

# Post-War Reconstruction of Cities (Reconstruction of Baba Amr Neighbourhood in the City of Homs, Syria)



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Wars are one of the most important human dangers and disasters that threaten social, economic and cultural structures, including the architecture and urban planning of the countries affected by them. Despite the devastation caused by wars and turning back the years of development, these wars offer opportunities for the development and treatment of previous problems through reconstruction programs designed to be integrated into long-term reconstruction strategies in the post-war areas and directed towards urban sustainability. A war is defined as a catastrophic, man-made event that leads to destruction and impacts the course of daily life, the natural environment, infrastructure, and the human-built environment [1].

## The impact of wars on the urban environment [2]:

1. Physical impact: The physical impact of a war on the urban environment is one

of the clearest and the most costly, as buildings, public utilities, infrastructure, and urban structures are damaged and they need to be reconstructed urgently.

2. Economic impact: The economic fabric is severely affected in the aftermath of disasters and wars, and sometimes the damage brings about the total destruction of the economy. Thus, private projects and industries are affected, and commercial movement is damaged and disrupted. What is more, at a time when the need for financing increases, especially for reconstruction, financing at the individual and public levels decreases.
3. Social impact: In times of war, the lack of basic needs and the deterioration of living conditions lead to the emergence of deep social problems. These problems must be resolved and dealt with very quickly and given the attention they deserve, as it is possible that these effects are not visible in a material way.
4. Cultural impact: In times of war, cultural and historical evidence is destroyed. It pertains both to the cultural evidence built physically, such as cultural centres, historical cities, religious monuments and symbols, as well as to the moral culture in customs and traditions.

5. Political impact: Wars accompany the shaking of the political situation, which is characterized by confusion, dispersion and instability. This leads to severe weakness or collapse of governments at various levels: local, regional, or national. One of the most important factors for the success of reconstruction operations is the restoration of political stability.

## Post-war reconstruction

Reconstruction operations after wars are defined as the process of building what is destroyed from the urban structure (buildings) as a result of war. This definition is considered incomplete because it only takes into account the reconstruction of what is destroyed in the physical structure and neglects the rest of the components of the urban fabric. The physical structure is just a part of this fabric; in fact, it reflects people's cultural, social, and economic life, history, technology and climate [3].

## Principles of Reconstruction Strategies

Reconstruction strategies refer to the methods and approaches used to rebuild or restore something, often after a period of destruction or damage. While the specific principles may vary depending on the



context, here are some general principles that are commonly applied in reconstruction strategies:

1. Assessment and planning: Conducting a thorough assessment of the extent of damage and the resources available and elaborating a comprehensive plan that outlines the goals, priorities, and timeline for reconstruction [4].
2. Community Involvement: Involvement of the affected community in the decision-making process and considering the needs and preferences of the community to ensure the reconstruction efforts align with their values [5].
3. Sustainability: Prioritize sustainable practices in design and construction to ensure long-term resilience and consider environmental, economic, and social sustainability in decision-making [6].
4. Multi-Sectoral Approach: Collaborate with various sectors, including government, non-governmental organisations, private sector, and community organisations. Integration of efforts across multiple sectors can lead to more comprehensive and more effective reconstruction [7].
5. Risk Reduction and Preparedness: Implement measures to reduce future risks, taking into account lessons learned from the war. Develop and enforce building codes and land-use planning to enhance resilience [8].
6. Infrastructure Development: Rebuild and upgrade essential infrastructure, such as roads, bridges, utilities, and communication systems. Use resilient materials and design standards to minimise vulnerability [9].
7. Capacity Building: Invest in training and capacity-building programs for local communities and institutions [10].
8. Cultural Sensitivity: Respect and incorporate cultural considerations into the reconstruction process. Preserve and restore cultural heritage and landmarks.
9. Flexibility and Adaptability: Remain flexible in adapting the reconstruction plan based on changing circumstances and evolving needs. Learn from ongoing feedback and make adjustments as necessary [11].

These principles provide a framework for designing and implementing effective reconstruction strategies that address the unique needs and challenges of a given context.

