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REVIVING CULTURAL HERITAGE IDENTITY IN HISTORICAL AREAS THROUGH LEFTOVER SPACES – APPLICATION OF A CULTURAL PARK IN ABU ALI RIVER REGION, TRIPOLI, LEBANON

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REVIVING CULTURAL HERITAGE IDENTITY IN HISTORICAL AREAS THROUGH LEFTOVER SPACES – APPLICATION OF A CULTURAL PARK IN ABU ALI RIVER REGION, TRIPOLI, LEBANON

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Abstract
Heritage being an inheritance from the past that is transmitted successively from one generation to the other plays a significant role in molding the memory of a country and forging its identity. As an element of heritage, architectural products are an expression of the cultural identity of communities. However, modern developments in historical regions ignore the presence of heritage buildings. Furthermore, the unorganized expansion of those areas led to the formation of leftover spaces. Abu Ali river is a historical region located in the city of Tripoli in Lebanon. Not long ago, this zone was considered the beating heart of the city before becoming a neglected area suffering from different social, economic, and environmental issues. One of the major problems the zone is currently facing is the loss of its cultural identity. In addition, the lack of green public spaces is noted. This paper attempts to revive the cultural heritage identity of Abu-Ali River area through the application of a cultural park using leftover spaces generated in the region as a site. The paper starts with presenting the theoretical background related to the topic; Then related cases are compared to reach the optimum project elements; Next the selected area is analyzed through macro-analysis, community analysis, and micro-analysis to reach initial design decisions; Finally, the application is designed based on specific social and environmental simulation tools. The application is expected to breathe new life into the neglected historical area and revive its heritage.

Keywords
Cultural heritage revival, Historical areas, Leftover spaces, Cultural Park, Tripoli’s Historical Core
1. INTRODUCTION

Heritage being an inheritance from the past that is transmitted successively from one generation to the other plays a significant role in molding the memory of a country and forging its identity. Its significance has been embodied by various modelers, material evidence that should be respected and acknowledged as it forms a valid record reflecting the culture of local regions through time. In this way, architectural products are an expression of the cultural identity of communities (UNESCO, 2014).

Recently, modern developments in historical regions ignore the presence of heritage buildings. Additionally, new architectural implementations are largely based on imported trends generating products that do not reflect the values of their communities and lead to the identity loss of local urban spaces. This phenomenon is the key issue of identity crisis in contemporary Arab cities, especially historical cities in expansion. However, evolution and identity should move in parallel, in other terms, architectural techniques and styles should be developed respecting the region roots (Zavodni, S., 2020).

Abu Ali river is a historical region located in the city of Tripoli in Lebanon. Not long ago, this zone was considered the beating heart of the city until the river was blocked by the execution of a highway along its sides in 1958 to control the town. This step added to the city history a new chapter full of problems and challenges. Indeed, the implemented highway separated the region and turned it into a neglected, polluted, and unsafe center. Beside all economic and environmental issues, one of the major problems the zone is facing is the loss of its identity (Frakes, N., 2021).

The paper will address the problem of the fading cultural identity in historical regions caused by two main factors. The first factor lies in the modern expansion of historical cities without taking into consideration the presence of historical cultural features. The second being the lack of cultural influence on contemporary architectural urban development.

The focus will be on cultural revival in Abu Ali River region through dealing with the two major problems stated previously: the neglected historical milestones in the city through the modern expansion and the absence of cultural mirroring on architectural additions. For that purpose, the paper will propose a studied application (cultural park) influenced by the heritage of the region.

2. REVIVING CULTURAL HERITAGE IDENTITY IN HISTORICAL AREAS THROUGH LEFTOVER SPACES

This paper will focus on cultural heritage as a principal factor of cultural identity that should be revived by architectural contemporary implementations, especially in historical areas where leftover spaces could be exploited.

