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URBAN HERITAGE AND SUSTAINABILITY
IN THE AGE OF GLOBALISATION





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6. Sustainable Urban Conservation of Historical Cities: The Case of Fez Medina, Morocco

Khalid El Harrouni

Introduction

The historic urban area of the medina is the oldest section and historical heart of several Moroccan cities. Various international bodies have bolstered efforts to preserve such historical monuments, and even entire cities, with initiatives such as the Global Charter of Historic Cities adopted by the International Council on Monuments and Sites (ICOMOS) in 1987 and the 1972 United Nations Educational, Scientific and Cultural Organization (UNESCO) convention to protect built and natural heritage, both of which include Morocco's medinas in their scope of preservation. In the 1980s, UNESCO acknowledged the cultural significance of several old towns in Morocco by including them on their World Heritage List. These medinas are not only physical environments and places of activities; they are also social spaces characterized by historical, cultural and spiritual values. They are reflections of a civilization's way of life and social traditions, which is evident in their design, construction and spatial organization.

The Fez medina, founded in the ninth century, is one such environment. Reaching its peak first in the fourteenth century under the Marinides and again in the seventeenth century, it serves as an example of pre-colonial urban planning. Moreover, its spatial

organisation resulted from the slow and 'integrative' evolution of urban and architectural production, adapted to the community's needs and lifestyle in its principal components: habitat, equipment and activities.

The World Heritage City of Fez is Morocco's spiritual, scientific and cultural capital. The significance of its medina lies in several factors, including its vast geographical area of 300 hectares and its population density of 800 to 1200 people per hectare. It boasts a substantial number of historic buildings—14000 in total, of which fifty percent are in good condition, thirty-four percent have degraded, fourteen percent risk ruin or collapse and two percent lie in ruin.¹ It is also the site of many historical monuments, numbering around 3000. These include 11 *madrassas* [schools], 43 Quranic schools, 176 mosques, 83 *zaouias* [religious edifices associated with Sufi Islam] and mausoleums and 117 *fondouks* [hotels] or caravansaries. Notably, it houses the historic Al Qarawiyine University, considered one of the oldest in the Islamic world.

Several years ago, Fez medina offered a striking contrast between areas of thriving economic activity and over-densified residential quarters with steadily deteriorating buildings, a juxtaposition of rich cultural and monumental heritage and a degraded historical built environment. Today, the medina is a major economic centre for the whole urban agglomerate of Fez,² with prosperous artisanal and tourism sectors. However, this wealth does not seem to reach its population. Of the city's nearly 160000 inhabitants, thirty-six percent are living below the poverty level.

The most serious problems facing Fez medina included deteriorating residential zones, infrastructural decay, the transformation of traditional handicrafts into partially mechanized small-scale manufacturing, a significant number of low-income households, complex property ownership and occupancy patterns and environmental pollution. Recognising these issues, the Moroccan public authorities, supported by international momentum and solidarity, have made safeguarding Fez medina a national priority.

1 ADER-Fès, *Bâti menaçant ruine à Fès-Médina, Rapport de suivi* (Fez: ADER-Fès, 2006).

2 Jelidi Charlotte, *Fès, la Fabrication d'une Ville Nouvelle (1912–1956)* (Lyon: Sociétés, Espaces, Temps, ENS Éditions, 2012).

The Fez medina was subject to an extensive rehabilitation programme that began in 1981 and has continued for over thirty years. The programme aims to restore and preserve the old city's economy, cultural value and social heritage.

This chapter uses observation and a system dynamics approach to describe and analyse the urban heritage safeguarding process over the last thirty-five years in order to identify the best practices, constraints and difficulties faced in the sustainable conservation of the Fez medina.

Safeguarding the Fez Medina: Principal Stages and Components

The overall rehabilitation strategy for the Fez medina focuses on alleviating the aforementioned constraints through a conservation programme. The implementation of this programme has depended on securing the appropriate tools, including institutional, financial and technical support. The safeguarding process began with the drafting of the first urban document, the *Schéma Directeur d'Urbanisme de Fès, SDUF* [urban planning orientation scheme of Fez], which underlined the importance of the medina in the development of the entire Fez agglomeration.³ The first period of the safeguarding process, from 1980 to 2005, can be divided into three principal stages.