### **Architecture trends after the war [12], [13]**

There are several directions for dealing with post-war architecture in reconstruction projects after a war. Some of these

techniques focus on the practical and functional aspects, and some are more symbolic and concerned with collective memory and national identity. In general, each reconstruction case has its own strategy for application, especially in the details.

Here are some general trends that have been observed after wars:

1. Reconstruction and rebuilding: After a war, one of the most immediate trends in architecture is reconstruction. Cities and infrastructure that have been damaged or destroyed are often rebuilt, and this process can influence architectural styles and urban planning.
2. Modernization and innovation: Wars can spur technological advancements and innovations in construction and design. The need for rapid reconstruction and the introduction of new materials or construction methods can lead to more modern and efficient architectural solutions.
3. Functionalism and utilitarian design: In the aftermath of a war, functionality and utilitarian design are often emphasized. Practical considerations, such as cost-effectiveness, efficiency, and adaptability, may take precedence over elaborate ornamentation.
4. Affordable housing and mass production: The demand for affordable housing after a war can lead to the adoption of mass production techniques. Prefabricated housing and standardised designs may become prevalent as a means of providing quick and cost-effective solutions for housing shortages.
5. Urban planning and infrastructure: Wars can necessitate re-evaluation of urban planning and infrastructure. Cities may be redesigned to improve their resilience against future conflicts or better accommodate evolving societal needs.
6. Memorials and Symbolism: War often leaves a lasting impact on communities, and putting up architectural memorials becomes a common trend. These structures may serve as symbols of remembrance, paying tribute to the sacrifices made during the conflict.
7. International influence: In some cases, the aftermath of war may lead to increased international collaboration, which, in turn, exerts influence on architectural styles. Reconstruction efforts may involve architects and designers from various countries, resulting in a blend of different influences.
8. Environmental considerations: More recently, there has been an increasing awareness of environmental sustainability in architecture. After a war, there may be a focus on rebuilding in an environmentally conscious manner,

incorporating green technologies and sustainable design principles.

9. Cultural preservation: It becomes important to preserve and rebuild cultural heritage sites that may have been damaged or destroyed during the conflict. This can involve a blend of traditional and modern architectural approaches.

It's vital to note that these trends are generalisations, and the specific impact of war on architecture can vary widely depending on each conflict's unique circumstances and the cultural, social, and economic context of the affected region.

### **Urban sustainability in post-war reconstruction processes**

Urban sustainability in post-war reconstruction processes is a critical aspect of rebuilding societies and cities that have been affected by armed conflicts. The challenges in post-war reconstruction are multifaceted and require a comprehensive approach to address sustainability's social, economic, and environmental dimensions.

Achieving urban sustainability in post-war reconstruction processes requires a holistic and collaborative approach that addresses the unique challenges of each affected community. It involves integrating social, economic, and environmental considerations to build resilient and inclusive cities for the future.

### **The most important actors in the reconstruction process [14], [15]:**

The post-war reconstruction process involves a complex interplay of various actors, each playing a crucial role in rebuilding societies and economies affected by conflicts. The importance of these actors can vary depending on the specific context, but generally, the following are considered key players in post-war reconstruction:

1. National governments: The affected country's government is often the central player in the reconstruction process. It is responsible for policy formulation, resource allocation, and overall coordination of reconstruction efforts.
2. International organizations: Entities like the United Nations (UN), World Bank, and International Monetary Fund (IMF) play a significant role in providing financial assistance, technical expertise, and coordination support to post-conflict countries.
3. Donor countries: Other nations that were not directly involved in the conflict may contribute financial aid, resources, and expertise to support the reconstruction efforts. These contributions are often coordinated through bilateral or multilateral agreements.

4. Non-governmental organizations: NGOs, both local and international, often play crucial roles in providing humanitarian assistance, development programs, and expertise in areas such as healthcare, education, and infrastructure.

5. Civil society: The involvement and participation of the local population and civil society groups are vital for the success of reconstruction. These groups can advocate for their communities, contribute local knowledge, and hold both national and international actors accountable.

6. Private sector: Businesses and corporations can contribute to reconstruction by investing in the local economy, creating jobs, and supporting infrastructure development. Their involvement is crucial for sustainable economic recovery.