2.1. Revival of Cultural Heritage Identity

2.1.1 Cultural Heritage:

Heritage is the sum of landscapes and natural sites, cultural and historical sites, cultural property, and intangible heritage. The term heritage was not given a standard definition at the country level; indeed, each country has its own way to interpret the word. Cultural heritage refers to three main components (UNESCO, 2014):

- a) Monuments: valuable works of architecture, painting, and sculpture.
- b) Groups of buildings: groups of connected or separated buildings, which are valuable because of their architecture, homogeneity, or place in the landscape.
- c) Sites: works of man or the merged works of nature and man, and zones counting archaeological sites that are valuable.
2.1.2 Cultural Identity:

Culture refers to the identity of a city or its people and to their lifestyle. Cultural spaces, however, refers to the physical framework of the urban environments. The architecture related to cultural talk is considered to be social, by that, cultural spaces are a pattern where people belong. “Cultural spaces” as an expression, refers to individuals and their surroundings as they both relate to a variety of cultural and environmental identity. The term “cultural space” relates to a unique type of place where cultural activities are held out, as it refers to the spatial design, cultural variables, and, primarily, the people living in it (Al-Zein, R., 2022).

Architecture forms a vision of cultural values through its formal sensations. Then, it is important to understand architecture as a tool of power in determining the cultural identity of a community. The development of cultural identity can be seen through place and time. Recently, it is clear that this identity is highly affected by globalization leading to a cultural fragmentation. In such case, critical redefinition of architectural processes should be led in order to redefine cultural identity (Ugljen-Ademovic, N., Turkusic, E., and Ibrisimbegovic, S.).

2.2. Dealing with Historical Areas

2.2.1 Historical Sites:

Historical sites accommodate a cultural heritage. They are the work of man alone, or its common work with nature (UNESCO, 2014).

Historical sites can be divided into three categories (Faracik, R., 2014):

a) Towns that are not inhabited anymore but hold archaeological attestation of the past.

b) Historical towns that are inhabited and have developed under the impact of sociocultural changes.

c) New towns (20th century) that may be associated with the two previous categories.

2.2.2 Modern Implementations:

There are different opinions on what concerns appropriate new implementation in a historical context. Recently, in modern developments, some architects chose to stick to the historical style. Others see that each generation should speak of her own time. Actually, both traditional and contemporary responses are valid. However, the critical is the quality of the relation between the old and the new, not the architectural way. Parameters such as detailing, color, materials, siting, form, and scale are important to take into consideration when studying the impact of new developments in a historical context. To conclude, conservation consists of balancing between the preservation of the significance, quality, and special character of the historic place and the facilitation of change in a way that sustains the future. Indeed, contemporary buildings play a role in forming the future heritage by adding a new layer to the present one (Macdonald, S., 2021).

Any design ideas should be developed on the basis that urban design and traditional architecture are the main references for new projects. The modern reflection of cultural identity can be done through two approaches. The first is the “visual abstraction” process where traditional architecture are decomposed into elements (plans, facades…) and then transferred into the projects with modification. At the end, the outcome may be different in the composition and simpler than the original, but visually it will recall the history of its place. The other approach is called “conceptual abstraction” where past architecture is analyzed in a way to form formulas and rules for new implementations. This approach is conceptual since it does not lead to a direct visual similarity with old architecture (Shafik, S. and Aly, A., 2011).
2.3. Use of Leftover Spaces

2.3.1 Definition, Forms, and Negative Use

Commonly known as negative spaces, urban voids, or lost spaces, leftover spaces are spaces that are empty and unoccupied but accessible to the public. They include spaces behind, in-between, or on top of buildings, free parking lots, playgrounds, vacant lots, and informal green spaces (Maatouk, H., Halabi, M., Mohsen, H. and Youssef, M., 2021).

Fig.1: Leftover forms and their negative use (Society, Culture and Human Behavior, 2021)

2.3.2 Factors and Potential

Leftover spaces are the consequences of natural, functional, cultural, economic, political factors and/or planning and design (Erkilic, N. and Ciravogle, A., 2018).