First Stage (1980–1989): Launching the Safeguarding of Fez

In 1981, the medina was officially classified by UNESCO. Subsequently, in 1985, the Moroccan government and UNESCO jointly launched the international campaign for the safeguarding of the Fez medina. In 1989, the government established the Agency for the De-densification and Rehabilitation of the Fez medina (ADER-Fez), creating a new institutional framework for the implementation of strategic projects within the medina. Today, ADER-Fez specialises in conserving and rehabilitating the World Heritage City of Fez. Through various local and international initiatives, ADER-Fez has accumulated extensive

3 Royaume du Maroc, Ministère de l'Habitat et de l'Aménagement du Territoire, Délégation Régionale de Fès, *Schéma directeur d'urbanisme de la ville de Fès* (Fez: Royaume du Maroc, 1980).

and valuable experience in intervening in the historic fabric of the Fez medina.

Table 6.1 Stage 1 (1980–1989) of the safeguarding process: objectives, approach, tools and actions.

STAGE 1 (1980–1989)	Launching the safeguarding of Fez medina
Objectives	Safeguard the medina including the historical monuments in the entire city
References	UNESCO Recommendation 1976 ICOMOS Charter 1987 Venice Charter 1964
Tools	SDUF Law (22–80): historical monuments and sites conservation Classification of the monuments UNESCO world heritage (Fez in 1981 and Marrakesh in 1985)
Actors	Government Local Authorities ADER-Fez

Second Stage (1990–1998): Expansion and Experimentation

During this period, every aspect of the safeguarding effort was examined, including the technical, institutional, legal and financial components. Simultaneously, experimental operations were undertaken such as monument restoration and the rehabilitation of housing and urban facilities. Local capacities to plan and carry out the various project components were strengthened through the development of a master plan, improvements in the field of restoration and urban rehabilitation, and implementation of certain management tools like a comprehensive Geographic Information System (GIS) linked with planning and cost estimate tools, which facilitated the supervision of the rehabilitation project.

Table 6.2 Stage 2 (1990–1998) of the safeguarding process: objectives, approach, tools and actions.

STAGE 2 (1990–1998)	Integrated rehabilitation and safeguarding: expansion and examination of legal, technical and financial components
Objectives	Integrated rehabilitation and safeguarding of the medina The medina is an entity of physical, social and economic structure
References	ICOMOS Charter 1987
Tools	Experimental operations: restoration of the monuments, rehabilitation of the houses, urban facilities, etc. Reinforcement of the regulation framework (master plan) and management tools implementation: GIS, improvement in the field of the restoration and urban rehabilitation
Actors	Public authorities Civil society Private sector

Third Stage (1999–2005): Collaboration with International Financial Institutions and Launch of the Major Structuring Programmes

ADER-Fez was the main liaison with the World Bank team⁴ in charge of the ‘Rehabilitation Project of the Medina of Fez’. The project’s development objective was the ‘conservation of the Fez medina by mobilizing its inhabitants and local institutions’ and, more precisely, ‘(a) to support the efforts of conservation in progress; (b) to consolidate the partnerships between public and private and (c) to use the process of

4 Royaume du Maroc, Banque Mondiale, *Projet de réhabilitation de la médina de Fès: rapport de synthèse* (Fez: Agence de Dédensification et de Réhabilitation de la médina de Fès, 1998).

rehabilitation to eradicate poverty'. These global development objectives encompassed the following: developing rehabilitation programmes for historic buildings; improving accessibility and emergency vehicle access; enhancing the medina environment; exploring the potential of the rehabilitation process to eradicate poverty; strengthening institutions and capacity building.

All of these components were achieved by 2005, and the project had a positive impact on the development of the Fez medina.⁵ Although financial indicators do not always fully capture the scope of a project of this size, it generated many partnerships among actors and investors, aligning with the articulated components. This established a model for development practices in conservation zones.

Table 6.3 Stage 3 (1999–2005) of the safeguarding process: objectives, approach, tools and actions.

