

# **ICOA663: SUSTAINABLE URBAN CONSERVATION OF HISTORICAL CITIES COME BACK TO THIRTY-FIVE YEARS OF OBSERVATION IN FEZ MEDINA, MOROCCO**

## **Subtheme 01: Integrating Heritage and Sustainable Urban Development by engaging diverse Communities for Heritage Management**

**Session 2:** Management, Documentation

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**Abstract:** Urban conservation has been a subject of academic and professional discourse for over three decades. In Fez medina, urban conservation is linked to urban redevelopment and thereby represents a significant component of urban design with respect to sustainability. The best practice and the constraints and difficulties of the Fez medina sustainable conservation are addressed in this paper, based on observation and a system dynamic approach to describe and analyze the urban heritage safeguarding process, its stages and components during the last thirty-five years. The overall rehabilitation strategy for this historical area is to alleviate the constraints through a sustainable conservation program, especially the historic housing stock, the social development, the historic monuments and the urban environment including the architecture heritage, which could not be launched without seeking adequate tools (institutional, financial and technical) for its implementation. ADER-Fez, the Agency for the De-densification and Rehabilitation of Fez Medina, places stakeholder participation at the core of its implementation strategy, including social animation and social participation in housing rehabilitation, and sets a program of emergency intervention on historic monuments and buildings, housing units threatening collapse and on infrastructure and urban facilities, with two concerns: the safety of the human lives and the safeguarding of cultural heritage and traditional constructions of architectural quality adapted to the requirements of modern life.

**Key words:** *sustainability; urban conservation; architecture heritage; participation*

## Introduction

The medina, historic urban area, is the oldest section and the historic heart of some Moroccan cities (31 medinas as shown in Figure 1). Various international bodies have instituted policy to save historic monuments and even entire cities: The Global Charter of Historic Cities adopted by ICOMOS in 1987, the 1972 adoption by UNESCO of a convention to protect built and natural history, both 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 in the UNESCO world heritage list. These medinas are not only a physical environment composed of inhabitants and places of activities, but they are also a social space characterized by historical, cultural and spiritual values. The way of life and the social traditions are the reflections of civilization, which appears even in design, constructions and space organizations.

Fez medina, founded in the 9th century, first reached its flourish in the 14th century under the Marinides and again in the 17th century. It was an example of this type of the urban space organization until the colonial period. Moreover, its urban space was the result of a slow and "integrative" evolution of an urban and architectural production adapted to the needs of the community and to a framework of life with its principal components: habitat, equipment and activities.

Fez, a World Heritage City, is the spiritual, scientific, and cultural capital of Morocco. The importance of its medina is reflected through several factors:

- a vast geographical area: 300 hectares;
- a dense medina: 800 to 1200 persons/ha;
- a large number of historic buildings: 14000 of which 50% are in good state, 34% are degraded, 14% are threatening ruin or are at risk of collapse, and 2% are in ruin (ADER Fès, 2006);
- a large number of historic monuments (about 3000); 11 madrasas, 43 koranic schools, 176 mosques, 83 zaouias and mausoleums, 117 foundoks or caravansaries;
- a historic university which is considered as one of the oldest universities in the Islamic world: the Al Qarawiyyine.

Few years ago, Fez medina offered a striking contrast between areas of thriving economic activity and over-densified residential quarters whose buildings are deteriorating steadily: A cultural heritage and monumental of an exceptional richness, and a degraded historical built environment. The medina is today a major economic centre for the whole urban agglomerate of Fez (Jelidi, 2012); its economic sectors are artisanship and tourism. However, this richness does not seem to profit with its population, nearly 160000 inhabitants, 36% of whom are below poverty level.