As stated previously, leftover spaces come in several types and forms which generate a variety of potential usage. Indeed, a neglected space used negatively or kept unused form an opportunity for the community by reusing it in useful facilities in order to get benefit. The potential of leftover spaces can be resumed in reaching self-sufficiency, creating sufficient equipment and facilities, furnishing social facilities, vitalizing neighborhoods, upgrading visual qualities, personalizing spaces, accentuating the need for belonging to a group, providing comfort, security, and privacy, amplifying diversity, and delivering permeability (Maatouk, H., Halabi, M., Mohsen, H. and Youssef, M., 2021).

3. CULTURAL PARK

A cultural park possesses purposes different from most existing parks, it is a model of landscape management and active participation. It forms a mechanism of management by giving attention to the hierarchy of heritage values (manufactured and natural), dealing with elements associated with the natural and social factor of a place, and insisting on enhancing the pedagogic relevance related with schools. The main goal of a cultural park is the conservation and promotion of the heritage values in an architectural form and in a cultural landscape shape including pedagogic activities in order to enhance the population education (Mascarenhas, J. and Barata, F., 2002).

4. METHODOLOGY

The paper starts with presenting the theoretical background related to the revival of cultural heritage identity in historical areas through leftover spaces. This collection of data begins by defining cultural heritage identity and how to revive it, explaining how to deal with historical areas, and finally clarifying leftover spaces and how to use them. Then, the concept of a cultural park is defined and the varied factors and elements forming it are presented. After that, cases related to the proposed project (cultural park) will be compared following specific criteria till reaching the optimum program to be implemented in the project. In the next step, a specific area of study will be selected and analyzed through macro-analysis, community analysis, and micro-
analysis till reaching the decisions leading to the proposed application. Finally, a contemporary architectural application consisting of a cultural park mirroring the cultural heritage of Abu Ali River historical region will be implemented based on specific simulation tools (social and environmental analysis).

5. COMPARISON OF RELATED CASES

To determine the components to be implemented in the application and to understand how to translate the culture of a region on an architectural addition: Three existing cultural park cases were selected based on specific criteria and analyzed following determined factors (table 1). The first case, Tian Han cultural park, was chosen for its small area which is the state of most leftover spaces in historical regions. Furthermore, this case and the second one, ShaZhou YouHuang cultural park, were adopted for the different components employed in the projects. The third and last case, China Meishan cultural park, helped understanding the different approaches used for cultural reflection on masses (preservation and renovation). The analysis of those cases highlighted exhibitions and educational components as common functions between similar type of projects, what led to determine the following elements as part of the application: heritage exhibition (1), library, exhibition of students work (2), and workshops.

Table 1: Comparison between the selected cases (author)