STAGE 3 (1999–2005)	Urban requalification of historic cities
Objectives	Rehabilitation and development of the medina The medina is a part of the physical, social and economic structure in permanent transition through urban development.
References	Royal Letters to the participants of the 23rd session of the World Heritage Committee (29 November 1999) ⁶ The Vienna <i>Memorandum</i> , 2005 ⁷
Tools	Strategic and action plans for rehabilitation and development Social animation and participation in housing restoration/rehabilitation Institutional strengthening and capacity building

5 Radoine Hassan, 'Urban Conservation of Fez-Medina: A Post-Impact Appraisal', *Global Urban Development Magazine*, 4.1 (2008), <https://www.globalurban.org/GUDMag08Vol4Iss1/Radoine.htm>

6 See <https://whc.unesco.org/archive/repcomx99.htm>

7 UNESCO, *The Vienna Memorandum on 'World Heritage and Contemporary Architecture —Managing the Historic Urban Landscape'* (Paris: UNESCO, 2005).

Actors	Public authorities Civil society Private sector Funds for development
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In addition to the World Bank, other financial entities such as FADES (Arab Fund for Social and Economic Development) engaged in these efforts. FADES has been heavily involved in rehabilitating Fez's monuments, housing and infrastructure. Private national and international donors also supported the restoration of many monuments in the city. Additionally, the Moroccan government was a main source of financing for ADER-Fez's operations. Various ministries, particularly the Ministry of Housing and Urban Planning, the Ministry of Cultural Affairs, and the Ministry of Islamic Affairs and Waqf provided substantial financial backing for different programmes based on their respective mandates. The financial structure of the conservation programme reflects the active participation of local authorities, municipal councils, NGOs, national and international donors and financial institutions.

The many rehabilitation projects realised in the Fez medina distinguish it as a successful case study, particularly concerning fundraising and financial investment in the heritage sector. Although a historic city of 160,000 inhabitants cannot be fully preserved from all potential threats, Fez has made significant advances in realising its conservation vision compared to other historic cities in Morocco. Analysis of the investments in Fez's conservation made between 1981 and 2005 shows that infrastructure was the most substantial, constituting fifty-three percent of the budget. The second largest investment was in the rehabilitation of buildings, at twenty-two percent. The restoration of monuments ranked third, with eleven percent of the funding. Some monuments have been restored by the holding company Al Omrane⁸ under an agreement between the Ministry of Culture and the Ministry of Housing and Urbanism.

⁸ Groupe Al Omrane, *Médina de Fès, Réhabilitation du Triangle Historique* (Rabat: Groupe Al Omrane, 2009).

Housing and Development

The housing and development component includes the following sub-components.

Social Mobilisation and Participation in Housing Rehabilitation

Early on in the project's development, social scientists were recruited from the university in Fez to undertake a participatory and social assessment, which began with data collection and consultations with various stakeholders. Government officials, religious and civic leaders, merchants, artisans, homeowners, renters and many others shared ideas for the potential expansion of project components. The aim was to arrive at a consensus on interventions and strategies based on an understanding of the city's social dynamics and to ensure the alignment of plans, aspirations and local capacities.

Participation was high owing to the involvement of several local NGOs in project development, facilitating collaboration between ADER-Fez and the local population and stakeholders in the implementation of the social assessment. This engagement had a significant impact on the project design. The objectives were to achieve the direct involvement of the population in the rehabilitation process, thereby improving living conditions and combating poverty through job creation. ADER-Fez contributed to this participatory process and community development in two forms: financial aid, evaluated at thirty percent of the operational costs, and support in building materials and technical assistance. The inhabitants' contribution amounted to roughly seventy percent of the operational costs.

Emergency Intervention on Housing Units at Risk of Collapse

Housing in Fez's historic district presents a high risk due to the threat of structural collapse. In 1991, ADER-Fez launched an innovative emergency action programme intended to protect the inhabitants from this mortal threat. The programme consisted of an emergency team comprised of builders, architects and engineers, who worked to prevent the collapse of these buildings.

Addressing buildings at risk of collapse requires emergency action from both the public and private sectors. Beyond consolidation and critical repairs, building codes emerged as a significant issue, with municipalities often lacking the necessary technical capacities and political influence for their enforcement. ADER-Fez prioritised emergency repairs for at-risk housing units situated along improved roads and tourist routes. Reducing the exceptionally high population density within the historic urban fabric constituted one of the most crucial tasks, as this factor was contributing to the rapid degradation of historical and traditional structures.