The private sector's engagement in post-war reconstruction programs is multifaceted, encompassing financial contributions, job creation, innovation, and sustainable economic activities essential for rebuilding societies and promoting long-term stability [16].

7. United Nations agencies: Various specialised agencies within the UN system, such as UNDP (United Nations Development Programme), UNICEF (United Nations International Children's Emergency Fund), and others, provide targeted support in areas like health, education, and governance.

8. Academic and research institutions: Researchers and academics contribute by providing expertise, analysis, and evaluation of reconstruction efforts. They can offer insights into best practices and lessons learned from other post-war situations.

9. Media: The media plays a crucial role in shaping public opinion, influencing policy decisions, and holding stakeholders accountable. Transparent and accountable communication is essential for the success of reconstruction efforts.

Successful post-war reconstruction requires the collaboration and coordination of these various actors to address the multifaceted challenges that arise in the conflict's aftermath.

### Theoretical concepts related to reconstruction after wars:

In the context of the post-war reconstruction of cities, several theoretical concepts and frameworks have been developed to guide the process of rebuilding and revitalising urban areas that have been affected by a conflict. These concepts often address not only the physical reconstruction of infrastructure but also the social, economic, and cultural dimensions of a city. Here are some

key theoretical concepts relevant to post-war reconstruction:

1. "Build Back Better": This concept originated in the context of disaster recovery and post-war reconstruction. It has been applied to various situations, including the rebuilding of cities after wars or natural disasters. The idea is to not simply replicate the pre-existing conditions but to take advantage of the reconstruction process to enhance resilience, sustainability, and overall well-being.

In essence, the "Build Back Better" concept emphasises creating cities that are more resilient, sustainable, and inclusive, taking advantage of the opportunity to address pre-existing issues and build a stronger foundation for the future.

2. Resilience: In the context of post-war reconstruction, it is a theoretical concept that refers to the city's capacity to absorb shocks, recover quickly from disruptions, and adapt to new challenges while maintaining essential functions and structures. This concept is particularly relevant in the aftermath of armed conflicts or wars, where cities may have suffered extensive damage to infrastructure, social systems, and the overall urban fabric.

Resilience in the post-war reconstruction is a multidimensional concept encompassing physical, social, economic, institutional, and environmental aspects. It involves not only rebuilding what was lost but also creating a foundation that can withstand future challenges and uncertainties.

3. Sustainable development: Sustainable development is a theoretical concept that emphasises the integration of economic, social, and environmental considerations to meet the needs of the present without compromising the ability of future generations to meet their own needs. In the context of post-war reconstruction, sustainable development becomes particularly relevant and crucial.

Applying the theoretical concept of sustainable development in the post-war reconstruction of cities involves a holistic approach that considers economic, social, environmental, cultural, and governance dimensions. It aims to create resilient, inclusive, and environmentally conscious urban spaces that can withstand future challenges while promoting the well-being of current and future generations.

4. Participatory approaches: In the context of post-war reconstruction, participatory approaches refer to a theoretical concept that emphasises involving local communities, stakeholders, and residents in decision-making processes related to rebuilding and revitalising

urban areas affected by war. This approach recognises the importance of engaging the people who live in these cities as active participants in shaping the reconstruction efforts.

Implementing participatory approaches in post-war reconstruction requires a commitment to inclusivity, transparency, and active collaboration among various stakeholders. While it may be challenging, the benefits often include more sustainable, contextually relevant, and socially equitable reconstruction outcomes.

### Reconstruction experiences of other countries after wars:

The reconstruction experiences of countries after wars vary widely depending on the nature of the conflict, the level of destruction, and the available resources.

Under this section, I would like to only make reference to the financing methods used in the reconstruction of the following countries, given the specificity of the Syrian situation, and the importance of benefiting from them in my experience of reconstruction in Syria.

Here are a few examples of countries that underwent significant post-war reconstruction efforts with a focus on financing:

1. Germany and Japan after World War II: Both Germany and Japan were extensively damaged during World War II. The United States played a key role in their reconstruction through the Marshall Plan, a massive financial aid program aimed at rebuilding war-torn European countries.

The plan provided substantial financial assistance to European nations, including Germany, to help them recover economically. Japan received assistance through similar mechanisms.

