

Post-war Planning for Urban Cultural Heritage Recovery

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Abstract. The purpose of the research is to present guidelines and recommendations that can contribute to the post-war recovery of urban cultural heritage by a proposed methodology, based on other experiences in the reconstruction and preservation field of historical areas after wars, with the possibility of applying them, as an attempt to regain the features of the old part of the city. We also suggest those suggestions and guidance on three different levels. These guidelines are applicable at three levels: the historic core of the city, neighbourhood level, and individual quarters level. Each level had a specific theme for reconstruction planning that can maintain the city's particular character during the current circumstances. Many cities have been heavily damaged as a result of the armed conflict in Syria, destroying most of the city's neighbourhoods, including the historic district. Hence, we present a study of the consequences of this destruction on the historic fabric of the city, and search for the best solutions to give it the needed protection. Finally, the results and recommendations of this research will lead to developing answers to deal with historic centres and historic buildings that have been damaged by the armed conflict and were neglected before the war. The goal of this research is to identify fundamental principles that can lead to a successful reconstruction process while also preserving the city's cultural identity.

1 Introduction

Regarding the value of cultural heritage in representing the identity of any place and its inhabitants, its protection is an obligation inextricably linked with the respect for the integrity of our past. The growing number of armed conflicts around the world is one of the most serious threats that negatively affect the cultural heritage. Since 2004, there have been thirty active armed conflicts in the middle east [1,2]. Syria's armed conflict has impacted every part of the Syrian people's lives. Many Syrian cities were severely damaged as a result of this military action. Particularly the demolition of the historic city centre, where historic buildings and their urban environment were targeted equally. [3,4]. Preservation of urban and architectural heritage in cities is one of the most difficult issues to tackle because of differing viewpoints as well as the need to consider political, social, and economic factors. Many seminars, international conferences, and workshops were organized by

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international organisations, governmental and non-governmental agencies to attract attention to the threat that historic cities and buildings face. [5]. Preserving historic areas entails preserving their values, which include such as architectural, historical, archaeological, social, spiritual, economic, and political values [6]. The preservation of a country's urban historical heritage has become increasingly important around the world. Each country aims to preserve its historical and cultural landmarks, as well as individual properties. [7].

1.1 The concept of reconstruction in Historic centers

Initially, the emphasis was on reconstructing and rebuilding individual structures, rather than paying enough attention to the surrounding territories and their need for preservation. However, the growing interest in the historic areas or historic centres in cities has turned into increased attention to buildings and their surroundings, increasing the consciousness toward maintaining the historic environment of the area and the urban fabric of the historic district or historic centre [8,9].

The restoration process in cities has become more complex as it has become more extensive. It extends to include all the city aspects like history, archaeology, art, economy, sociology, population, as well as, the infrastructure such as roads, water, sewerage system etc. The primary goal of the reconstruction of the historical centres or old towns is to preserve the city's identity, as well as its residents, houses, historical monuments, to re-establish a sense of safety in the aftermath of a crisis. Regardless of these challenges, any restoration and reconstruction program must have the goal of preserving the city by taking into account all of its components and integrating the city's historical and modern sections in a harmonious manner [10].

1.2 Post-war reconstruction in historic areas

Unfortunately, modern conflicts pose a significant threat to cultural heritage around the world due to the widespread use of long-range missiles and aerial bombardment. Post war reconstruction is an effective tool for preserving historical areas and structures or restoring their original appearance after the military conflict. However, post war reconstruction in the historical part of the city that was affected by wars, has always been a contentious topic for those who are interested in the physical ruins of the past. Syria is an example of this. In several towns, historic neighbourhoods have been completely destroyed as a result of the conflict. Therefore, huge efforts have to be considered to safeguard our heritage. As a result, massive efforts must be considered in order to safeguard the country's cultural heritage and historical sites. To be successful, post-war recovery must be driven by an integrated strategy that integrates developmentalism with social change and reconciliation. This concentration is a result of my comprehensive and deliberate approach to post-war reconstruction as a concept through strategy and experience [2,11,12].