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>1. Tian Han Cultural Park</th>
<th>2. ShaZhou YouHuang Cultural Park (newly built part)</th>
<th>3. China Meishan Cultural Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection:</td>
<td>• Small scale case (area)</td>
<td>Components</td>
<td>Cultural reflection</td>
</tr>
<tr>
<td>Site:</td>
<td>Changsha, China</td>
<td>Zhangjiagang, China</td>
<td>Hunan, China</td>
</tr>
<tr>
<td>Year:</td>
<td>2018</td>
<td>2021</td>
<td>2007</td>
</tr>
<tr>
<td>Components:</td>
<td>• Tian Han's Former Residence</td>
<td>• Museum</td>
<td>Cultural Museum</td>
</tr>
<tr>
<td></td>
<td>• Art Gallery</td>
<td>• Wine Aging Warehouse</td>
<td>Traditional Buildings</td>
</tr>
<tr>
<td></td>
<td>• Square of National Anthem</td>
<td>• Traditional Wine Village Exhibition</td>
<td>Stilt- Styles House</td>
</tr>
<tr>
<td></td>
<td>• College of Art</td>
<td>• Restaurants</td>
<td>Stone Beacon</td>
</tr>
<tr>
<td></td>
<td>• Square of Sculpture</td>
<td>• Shopping</td>
<td>Stone Stage</td>
</tr>
<tr>
<td></td>
<td>• Open Street (Educational Units)</td>
<td>• Exhibition Display</td>
<td>Watermill</td>
</tr>
<tr>
<td></td>
<td>• Ancient Open Stage</td>
<td>• Library</td>
<td>Farmhouse Courtyard</td>
</tr>
<tr>
<td></td>
<td>• Visitor Service Center and Hotel</td>
<td>• Tourism Functions</td>
<td>Traditional Covered Bridge</td>
</tr>
<tr>
<td></td>
<td>• Parking Lot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Translation:</td>
<td>• Ritualistic space (light)</td>
<td>Abstraction of traditional features:</td>
<td>Two approaches:</td>
</tr>
<tr>
<td></td>
<td>• Spatial features of horizontal and grasping</td>
<td>• Historic lmu style houses</td>
<td>1. Preservation</td>
</tr>
<tr>
<td></td>
<td>• Traditional building materials (black bricks, concrete, cement tiles and timber)</td>
<td>• Roofing details</td>
<td>• Architectural symbols (traditional features, local materials, building methods)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rhythm</td>
<td>• Spatial orders continuity (connectivity between people and environment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Landscape elements (water features)</td>
<td>2. Renovation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Functional spaces renovation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Sustainable development (local plants)</td>
</tr>
<tr>
<td>Total Area:</td>
<td>12432 m²</td>
<td>23500 m²</td>
<td></td>
</tr>
</tbody>
</table>

6. STUDY AREA SELECTION

The paper focus on reviving cultural heritage identity in the historical region of Abu Ali River (1) located in the city of Tripoli (2), Lebanon (3) (fig.2). Abu Ali River zone was considered to be the beating heart of Tripoli and a crucial contributor to the social and economic life in Lebanon. However, this fact changed in 1958 when the river was blocked, and the city separated by the implemented highway in order to redesign and modernize Tripoli as well as controlling the city in terms of security. Nowadays, the region is considered one of the most neglected areas.
in the Lebanese city, including its historical core dating from the Mameluke period. In addition, the modern expansion of the city without taking into consideration the presence of historical cultural features made the region lose its cultural identity (Frakes N, 2021). The choice of that specific region forms a trial to breathe a new life in the neglected historical area and revive its heritage.

6.1. Urban Analysis of Abu-Ali River Region

The urban analysis of the region (fig.3) reveals that the zone is rich in historical features. However, the historical area is compacted and lacks public and green spaces. From here was taken the decision to implement a public open green space in the compacted historical region. This implementation will be influenced by the cultural architectural features dominant in the area, including pointed arches and arcades.

Fig.3: Urban analysis of Abu-Ali River region (Trad, A., Hassan, R., Mesto, G., and Lazkani, R., 2022)
6.2. Community Analysis in Abu-Ali River Region

The next analysis (fig.4) was based on field observation and direct questionnaire using google forms within the inhabitants of the area as well as the typical users that visit the region quite often. The questionnaire was answered by 50 people and the sampling method was a random simple determined by using a sampling calculation with a confidence level (90%) and standard error (5%) in relation to Tripoli population size. According to the answers, the majority have a negative feeling toward the region; They notice that the area needs more public open green spaces and specific walking zones. In addition, more than 90% of them remark that the region is losing its cultural identity.

Fig.4: Survey taken in Abu-Ali River region (Trad, A., Hassan, R., Mesto, G., and Lazkani, R., 2022)

The previous social analysis confirms the results of the urban analysis of the area. Indeed, the region suffers mainly from its imbalanced urban composition that can be treated through reviving the cultural identity of the region and creating green public spaces. This will be achieved by the proposed application (cultural park).