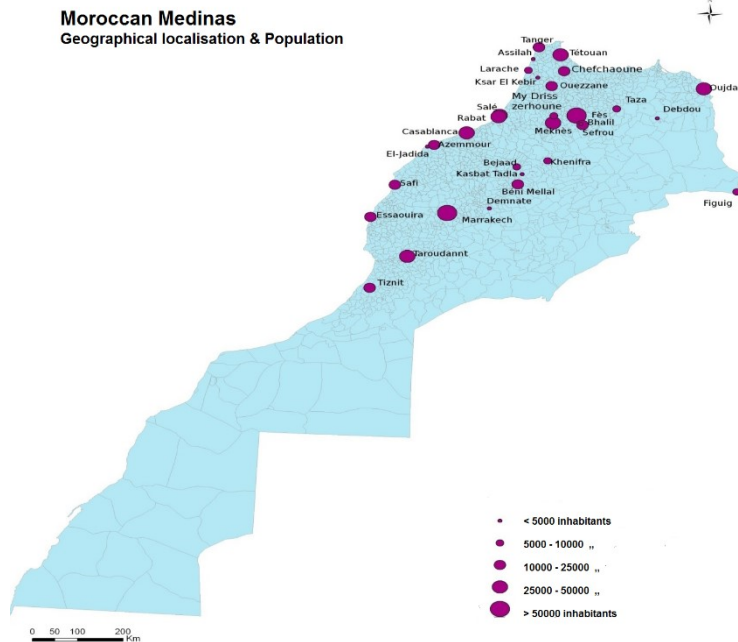


Fig.1- Moroccan medinas: Geographical localisation and population.

The most serious problems of Fez medina included the deteriorating residential zones, the degradation of the infrastructures, the transformation of traditional handicraft activities into partially mechanized small-scale manufacturing, the significant number of low-income households, the complex property ownership and occupancy patterns, and the environmental pollution. In front of that situation, the Moroccan public authorities, supported by an international momentum of solidarity, made safeguard of Fez medina a national priority.

Fez Medina is then subject to an extensive rehabilitation program which started in the year 1981 and runs over thirty years. The safeguard program aims at restoring and preserving the economy, cultural value, and social heritage of the old city.

The paper is based on observation and a system dynamics approach to describe and analyze the urban heritage safeguarding process during the last thirty-five years in order to identify the best practice and the constraints and difficulties of the Fez medina sustainable conservation.

### **The Safeguard Process of the Fez Medina, its Principal Stages and Components**

The overall rehabilitation strategy for the Fez medina is to alleviate the above constraints through a conservation program which could not be launched without seeking adequate tools (institutional, financial and technical) for its implementation. The process of safeguard began from the production of the first urban document, the urban planning orientation scheme of the Fez city (SDUF, *Schéma Directeur d'Urbanisme de Fès*) which underlined the importance of the medina in the development of the whole of the Fez agglomeration (Royaume du Maroc, Ministère de l'Habitat et de l'Aménagement du Territoire, 1980). The first period of the safeguard process from 1980 to 2005 can be divided into 3 principal stages.

#### **FIRST STAGE (1980 - 1989): LAUNCHING OF THE SAFEGUARD PROCESS OF FEZ**

In 1981, the medina was classified by UNESCO; then the Moroccan government and UNESCO launched in 1985 the international campaign for the Fez medina safeguard. In 1989, the government created

ADER-Fez, the Agency for the De-densification and Rehabilitation of Fez Medina, a new institutional framework to implement the strategic projects for the medina. ADER-Fez is now an agency specialising in the conservation and rehabilitation of the world heritage city of Fez; it has accumulated a long and valuable experience in intervening on the historic fabric of the Fez medina through various local and international initiatives.

**SECOND STAGE (1990 - 1998): PHASE OF DEEPENING AND EXPERIMENTATION**

All aspects of the safeguard have been deepened through the examination of the technical, institutional, legal and financial components. This period was also characterized by the realization of the experimental operations: restoration of the monuments, rehabilitation of the houses and the urban facilities, etc. Local capacity to plan and carry out the various project components have been strengthened through the elaboration of the master plan, the improvement in the field of the restoration and urban rehabilitation, and the implementation of some management tools: GIS, a comprehensive Geographic Information System, linked with planning and cost estimate tools, to support supervision of the rehabilitation project.