Various programmes related to emergency intervention in at-risk housing units have been implemented and a restoration and rehabilitation laboratory was established to oversee the stability of physical structures, monitor the rate of degradation and conduct diagnosis and material quality analysis. The structural laboratory is assisted by the survey and spatial analysis group, a team of skilled technicians whose main task is to gather data and survey the medina's various buildings and structures. In addition to scientific data, the laboratory also explores the technical expertise of master builders through the interaction of engineers with traditional techniques.

Upon the completion of the 1980–2005 stage of the project, improvements in the overall state of the medina's housing stock were negligible, except for specific interventions and private investments to transform historic houses and palaces into Riads and guest houses.⁹ Indeed, the collapse of housing units due to deterioration and lack of maintenance has continued. However, this has not resulted in any loss of human life, thanks to a wooden buttressing initiative financed by the Ministry of Housing and Urban Planning and carried out by ADER-Fez.

Infrastructure and Facilities

The successful revival of the medina is closely linked to improvements in its infrastructure and facilities, including the following:

9 Bianca Stephano, 'Conservation and Rehabilitation Projects for the Old City of Fez', in *Adaptive Reuse: Integrating Traditional Areas into the Modern Urban Fabric*, ed. by M. Bently Sevcenko (Cambridge, MA: MIT Laboratory of Architecture and Planning, 1983), pp. 47–59.

- Emergency vehicular access: these networks have a noticeably positive impact on the communication and transportation networks in the medina.
- Traffic organization: the traffic network has been improved, especially around the historic walls and monumental gateways.
- Accesses and parking: improved access points have facilitated parking outside the pedestrian zones. This accessibility also contributes to economic growth and enhances real estate values in many parts of the medina.
- Water and sewage system: ensuring a reliable water supply and efficient sanitation services are critical to the quality of life and productivity of the medina's residents. Urban local bodies, including the municipal council, RADEEF (Régie Autonome de Distribution d'Eau et d'Electricité de Fès—Water Supply and Electricity Public Utility of Fez), and ADER-Fez, are the main actors engaged in improving traditional water channels and modern sewage systems.
- Electricity: the municipality and RADEEF have played a major role in the electrification of the entire medina. Public lighting, electricity and telephone networks have increased business activities and tourism.
- Urban facilities: adapting their equipment standards to fit historical building capacities, the Ministries of National Education and Public Health have constructed numerous schools and nurseries within the medina. This infrastructure is an example of the efforts made by many actors to improve the living conditions in the medina.

Fourth Stage (2005–2018): Continuation of the Safeguarding Process and New Development Programmes

The safeguarding process continued from 2005 until 2018 (Table 6.4) with the integration of development plans and programmes at central and local levels. During the first phase of this fourth stage (2005–2013),

the historical space was able to incorporate new territorial development approaches launched by the National Initiative for Human Development (INDH), the Regional Development Programs of Tourism and Crafts, and the Millennium Challenge Corporation.

The next phase (2013–2018) of the new development activities focused on the restoration and rehabilitation of historical monuments and addressing buildings at risk of collapse, guided by conservation and sustainability strategies.

After 2018

The period following 2018 was characterized by the signing of conventions at the Royal Palace in Rabat, presided over by presidency of the King of Morocco. These agreements pertained to programmes to enhance the old medinas of Marrakech and Rabat, the complementary programme for the enhancement of the old medina of Fez and the third phase of the programme for at-risk housing. The latter is an integral part of the rehabilitation programme for the old medina of Casablanca and the complementary programme for the requalification and upgrading of the medina of Essaouira.

Table 6.4 Stage 4 (from 2005) of the safeguarding process: objectives, approach, tools and actions.

STAGE 4 (2005–2018)	Requalification and protection of built heritage against natural disasters
Objectives	Develop sustainable strategies for the preservation, conservation and management of heritage
References	<p>Kyoto Declaration ICORP-ICOMOS 2005 on Protection of Cultural Properties, Historic Areas and their Settings from Loss in Disasters</p> <p>ICOMOS Declaration 2005: Monuments and sites in their settings; Conserving cultural heritage in changing townscapes and landscapes</p> <p>ICOMOS Charter 2003: Principles for the analysis, conservation, and Structural Restoration of Architectural Heritage</p>

Tools	Tools, planning and development practices of conservation and sustainable management of the urban environment Effective measures to control the impact of incremental or rapid change on the context
Actors	Public authorities Civil society Private sector Funds for development

A new generation of stakeholders emerged and became involved in this stage of historic city conservation (see Table 6.5).