Multilateral organisations, such as the World Bank, also contributed to the reconstruction efforts.

• Marshall Plan (1948–1952) – Europe after World War II: After World War II, Europe was devastated, and the United States implemented the Marshall Plan to aid in its reconstruction. The plan provided financial and economic assistance to European countries, helping them rebuild infrastructure, industry, and economies. This played a crucial role in the post-war recovery of Western Europe [17].

2. Bosnia and Herzegovina after the Bosnian War (1992–1995): The Dayton Agreement, which ended the Bosnian War, included provisions for the reconstruction of Bosnia and Herzegovina. The international community, including the European Union, the World Bank, and the International Monetary Fund





Baba Amr is one of Homs's neighbourhoods (see fig. 1.), with a population of 55 thousand inhabitants (according to 2010 estimates). Initially, the neighbourhood was a small village overlooking the Orontes River; then it expanded to merge with the western side of the city of Homs. The Baba Amr neighbourhood has been designated as a regulatory area where collective violations are addressed. This was established through a decree and remains under dispute resolution committees. Baba Amr is considered an ideal area for popular housing, close to the university and the main entrances of the city (see fig. 2.).

### Steps adopted in the reconstruction of the Baba Amr neighbourhood

#### 1. Analysis of the pre-war reality of the neighbourhood

Baba Amr neighbourhood is located in the southwestern part of the city of Homs, 3.1 km away from the centre. It is connected to a major transportation network and surrounded by: Al. Enshaat neighbourhood, AL. Mahata neighbourhood, Karm Al-Shami neighbourhood, West Damascus Road suburb, Gouber and Al Sultanyia. The area of the neighbourhood is about 159 hectares. The urban structure is characterized by a grid of parallel and orthogonal streets, which is simple and allows for easy disposal of cars, but one of its drawbacks is the lengthening of the travel time between different areas of the neighbourhood.

The neighbourhood does not have a clear urban identity. Three-story housing buildings prevail there, and the ground floor is sometimes used as a commercial space. There is not much diversity of buildings in addition to the narrow streets between residential buildings and the absence of pockets of green spaces. Public buildings are almost non-existent, except for schools, some shops and one clinic.

#### 2. Documenting and describing the reality of the neighbourhood after the war

The assessment of the damage to the district after the war was made and relevant documentation was provided by the Governorate of the city of Homs, on the basis of which a damage assessment plan for the Baba Amr neighbourhood was prepared. The process involves evaluating the extent of damage to infrastructure, housing, and essential services. The extent of damage is documented through photographs to provide visual evidence for planning. A report assessing the technical and structural condition of buildings was also prepared by the General Company for Engineering and Consulting Studies, giving a clear indication of the poor structural integrity of these buildings, in addition to the significant vandalism and apparent shattering of the buildings [19].