*Fig.2- Stage 1 (1980-1989) of the safeguard process: objectives, approach, tools and actions.*

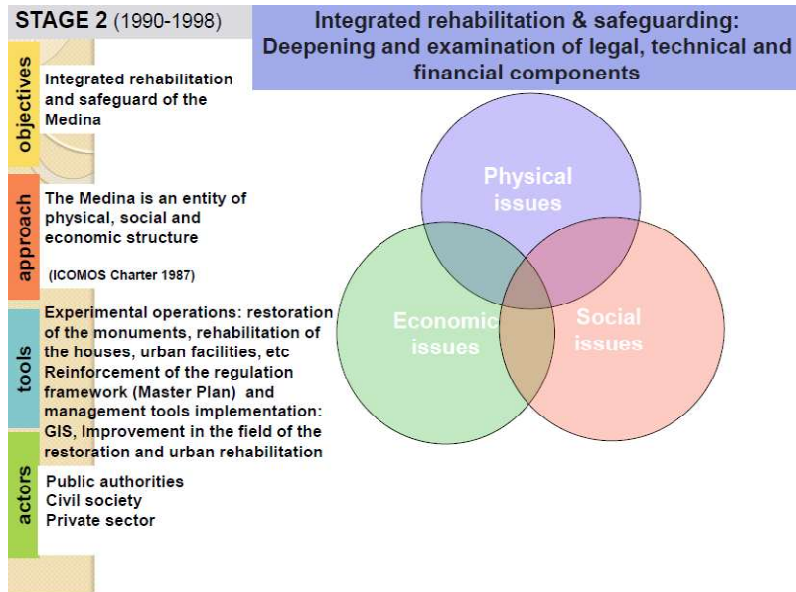


Fig.3- Stage 2 (1990-1998) of the safeguard process: objectives, approach, tools and actions.

### THIRD STAGE (1999-2005): COLLABORATION WITH THE INTERNATIONAL FINANCIAL INSTITUTIONS AND LAUNCHING OF THE GREAT STRUCTURING PROGRAMS

ADER-Fez was the main interlocutor of the World Bank team (Royaume du Maroc, Banque Mondiale, 1998) in charge with the case of Fez in order to carry out the “Rehabilitation Project of the Medina of Fez”. The development objective being “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 rehabilitation to eradicate poverty”. These global development objectives fall under the following: Development of the historic buildings rehabilitation programs; Improvement of accessibility and emergency circulation network; Improvement of the medina environment; Exploration of the rehabilitation process to eradicate poverty; and Institutional strengthening and capacity building.

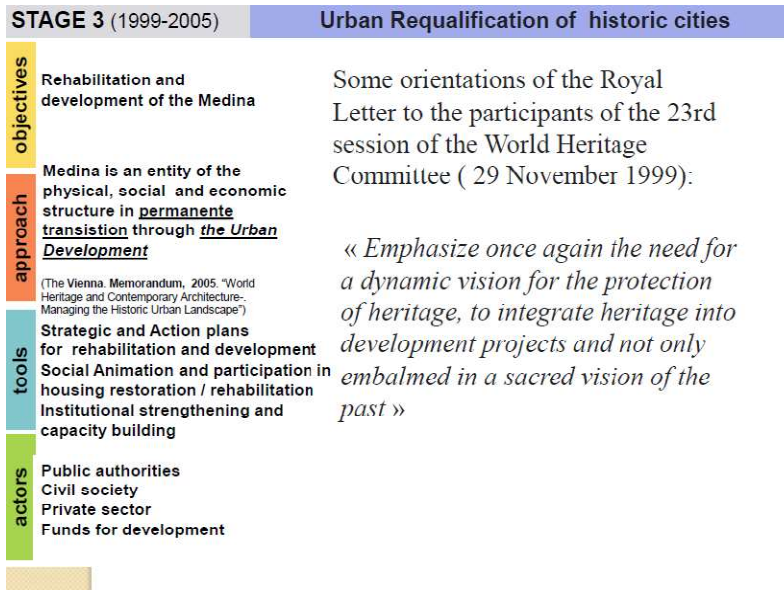


Fig.4- Stage 3 (1999-2005) of the safeguard process: objectives, approach, tools and actions.