2 Methods

The current situation generally refers to the challenge of recovering destroyed heritage in historic city centres in the Middle East, especially in Syria after almost ten years of war.

Since there is almost no practical experience of post-conflict urban heritage recovery in the Middle East, it is important to identify a special approach to recovery of such important sites. One of the important steps towards the preservation of cultural heritage in the post war period, recovering the historical centres of Syria, is the implementation of four main themes: – Documentation - Damage assessment - Planning - Legal framework and

regulations. The goal of this research is to determine approaches and tools to identify the required planning elements for the recovery of historical and cultural sites on three different levels.

2.1 Urban Post-war Planning approaches for Cultural Heritage recovery and its instruments.

One of the most important ways of promoting the recovery and preservation of urban cultural heritage is by accurate and prompt documentation of cultural and historical sites. After analyzing the level of destruction caused by wars in historic cities, a number of important planning tasks must be addressed because it will take a long time to recover them. First, we need to identify ways of how to rebuild the cultural heritage in our study (Intervention's algorithm). Using different forms of reconstruction, from conservation and repair to restoration, must therefore go hand in hand with urban redevelopment. Second, we must identify performance objectives and phases on three separate levels in our situation: for the entire historic part of the city Centre, neighborhood level, individual quarters level. One of the tools which can include an improved approach of staggered emergency initiatives to re-establish the essential viability of a destroyed historic city is the restoration directory. In a way that would not jeopardize the continuity of future recovery attempts. It would then gradually create a practical framework of prototypical reconstruction methods that are tailored to particular architectural/historical principles, geographical environments, contextual factors, and functional requirements. A restoration directory will typically contain the following tools and activities, although its evolution will need to be adjusted to match the current local conditions:

- List of surviving key monuments and of urgent stabilization measures that will not compromise future conservation.
- Definition of surviving homogeneous zones of the former historic fabric, with emphasis on coherent residential areas, market complexes and public open-space structures.
- Identification of reconstruction potential in previously transformed sections of the historic city.
- Different forms of intervention's algorithm.
- Guidelines and manuals responding to different types of conservation, repair, infill and area redevelopment needs.

2.2 Case study: The historical centre of Homs city (Old town)



Fig. 1. The territory of the historical center of Homs city (Old town)

Homs city is considered the third largest city in Syria. Homs Situated in the central-western part of Syria, it is not only the administrative and industrial central-western part of Syria, but also one of the historical centres on the road between two historical cities, Damascus, the capital and Aleppo, with important historical and cultural significance that was first mentioned in the history of mankind back to 2300 BC. The old Homs is the core of the city; it was built inside its ancient walls, which have always been used to protect the city. In 1870, during the Ottoman era, the city expanded beyond its ancient walls, leaving an urban impact that still reflects the heritage of the past on our present [13].

The buildings in the old city are famous for their courtyards. The main material of buildings is basalt stones. Each building is close to the other one along a narrow alleyway. As a result of Homs' high level of coexistence, ancient mosques and churches were built next to each other, using the same methods of construction and materials. Moreover, the old city includes nine neighbourhoods in addition to the other three adjacent neighbourhoods, which used to have highly dense residential and commercial buildings before the war. Important historic buildings have been destroyed due to the armed conflict; the UN-Habitat estimated that 37,700 units have been heavily damaged and 66,500 have been partially damaged in the old city [14].

Building Typologies in the old city: The traditional buildings in the old city have a unique presence where most of them were Arabic traditional buildings and were built with black basalt stones. However, in 1985, modern projects in the city centre were initiated, which hence made the urban fabric dominated by multi-story buildings and commercial shops on the ground floor. The Urban fabric of the old city of Homs: In 1940, the city began to expand beyond its demolished walls and vast construction actions had started back then, and it started with extending the city centre northwards from the end of the souk and its square, forming a new square representing the new downtown of the city. For instance, in the old part we can see features of colonial architecture, such as the narrow-arched windows and tiled pitched roofs. On the other hand, in the new section, which is really connected to the old city, we see concrete buildings and random additions reflect disharmonious reality, with lack of identity and architectural sense [15].