6.3. Site Selection and Analysis

The selected site (fig.5) consists of two leftover spaces separated by a minor street and formed because of the unorganized urban development in the region. This site is at the end of the historical core and forms a node between it and the modern expansion of the city. The two lands connected reach an area of 8565 m2.

Fig.5: Selected site (author)

The analysis of the selected site led to initial design decisions forming the base of the upcoming proposal. The following table (table 2) presents the site, land use, topography (manufactured and natural), sensory, accessibility, visual, and environmental analysis related to the selected spot. The analysis is demonstrated using diagrams and followed by appropriate design decisions.
7. APPLICATION OF A CULTURAL PARK IN ABU ALI RIVER REGION, TRIPOLI - LEBANON

7.1. Concept Generation

7.1.1 Application Story: Mameluke’s Heritage

A story must be told by every successful cultural park. Also, heritage features must be organized in a hierarchical order to fit the story to be narrated (Gonzalez, P., 2011). In 1289 AD the Mamelukes conquered the Crusader city, razed it to the ground, and built a new city at the foot of the citadel, straddling the Abu Ali River (this city is currently known as the historical core of Tripoli in Lebanon). Tripoli experienced a notable growth in its political power and economy during this period (LAU, Tripoli, The Phoenician's Route). The park will highlight the heritage of Tripoli’s historical core ancestors: the Mamelukes.
7.1.2 Application Concept: A Promenade through Layers of Time

Space can make us more conscious of a valuable resource it is designed and the way we experience it by moving through it: Time. In this means, Architecture can magnify the perception and experience of time, most effectively by considering movement. Architectural promenade is an architectural device that can be employed to intensify a person’s experience of time and space (Louw, M., 2020).

7.2. Design Decisions and Design Approach

7.2.1 The Application as an Extension from the Historical Core

The chosen site consists of a node linking the Tripolitan historical core (past) with the extended city (present future). The previously stated project components (exhibition 1, library, exhibition 2, and workshop) will be distributed according to the chronological relationship between them and the context. The journey will start with the past as a continuity of the historical core forming the main vehicle leading pedestrians toward the project. The analysis of figure 7 shows that the historical core consists of several nodes (monuments) linked by a main path. From here was taken the decision to extend the path into the site where the masses will act as linked nodes.

Fig.6: Relation between functions (author)  
Fig.7: Periphery and classified monuments and sites of the historical core (Ginzarly, M., Teller, J., 2016)

7.2.2 Design Approach

As a cultural park, the project can be divided into two main elements: built masses and landscape. Regarding built masses, the functions were previously determined through related cases analysis and the relation between the different functions built on the basis of the philosophical concept. In what follows, the location of each masse will be determined through visual graph analysis using depthmapx0.50. Concerning landscape, the main landscape element in the project is the path deriving from the historical core and linking the different functions. Since the previous site analysis notes that the land is highly subjected to direct sunlight, the pedestrian comfort along this path will be tested by solar radiation analysis using Rhino-Ladybug plug in.
7.2.3 Visual Graph Analysis

One of the main challenges faced in the project is to achieve a good visual connectivity between the historical core, playing the role of the main gate of the project, and the different masses in the site. To achieve this goal, a visual graph analysis (VGA) using depthmapX0.50 was run on a 2D map of the site.

The study of the visual graph analysis (fig. 8) shows a high visual flow from outside to inside the site at two of its sides. On this basis two entrances will be assigned to the project, a major one facing the historical core and a second entrance at the western side of the site. Furthermore, points with high visual connectivity (attraction points) will be exploited as primary location of functions with point 1, having the highest connectivity, as location for the main project function (exhibition 1). In addition, the intersection of the multiple highly visually connected flows indicates the position of a main public space (plaza). The main path will link the distinct functions following the visual flow with high connectivity inside the site till reaching its end.

Those studies will constitute the base of the following design phases.