All these components were achieved in 2005, and the project had a positive impact on the development of the medina of Fez (Radoine, 2008). Although in terms of financial indicators, the achievement of a project of such a size is not always fully met, it has generated many synergies of actors and investors pursuing the lines of the components. This established a model in the level of practice of development in a conservation zone.

In addition to the World Bank loan, other financial actors participated in Fez such as FADES (Arab Fund for Social and Economic Development). FADES has been involved widely in the rehabilitation of the monuments, housing and infrastructure of Fez. Private national and international donors supported the restoration of many monuments in Fez. Other main source of financing for the ADER's operations is the Moroccan government. The different ministries (especially the Ministry of Housing and Urban Planning, the Ministry of Cultural Affairs and the Ministry of Islamic Affairs and Waqf) participate financially in different programs following their prerogatives. The financial structure of the conservation program might reflect a very advanced participation of local authority, municipal councils, NGOs, national/ international donors, and national/ international financial institutions.

The large number of implemented rehabilitation projects in the medina of Fez has made it a successful case study, particularly in fund raising and financial investment in the heritage sector. Despite the fact that a historic city of 160000 inhabitants could not be conserved or fully saved from danger, Fez is very advanced in the implementation of its vision of conservation compared to other historic cities in Morocco. The different investments made in the conservation project of Fez between 1981 and 2005 show that infrastructure is the most important with 53% of the whole budget. The second largest investment is made in the rehabilitation of buildings with 22%. The third is the restoration of monuments with 11%. Some of monuments have been restored by the Holding company Al Omrane (Groupe Al Omrane, 2009), under the agreement between the Ministry of Culture and the Ministry in charge of Housing and Urbanism.

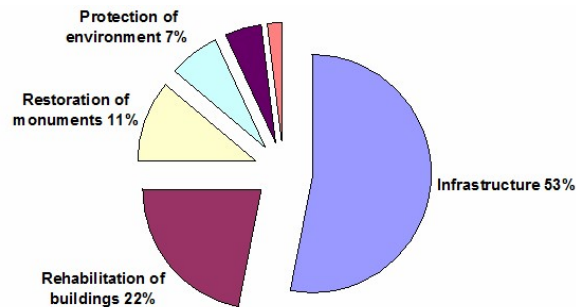


Fig.5- The conservation project investments between 1981-2005.

### Housing and Development:

This component includes the following sub components:

Social animation and social participation in housing rehabilitation:

Early in project preparation, social scientists were recruited from the university in Fez to undertake a participatory and social assessment, which began with data collection on and consulting with a wide array of stakeholders. Government, religious and civic leaders, merchants, artisans, householders, renters, and many other ordinary population contributed ideas for possible elaboration into project components, worked toward consensus on interventions and strategy, and described the social dynamics of the city to assure a match among plans, aspirations, and local capacities.

Participation was high, given the involvement of a number of local NGOs in the project development between ADER-Fez and the population, and of many local stakeholders in the implementation of the social assessment. This had a direct impact on project design. The objectives are the direct involvement of the population in the rehabilitation process in order to improve the living conditions and to fight against poverty by job creation. ADER-Fez presents this participatory process and community development into two forms: A financial aid evaluated to 30% of the cost works and a help out in terms of building materials and technical assistance. The inhabitants contribution is about 70% of the works cost.

Emergency intervention on housing units threatening collapse:

Housing presents a high risk because of the threat of collapse of their physical structures. In 1991, ADER-Fez launched an innovative emergency actions program that targeted the saving of human lives from this threat. The program consisted of an emergency team of builders, architects, and engineers who engaged themselves in the service of stopping the collapse of the buildings.

Buildings threatening collapse require emergency action involving both the public and private sectors. Beyond consolidation and critical repairs, the municipalities lack the technical capacities and political must enforce building codes. Priority is given to emergency repair of housing units threatening collapse and fronting on improved roads and tourist circulation routes. One of the challenging tasks of ADER-Fez is to facilitate the reduction of the extremely high population density within the historic urban fabric as this is causing a rapid degradation of the historical and traditional structures. Various programs related to the emergency intervention on housing units threatening collapse have been implemented. The restoration and rehabilitation laboratory was established and it is mainly concerned with the follow-up of stability of physical structures, control of the rate of degradation, as well as the auscultation, diagnosis, and analysis of the quality of materials. 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 different buildings and structures of the medina. In addition to the scientific data, this laboratory is also exploring the technical know-how of the master builders through the interaction of engineers with the traditional techniques.

