for the spaces surrounding the river corresponding to the type of use. However, the first zone is considered effective in terms of the multi-usability and the existence of people due to the availability of the attracting points that relate to the daily life needs of people. This is positive in terms of the fact that commercial use is more effective in attracting people.
- Ease of access: The presence of mixed usage in the first zone made the users activate several pedestrian and vehicle roads while the vehicle roads are more active in the second zone, and it is scarce in the third zone. This makes the benefit of the spaces in terms of the transportation between the two banks rare in the third zone.
- As for the space organization, the second zone is considered more related with providing street space and furniture. This makes the riverfronts of this zone more aesthetically pleasing, compared to the other two domains. The third zone, despite the existence of transportation roads, it lacks designed areas, street furniture, and a study of the type of green cover. Indeed, there is no presence of those green appearing on that zone. This increases the percentage of environmental pollution in the first zone.
- The presence of the heritage buildings on the Al-Ashar River is a strong and basic attraction that increases the effectiveness of the spaces. Al-Ashar market

is linked to Basra's heritage, dating back 100 hundred in the first zone, the court as the oldest administrative building in the second zone, and the Shanashel in the third zone gives the river and its spaces strong power, dominance, and presence.

- The second zone is considered more active in providing open public spaces because the relative distance between buildings and spaces is large. Besides, the river's edge is wide and gradient, giving a wide area in how to activate the spaces in order to achieve a riverfront façade with an aesthetic and heritage dimension to the city. Whereas the first and third areas approach the taller buildings on the riverbank, and this creates a bottleneck. In turn, that reduces the area of open spaces on one side and blocks the riverfront on the other.
- The lack of nodes that cross the river, providing intermediate areas that the Ashar River lacks between the third and second zone. There is only a single node between the first and second zone. This makes the river need to have several designed roads linking the two sides of the river.

9. Recommendations

A set of recommendations can be reached according to the conclusion of the research

- The research recommends the importance of the presence of pedestrian roads in the three zones. These roads activate the human presence and give high accessibility. Moreover, the presence of pedestrian roads in the first and third zones is more important than the second is, because the first facilitates the movement of people and their movement and ease of access between the two river's banks. When it comes to the third range, it is considered important because it facilitates movement and access for residents and their transportation.
- The research recommends the necessity of expanding and providing more open spaces around the river. These spaces would give an opportunity to provide green spaces, and this supports the ecological and environmental aspects of Basra.
- The research recommends the necessity of focusing on the spaces surrounding the river close to the heritage buildings because it gives strength and reinforcement to the buildings. In addition, these spaces have characteristics related to the feeling and belongingness to the place.
- The research recommends the necessity of activating the spaces surrounding the river in the near side for commercial facilities and open buildings towards the river.
- The most important requirements that must be provided and which need to be developed are control over the nature of river interfaces in a manner befitting their specificity and distinction. These requirements include various characteristics that affect the efficiency of the facades.
- The research recommends the importance of surrounding the river with low fences, in a way that does not block the riverfront, and in a way, that provides safety for the inhabitants.
- The importance of having roads in areas that show a continuous extension of the river without interruption, to give a beautiful river interface, as well as attractions for pedestrians. Thus, that would increase the activation of the spaces surrounding the river

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