7.3. Design Process

7.3.1 Phase 1

To create a site composition with the optimum visual connectivity between the masses and the context, a visual graph analysis using the simulation tool of depthmapX0.50 was run on proposals with different masses organization.

The main functions were located according to the chronological order between them (philosophical concept) and previously selected attractions points (previous visual graph analysis on site). The masses consist of simple geometrical forms in harmony with the context and in agreement with needed areas and heights of the different functions.

The study of the visual graph analysis (fig. 9) shows that the main street represents the major visual flow in urban composition. Also, a single high visual flow starting from the main street and penetrating the site till reaching the western minor street bordering it is noted. The visual relationship between the masses and the context variates between moderate and low, as well as the relation between the different project’s functions.
7.3.2 Phase 2

To achieve a better-connected composition visually, the library masse was rotated to face exhibition 1, assuming it will allow a higher visual connectivity from the main street to the site.

The study of the visual graph analysis (fig.10) confirms the built assumption; Indeed, the visual connectivity between the masses and the context is higher than the first proposal, as well as the visual connection between the functions themselves. However, the higher part of the project including the exhibition 2 and workshop masses register a lower visual connection. In addition, the workshop masse blocks the connection with the upper city extension.

7.3.3 Phase 3

To create a higher visual integration in the upper part of the site and to link the historical core with the modern extension through a continuous visual path, the exhibition 2 masse was rotated, and the workshop masse moved to the west.

The study of the visual graph analysis (fig.11) shows the achievement of the intended objectives; Indeed, the visual connectivity between the upper part of the site (exhibition 2 and workshops masses) and the context is higher than the first and second proposal, as well as the visual connection between the different site functions. In addition, the main visual flow between the historical core and the modern city is no longer interrupted. However, the visual integration with the western side of the site bordered by a minor street is now lower than in previous proposals.

7.3.4 Phase 4 - Optimum Visual Connectivity

In order to enhance the visual connectivity between the project and its western context, exhibition 1 and library masses were rotated.

The study of the visual graph analysis (fig.12) confirms the accomplishment of the optimum visually connected masses composition in site. Indeed, this organization assures the greatest visual connectivity between the project components and the context, as well as between the project functions. In addition, the composition creates a strong visual path deriving from the historical core till reaching the modern expansion of the city.
After locating the different masses on site and determining the main path linking them to each other and to the context, the application was designed based on previous decisions. The main entrance (south) forms the starting point of the path derived from the historical spine. The journey starts with vertical circulation leading the users down to the roots (-3.50m) where lies the past represented by exhibition 1 and library masses. This cultural experience continues by entering the souk zone imitating the vibes of khans; Then, ascend (-3.00m) to reach the present embodied by the exhibition 2 masse where works of workshops students will be displayed. Finally, users rise (0.00m) to the future presented by the workshop where future outcomes are being prepared; Afterwards pedestrians can continue their promenade in the extended city (minor entrance).

Exhibition 1, exhibition 2, and workshops consist of three floors, and the library has two floors. The exhibition 2 and workshop masses were linked by a bridge to ease the transportation of items.

7.3.5 Phase 5 - Optimum Design

In the previous environmental analysis, the solar radiation analysis registered that the site is highly subjected to direct sunlight. Since the pedestrian path forms the main element of the application it is necessary to test the user’s comfort along it. From here, this simulation (solar radiation analysis) will be reapplied on the designed project to evaluate if the implemented masses are enough to shade the outdoor spine.

After running the simulation on the designed project, the study of the solar radiation analysis (fig. 13) shows that indeed the project masses provide shading to parts of the outdoor spaces; However, the main spine remains unshaded. From here it was taken the decision to shade the path during the direct sun hours through the use of retractable shading units.