At project closing related to the period 1980-2005, the overall state of the housing stock of the medina has not improved, with the exception of the project interventions and of the private investments in the

transformation of historic houses and palaces into Riads and guest houses (Bianca, 1983). Indeed, the collapse of housing units due to decay and lack of maintenance has continued, with no losses of human lives, due to the campaign of wooden buttressing of the endangered buildings financed by the Ministry of Housing and Urban Planning and carried out by ADER-Fez.

Infrastructure and facilities:

The success of the revitalization of the medina is greatly associated with the up-grading of its infrastructure and facilities including the following:

- Emergency and liaison circulation networks have noticeable impact on the communication and transportation networks in the medina.
- Traffic organization: the traffic network has been improved especially surrounding the historic walls and their monumental gateways.
- Accesses and parking: the accesses facilitate enormously the parking of cars outside the pedestrian road network, and they contribute to the increase of the economy and real estate value of many parts of the medina because of the easy accessibility.
- Water and sewage system: water supply and sanitation are important basic needs affecting the quality of life and productive efficiency of the medina population. Provision of these basic services continues to be among the core activities of urban local bodies. 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 in the improvement of water and sewage systems (both traditional water channels and modern sewage systems).
- Electricity: the municipality and the RADEEF played a major role in the electrification of the whole medina. Public lighting, electricity and telephone networks have increased the number of businesses and the tourism activity.
- Urban facilities: the Ministries of National Education and Public Health have found ways to adapt their equipment norms to the historic building capacity, and then they have built a significant number of schools and nurseries in the medina.

These infrastructures are only examples of the efforts made by many actors to increase the living conditions of the medina.

#### FOURTH STAGE (2005 -2018): CONTINUATION OF THE SAFEGUARD PROCESS WITH NEW DEVELOPMENT PROGRAMS

The process of safeguard continued from 2005 until 2018 through the integrating the development plans and programs at central and local levels. During the period (2005-2103) of this fourth stage, the historical space was able to integrate the new territorial development approaches launched by the National Initiative for Human Development (INDH), the Regional Development Programs of Tourism and Crafts, the Millennium Challenge Corporation,...



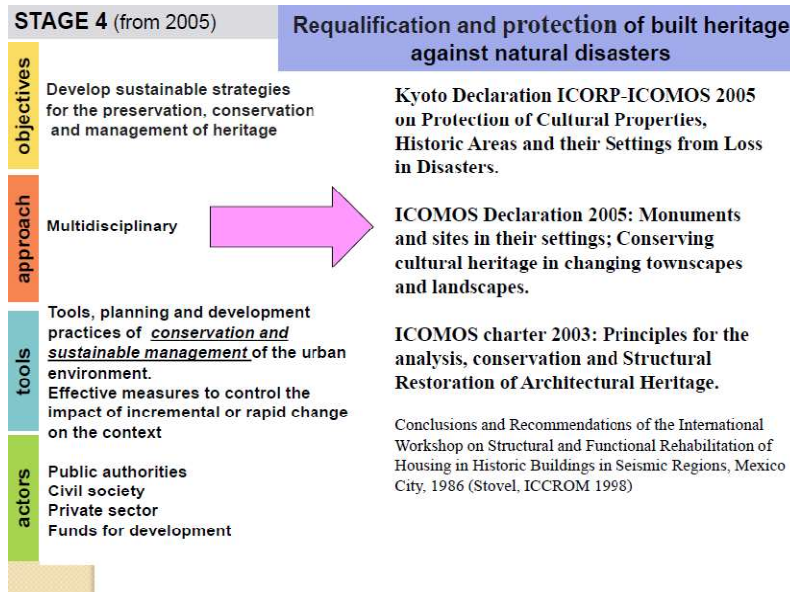


Fig.6- Stage 4 (from 2005) of the safeguard process: objectives, approach, tools and actions.