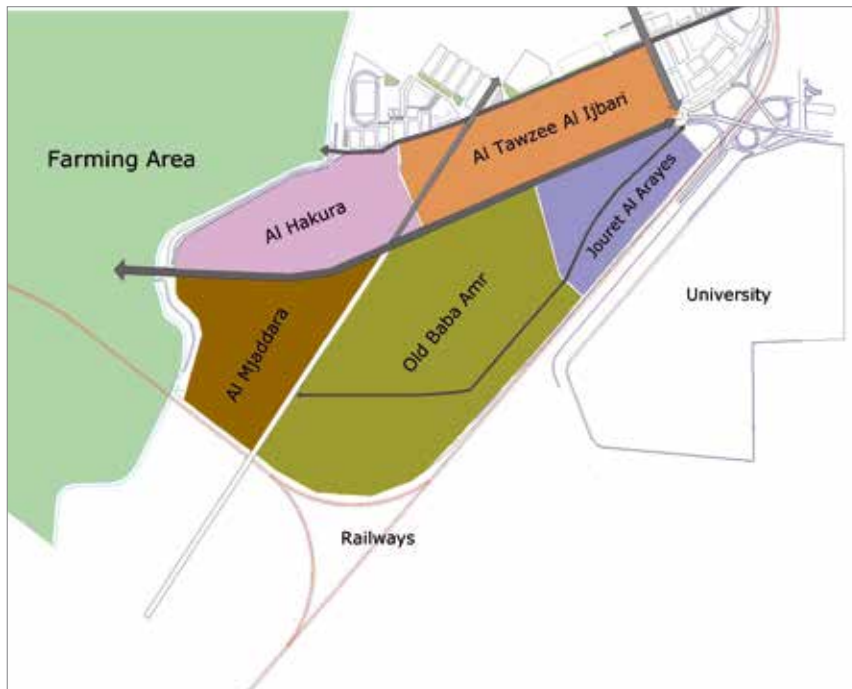


Fig. 2. Baba Amr Neighbourhood; source – author

#### 3. Conclusions of documenting and describing the reality of the neighbourhood

Baba Amr neighbourhood is an area of collective violations for which a decree was issued to create it as a regulatory area. Until now, it is in the stage of dispute resolution committees. A large part of the neighbourhood was subjected to vandalism and destruction, especially the AL-Hakoura and AL-Mjdara areas, the residential strip overlooking the main street (Musab ben AL-Zuber)

and the residential strip parallel to the railway. The condition of the roads is good, especially the main roads (Musab ben AL-Zuber, Sues), and they can be retained in preparing new planning for the Baba Amr neighbourhood because these roads connect the city with the north-south highway. It is necessary to revitalise the infrastructure, such as roads, bridges, water supply, sanitation, and power systems (see fig. 3.).

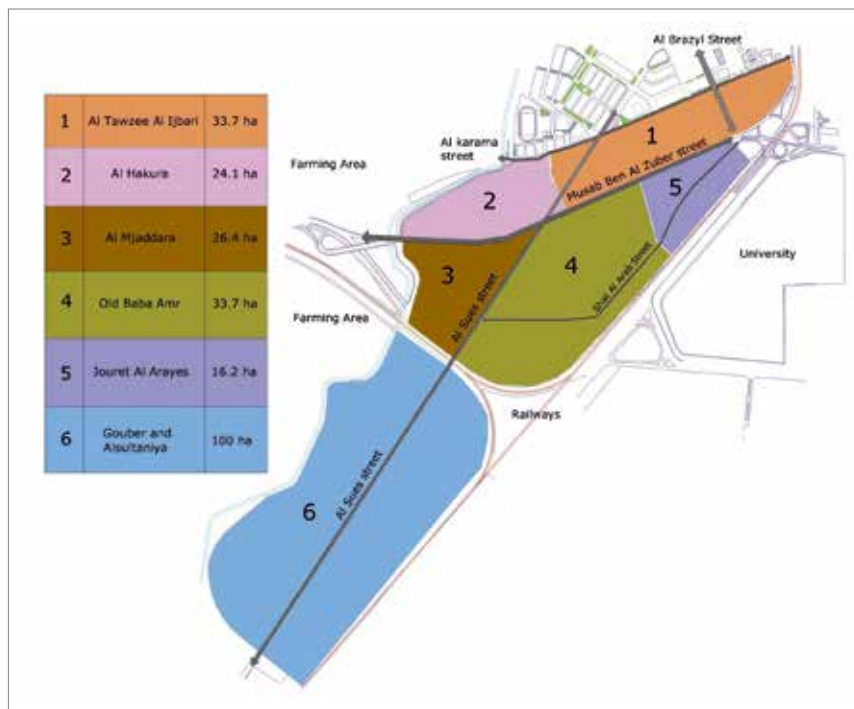


Fig. 3. The main streets and communities (Hara) of the reconstruction area; source – author

### New planning for the Baba Amr neighbourhood

To prepare plans for the reconstruction of the Baba Amr neighbourhood, the area of work has been expanded to the administrative borders of the city of Homs, adding the neighbourhoods of Al Sultanyia and Gouber. The planning program was prepared based on the planning foundations approved by the Ministry of Housing and Urban Development and the planning standards related to the nature and privacy of the planning area. In order to finance the reconstruction of the Baba Amr neighbourhood, the population density of the built-up area was increased, as the implementation and financing of this reconstruction are to be carried out by the private sector.