When analyzing historical paths in Tripoli, the first thing to notice is the sense of enclosure provided (fig. 14): Since the project’s path form an extension of the historical Tripolitan spine, a grid of shades was set along of it to vibrate the sense of enclosure among the users during various times (fig. 15).
The designed application was modified based on the latest decision. A grid constituted of a repetitive unit (4*4.20m with a 3m high) was set along the pedestrian path. To enhance the connectivity with nature, it was decided to adopt a wooden lightweight structure where a retractable shade mechanism (motor operated) is implemented at the top of each unit. Fabric is opted for the shade material to increase the association with the historical path where textile shadings are employed. Furthermore, the wooden structure will be elevated at the main gate, linking the exhibition 1 and library masses to accentuate the entrance.

To test the effectiveness of the implemented shadings along the path a solar radiation analysis was applied on the project after the addition of the shading units (fig.16). The simulation confirms the efficacy of the employed shadings.

### 7.4. Designed Application

The application was designed according to the optimum proposal reached in phase 5 and on the basis of the previous design decisions.
7.4.1 Landscape Detailing

In addition to the retractable shading units set on grid to shade the outdoor path, native vegetation was opted to shade the outdoor functions and to act as buffer elements decreasing the amount of noise and pollution in the region. Furthermore, the historical path was extended along the project using permeable pavement to reduce water runoff on surface.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Local Name</th>
<th>Color</th>
<th>Evergreen</th>
<th>Fruitful</th>
<th>Length</th>
<th>Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phoenix Dactylifera</td>
<td>Date Palm</td>
<td>Green</td>
<td>Yes</td>
<td>Yes (white flower)</td>
<td>15-25m</td>
<td>6-10m</td>
</tr>
<tr>
<td>2 Citrus Reticula</td>
<td>Orange Tree</td>
<td>Green</td>
<td>Yes</td>
<td>Yes (white flower)</td>
<td>1-3m</td>
<td>6m</td>
</tr>
<tr>
<td>3 Callistemon Citrinus</td>
<td>Crimson Bottlebrush</td>
<td>Green</td>
<td>Yes</td>
<td>Yes (red/pink flower)</td>
<td>1-5m</td>
<td>2.5m</td>
</tr>
<tr>
<td>4 Ceratonia Siliqua</td>
<td>Cacd Tree</td>
<td>Green</td>
<td>Yes</td>
<td>Yes (red flower)</td>
<td>8-10m</td>
<td>8m</td>
</tr>
<tr>
<td>5 Cupressus Sempervirens</td>
<td>Italian Cypress</td>
<td>Green</td>
<td>Yes</td>
<td>Yes (green flower)</td>
<td>25-35m</td>
<td>3-6m</td>
</tr>
<tr>
<td>6 Bermuda</td>
<td>Grass</td>
<td>Green</td>
<td>Yes</td>
<td>-</td>
<td>2-5cm</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 3: Characteristics of selected native vegetation (author)

Fig.21: Selected native vegetation (author)

8. CONCLUSION

Architecture is a device used to mirror the cultural identity of communities. However, modern architectural implementations in historical regions do not reflect their cultural heritage. In addition, the unplanned expansion of historical areas resulted in negative spaces. Abu Ali River historical region located in the city of Tripoli in Lebanon is not an exception to the case.

The paper demonstrates that leftovers spaces could be employed as a tool to revive cultural heritage in historical regions. It presented a studied application consisting of a cultural park in a leftover space located in the historical area of Abu Ali River as an attempt to revive the cultural heritage identity of the region. At start the presented theoretical background allowed a deeper understanding of the topic; Then optimum project elements were selected based on related cases comparison; Next initial design decisions were reached by analyzing the selected area through macro-analysis, community analysis, and micro-analysis; Finally, the application was designed based on specific social and environmental simulation tools (visual graph analysis and solar radiation analysis).

The application is an extension of the historical core, it consists of masses acting as nodes linked by a main path extended from the historical spine. The designed proposal breathes a new life in the neglected crowded historical area and revives its heritage. It is recommended in advanced research to continue the historical path extension and end it with a main node or landmark.
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