The second step (2013-2018) of the new development actions concerns the realisation of restoration and rehabilitation programs of the historical monuments and treatment of buildings threatening to collapse.

Regarding the conservation and sustainability in this historic city (Rodwell, 2007) and based on a system dynamics approach to sustainability, emphasis is put on the key actors involved in the system and on the links between them. Only the actors (ADER-Fès, public authorities, civil society, private sector, funds for development,...) as shown in Figures 2-6 and interactions comprised within the medina have been investigated. The analysis is based on a Causal Loop Diagram (CLD) as shown in Fig.7 that summarizes some issues of the system (Belyazid et al., 2003).

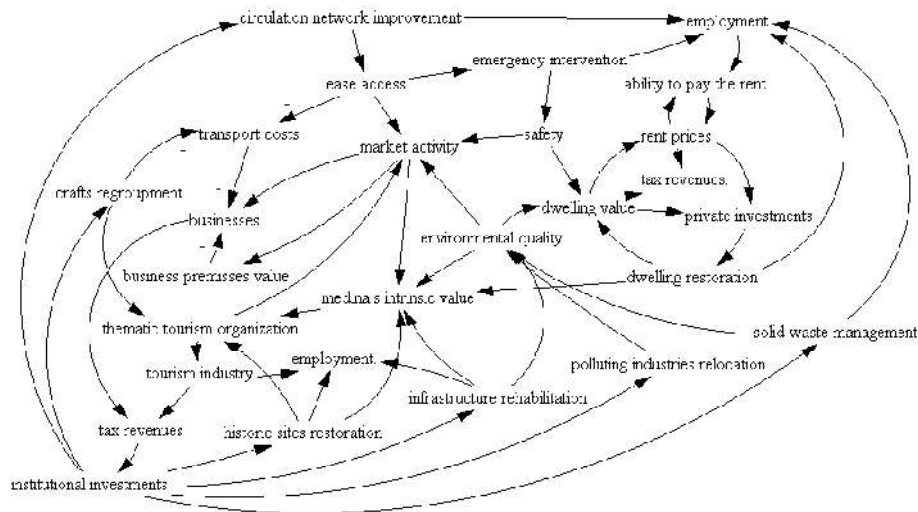


Fig.7- CLD of the medina's rehabilitation system (unmarked arrows are reinforcing connections, while arrows marked with "-" apply a hindering action)

In terms of social sustainability, the safeguarding process of Fez medina has been targeted the participation and the integration of the local society into the sustainability aim of the rehabilitation and conservation project which was and is still substantially profitable to the population.

In terms of environmental sustainability, the environmental quality is essentially improved through public investments in solid waste management, water and sewage system, infrastructures and urban facilities

In terms of integrated sustainability, it is evident that the investments accompanying the safeguarding process are the main pillar for the conservation and the rehabilitation of Fez medina, as they boost the economy, protect the cultural heritage, and ameliorate the physical environment. However, it is necessary to secure funding for maintaining public investment in the medina and surrounding areas. These cannot be thought out, planned and managed independently of the Fez city, and the integrated rehabilitation cannot be limited to the technical aspects, it requires a transversal intervention involving all relevant development actors.

### **Conclusions: lessons learned**

The paper has summarized the basic principles of the sustainable urban conservation of Fez medina and has shown that one of the pillars of the rehabilitation scheme is the reinforcement of the local institutions. This is mainly achieved through securing funding.

It has also shown that there are some positive results of the Fez conservation program, including the social participation which is essential for the successful rehabilitation of the historic housing stock, and the project has demonstrated that reconciling the objectives of urban conservation and rehabilitation with the housing needs of the impoverished inhabitants is feasible, through a process of consultation and social participation in the design and implementation of the interventions on the historic housing stock.

But there are some constraints: The tenure of land and buildings is a critical difficulty in the rehabilitation of historic cities, and the municipality should consider delegating urban rehabilitation operations to competent agencies. The urban rehabilitation projects should be designed according to simple objectives and design. Given the complexities of intervening in historic cities, the related interventions should not try and address all of the needs and opportunities under a single operation, but should rather support a programmatic approach.

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