Furthermore, no proposals to develop the area in the old city were made during the previous century. On the other hand, the lack of interest in urban heritage, as well as the growing use of reinforced concrete and building modern facilities, all led to the destruction of the urban fabric.

3 Results

Damage assessment of cultural and historical sites in Homs city shows that significant damage was caused by military actions in the historical centre (Old Town). The destruction in the historical district was extensive, and the damage is estimated to cover the majority of the city. Documentation shows that 66 historical and traditional sites in Homs centre have been affected due to the conflict, according to the Ministry of culture of Syria [3,16]. Based on these facts, we suggest an intervention algorithm to identify ways of how to recover and rebuild the cultural heritage in our study depending on four factors:

- Degree of historic and architectural significance"; extremely high (e.g., major monuments), high (e.g., minor monuments, important houses), medium (e.g., ordinary historic houses), contextual (e.g., transformed historic houses, those of no specific interest), not historic (e.g., recent buildings of moderate height).
- Degree of damage/Physical condition; No relevant damage, Minor damage, Moderate damage, Severe damage, Irreversible damage.
- Functional use; before the war period, new functional use after the war period.
- Property rights and regulations.

The types of proposed interventions vary depending on where the conditions match in the algorithm, as seen in the following examples:


	<p>Abdullah Farkuh' house;</p> <ul style="list-style-type: none"> - Degree of historic and architectural significance: ordinary historic houses. - Degree of damage/Physical condition: Irreversible damage. - Functional use: Arabic traditional house. - Property rights and regulations: Individual Property - Recommendation: Full reconstruction is possible if documentation is available
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Fig. 2. Abdullah Farkuh' house, Homs, Syria. Photo available at: www.dgam.gov.sy

Analysing the pre-war situation, we found that there were no guidelines or plans to provide the protection of historical buildings and archaeological areas in such situations as wars. In

2001, the Old Homs Committee for Protection was formed by the City Council, Directorate of Antiquities and Tourism, the University of Al-Baath in Homs, the local community and some researchers. The committee had agreed on a few suggestions:

- Accelerate the process of archaeological and heritage property conservation and reconstruction by connecting them to a main axis.
- Divide the old town into segments to improve utilities and services.
- Modifying the local legislation regarding the old city.
- The transformed use of historic buildings must be monitored in order to protect their identity.
- Working on new strategies to revive and improve the economic situation.
- Enhance the city's architectural quality and general appearance.

Unfortunately, neither of these suggestions nor better plans can be implemented in the old city of Homs at this time for a variety of reasons. As a result, it is important to propose new approaches to protect these areas for their historical and cultural value, especially in the post-war period.