Table 6.5 List of Stakeholders involved in this stage of historic city conservation.

<ul style="list-style-type: none"> ● The Ministry of the Interior ● The Ministry of Islamic Affairs ● The Ministry of National Land Use Planning, Town Planning, Housing and Urban Policy ● The Ministry of Tourism, Air Transport, Handicrafts, and Social Economy ● The Ministry of Youth and Sports ● The Ministry of Culture and Communication ● Hassan II Fund for Economic and Social Development ● The <i>Wilaya</i> (administrative division of each region) ● The Council of each region ● The Communal Council of each city ● Al Omrane Group ● The National Agency for Urban Renovation and Rehabilitation of Buildings Threatened with Ruin

The sustainable urban conservation of historical cities is not only a concern of the cultural actors seeking to prevent the loss of historical values; it has also become a concern shared by a broader array of institutional and social actors interested in economic and social values.

In the context of conservation and sustainability in the historic city of Fez,¹⁰ a system dynamics approach has been employed to examine the involvement of the key actors and the interconnections between them.¹¹ This analysis explored the interactions of various actors with the medina, including ADER-Fez, public authorities, civil society, private sector entities, and financial institutions. Based on a causal loop diagram, the research revealed the relationships among different variables in the Fez medina's rehabilitation system, including institutional investment, environmental quality, housing restoration, monument and site restoration, infrastructure rehabilitation, solid waste management, emergency intervention and accessibility improvement.

Promotion of Tangible and Intangible Cultural Heritage: The Case of Fez Medina

This analysis of the safeguarding of Fez medina has illuminated the evolution of its phases over time, its objectives, the approaches and tools used and the key actors. An important epistemological and semantic observation lies in the evolving terminology used in heritage conservation, expanding to encompass socio-terminology within the heritage domain. In addition, regarding social, environmental and integrated sustainability, the safeguarding the Fez medina has focused on local participation and integration in the rehabilitation and conservation project, continuing to benefit the community. The quality

10 Dennis Rodwells, 'The Coincidence Between Conservation and Sustainability', in Rodwells, *Conservation and Sustainability in Historic Cities* (Oxford: Wiley-Blackwell, 2007), pp. 183–203.

11 Belyazid Salim, Haraldson Hörður, Kalen Christer and Koca Deniz, 'A Sustainability Assessment of the Urban Rehabilitation Project of the Medina of Fez, Morocco', in *Proceedings of the 21st International Conference of the System Dynamics Society*, ed. by Robert L. Eberlein, Vedat G. Diker, Robin S. Langer and Jennifer I. Rowe (New York: Publisher System Dynamics Society, 2003), n.p.

of the environment has been improved thanks to public investments in solid waste management, sanitation and sewerage networks, infrastructure and urban facilities.

The sustainable urban conservation of Fez as a historical city was based on coordinating diverse stakeholder perspectives. ADER-Fez, traditional artisans (*maalems* or master craftsmen) and local NGOs have participated in developing tools and disseminating best practices in restoration, rehabilitation and urban heritage conservation. Professional training has also contributed to developing scientific and experimental advances related to sustainable urban heritage conservation.

Conclusion and Lessons Learned

This chapter contributes to the literature on urban heritage and sustainability by providing insights into traditional Moroccan neighbourhoods, with a specific focus on the Fez rehabilitation project. It has outlined the basic principles of the sustainable urban conservation of the Fez medina, identifying the strengthening of local institutions, primarily through funding mechanisms, as an important pillar of the rehabilitation process. Positive outcomes of the Fez conservation programme include social participation, which is essential for successfully rehabilitating the historic housing stock. The project has demonstrated the feasibility of reconciling urban conservation objectives with the housing needs of underprivileged residents, facilitated through consultation and social participation in the design and implementation of interventions in historic housing.

However, certain challenges persist. Tenure of land and buildings is a critical obstacle in historic city rehabilitation, and municipalities should consider delegating urban rehabilitation operations to competent agencies. Additionally, urban rehabilitation projects should be straightforward in their objectives and design. Given the complexities of historic cities, interventions should adopt a programmatic approach, focusing on specific needs and opportunities rather than attempting to address all aspects within a single operation.

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