Neighbourhood centres (north and south) include all the necessary services required for the population (commercial, administrative, health, social, cultural, religious, investment, public parks and sports stadiums). The percentages of the main public services in the neighbourhood units (kindergartens, basic education schools, commercial areas, religious buildings, green areas, playgrounds

and gardens, recreational activities, secondary, technical and vocational schools, parking lots) were determined according to the planning principles and standards applicable in Syria, also principles and standards which are commonly recognised and applied in planning as: sustainability, economic viability, flexibility and adaptability, compact and mixed-use development, preservation of natural resources, health and well-being, accessibility and connectivity, and regulatory compliance (see fig. 4., 5.).

### Conclusion and recommendations

- In the reconstruction process of the Baba Amr neighbourhood, the concept of sustainable development was adopted to improve the flexibility and sustainability of the neighbourhood. This was achieved by restoring the destroyed infrastructure and creating new spaces in addition to completing all services and meeting the population's needs, increasing green spaces, and also improving the flexibility and sustainability of the neighbourhood by integrating economic, social and

environmental considerations to ensure long-term well-being.

- Increasing population density in the urban planning program will boost the number of apartments, which will, in turn, allow the private sector to finance and construct buildings. Thus, the government can save on the costs of implementing this project and only cover the implementation of infrastructure.
- In addition to the reconstruction plans, a legislative decree has been prepared for the area to be reconstructed. This decree preserves the rights of property owners in this area and organises and prepares all procedures and legal matters that must be followed before starting and after the completion of reconstruction. It is also possible to adopt it for other reconstruction areas in Syria.
- Reconstruction after wars requires developing reconstruction plans for each region in proportion to the needs of the segment of its population. These plans take into account the previous population of the neighbourhood to be reconstructed and the number of future



Fig. 4. New Master Plan for the Reconstruction of Baba Amr Neighbourhood; source – author



Fig. 5. Visualisations for the reconstruction of Baba Amr neighbourhood; own archive

residents, thus defining areas and structure heights that suit each requirement separately.

- The vast majority of destroyed neighbourhoods are impromptu housing areas that have been annexed to the city's master plan without settling the irregularities, such as the lack of necessary public services for the population. Therefore, reconstruction must be carried out towards modernisation and renewal instead of just returning to what it was before.
- Establishing a good infrastructure and avoiding previous mistakes due to impromptu construction.
- these areas in a sustainable and healthy manner, using natural energy sources as much as possible, and securing spaces designated for power generation devices for the entire neighbourhood.
- and maintaining building legislation that respects society's conditions, history, current and future needs, which differ from one place to another in all cities worldwide.

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#### PRAWIDŁOWY SPOSÓB CYTOWANIA

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#### ABSTRACT:

The research discusses the issue of reconstruction after wars. The paper presents theoretical ideas about reconstruction after wars, including but not limited to the impact of wars on the urban environment, the reconstruction strategies and trends in architecture after wars, the principles of reconstruction of the physical structure of buildings, and urban sustainability in post-war reconstruction operations. The concepts are illustrated through case studies of post-war city reconstruction experiences, such as the Baba Amr – Al Sultanyia – Gouber neighbourhood, which could constitute an introduction and a model for presenting a future vision of reconstructing destroyed areas in Syria.

#### KEYWORDS:

reconstruction, international experiences, strategies, post-war

#### STRESZCZENIE:

**POWOJENNA ODBUDOWA MIAST (ODBUDOWA DZIELNICY BABA AMR W MIEŚCIE HOMS, SYRIA).** Niniejsza praca porusza problematykę odbudowy po wojnach. W artykule przedstawiono teoretyczne koncepcje dotyczące odbudowy powojennej, m.in.: wpływ wojen na środowisko miejskie, strategię i tendencje odbudowy po wojnach w architekturze, zasady odbudowy konstrukcji budynków, zrównoważony rozwój miast w okresie powojennym. Koncepcje zilustrowano studiami przypadków powojennej odbudowy miast, takich jak np. dzielnica Baba Amr – Al-Sulta-

nyia – Gouber, która może stanowić modelowy przykład przyszłej wizji odbudowy zniszczonych obszarów w Syrii.

#### SŁOWA KLUCZOWE:

odbudowa, doświadczenia międzynarodowe, strategię, okres powojenny