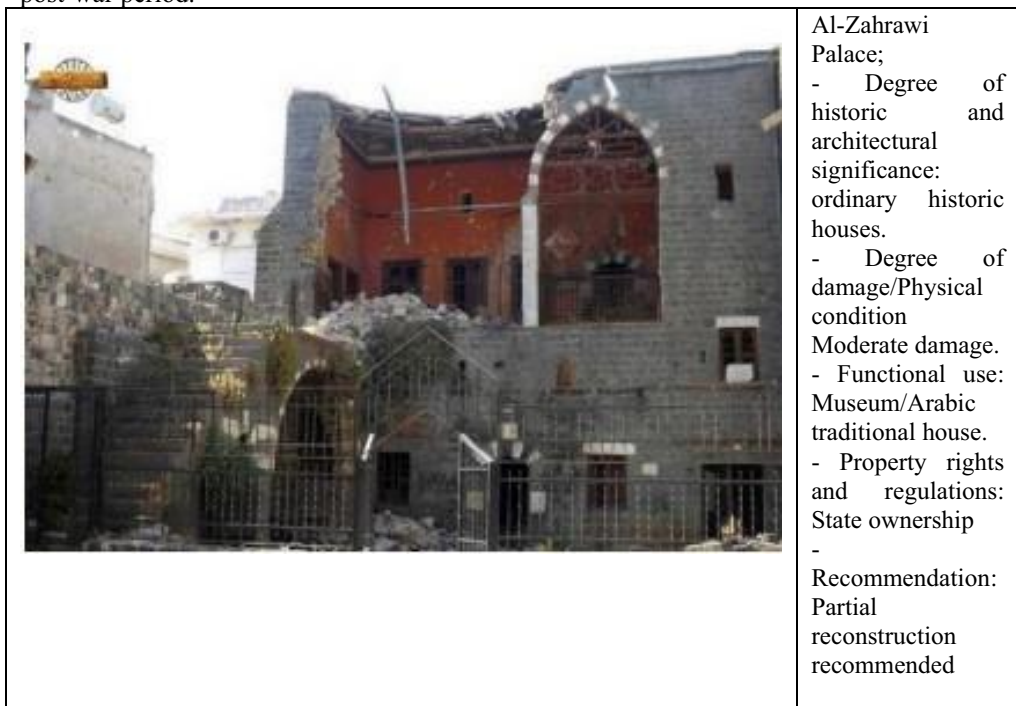


Fig. 3. Al-Zahrawi Palace, Homs, Syria. Photo available at: www.dgam.gov.sy

4 Discussion

The city today is experiencing the consequences of the plans which were implemented in 1997, which have turned the city into segments covered with black and white stones without any legal legislation. On the other hand, the city council, which is represented by DGAM, has done limited actions like marking the archaeological and cultural properties without any serious interventions in terms of the preservation, restoration, or rehabilitation of historic buildings. The loss of the historic urban fabric of the old city of Homs is obvious to any observer. Currently, only some buildings, which are distributed among the city and not linked together thoroughly, represent the old city and hence this has contributed through

the years to the absence of the context of (old town) in Homs, unlike in Damascus or Aleppo, where the old city still occupies strongly a part of the city.

4.1 Guidelines recommendation for the entire historic city centre

Guidelines for the whole old city should be established in order to restore the urban cultural heritage: The historic old city is the most important cultural, commercial and tourist asset. It gives all the city's residents a sense of ownership, belonging and cultural identity. - The pre-conflict cadastral records can be used as a reference point for restoration of the urban layout and land arrangement. - Both residents' accommodation, land, and property rights must be protected. - To prevent any damage or overhauling of the historical framework, urban planning guidelines must be formulated. – In some exceptional circumstances, only special building projects are allowed to stray from the guidelines.

4.2 Guidelines recommendation for intervention at neighbourhood level

Neighbourhoods' guidelines must take into account the unique characteristics of the traditional urban fabric while also attempting to promote unity. The aim of development regulations should be to preserve not just the unique identity of the neighbourhoods, but also the environment and its building typologies and functions: - Reconstructed buildings and new buildings on vacated plots must fit into the structural context defined by the type and size of adjacent buildings. - Building heights must embody typical Islamic architectural styles while still respecting the privacy of neighbouring structures. - Buildings that have been reconstructed must follow the original existing construction lines (red line). - The adopted guidelines could also apply to structures which, before they were destroyed, did not comply with their provisions. - Special monuments should be exempted from the adopted directives. Their reconstruction is to be based on reliable documentary evidence. Areas and ensembles of special archaeological or historical value should be designated as archaeological protection zones and safeguarded by fencing in order to allow a thorough survey of the existing structures to be performed in due course.

4.3 Guidelines recommendation for individual quarters level

Further guidelines complying with the overall objectives of protecting and recovering the sensitive urban fabric are needed for individual projects. These typically include the following provisions: - Emphasis is given to the preservation of structures that have been demolished or partly destroyed. - Renovation and repair take precedence over demolition and new construction. - Historic structures that have been damaged or partly demolished must be restored or reconstructed using materials that are acceptable for the form of building. - New construction must match the scale, form, and style of neighbouring buildings or other buildings that are typical of the quarter. - The colours and textures used in modern new buildings must harmonize with those of adjacent buildings or other buildings typical of the quarter.

5 Conclusion

Wars have destructive impacts on cities; war is the devastation of the built environment, and particularly the loss of cultural properties. Additionally, armed conflict is one of the most serious threats that can cause great damage to the cultural heritage. However, understanding its impact on the urban environment, such as cultural, political, economic, and social impacts, as well as having adequate knowledge about the amount of damage can be a great motivation toward urban historical recovery. Therefore, focusing on

reconstruction as an essential treatment after the war in Syria, because reconstruction can contribute to urban conservation through dealing with the city as a unit. While preserving historic property can contribute to increasing the value of any place.

Post-war reconstruction plans should include not only historic buildings but also extend to include the urban environment. Historic centers can improve the urban environment through creating more public and green spaces, which can contribute to reducing environmental pollution. Intervention methods in historic areas should assure the preservation of the cultural identity of cities with the possibility of applying contemporary architectural plans without harming the historic fabric. Moreover, any new structures and contemporary architecture must be in harmony with the old centers. In addition, the intervention methods in the old centers should include all historic elements.

References

1. A. Belal, E. Shcherbina Smart-technology in city planning of post-war cities *IOP Conf. Ser. Mater. Sci. Eng.* **365** (2018)
2. S. Barakat. Necessary conditions for integrated approaches to the post-conflict recovery of cultural heritage in the Arab World *Int. J. Herit. Stud.* 1–16 (2020)
3. A. Belal, E. Shcherbina. Heritage in post-war period challenges and solutions *IFAC-PapersOnLine* vol 52 (Elsevier B.V.) pp 252–7 (2019)
4. E. Gorbenkova, E Shcherbina, A Belal. Rural Areas: Critical Drivers for Sustainable Development *IFAC-PapersOnLine* **51** (2018)
5. R. W. Khalaf. A Proposal to Apply the Historic Urban Landscape Approach to Reconstruction in the World Heritage Context *Hist. Environ. Policy Pract.* **9** .39–52 (2018)
6. B. Feilden 2007 *Conservation of historic buildings* (2007)
7. E. Shevchenko, N. Danilina. Historical settlement systems as strategic vector of Russian Federation development *IOP Conf. Ser. Mater. Sci. Eng.* **451** 012152 (2018)
8. B. Dalar. The problems of peculiarity regeneration of architectural-spatial environment of demolished cities *MATEC Web Conf.* **106** 01019 (2017)
9. N. Levin, S. Ali, D. Crandall, S. Kark. World Heritage in danger: Big data and remote sensing can help protect sites in conflict zones *Glob. Environ. Chang.* **55** 97–104 (2019)
10. R.W Khalaf. Cultural Heritage Reconstruction after Armed Conflict: Continuity, Change, and Sustainability *Hist. Environ. Policy Pract.* **11** 4–20 (2020)
11. A. Puskas. INTERNATIONAL ENGAGEMENT FOR THE PROTECTION OF CULTURAL HERITAGE IN THE SYRIAN CONFLICT *J. Chem. Inf. Model.* **53** 11–24 (2019)
12. E. Cunliffe, N. Muhesen, M. Lostal. The Destruction of Cultural Property in the Syrian Conflict: Legal Implications and Obligations *Int. J. Cult. Prop.* **23** 1–31 (2016)
13. Mohamed A-D. *Homs et Hama en Syrie centrale* (1995)
14. UN-Habitat Syria. Old City of Homs (2014)
15. E.V. Shcherbina, A. Belal. The value of historical and cultural heritage in the reconstruction and restoration of cities *Vestn. MGSU* **4**. 417–426 (2019)
16. E.V. Shcherbina, A. Belal, A. Salmo. Historic centres of Syrian towns ruined by the war: restoration through urban planning *Vestn. MGSU* **4**. 632–640 (2020)