

THE RENOVATION PLAN FOR KSAR ZENAGA IN THE FIGUIG OASIS, MOROCCO.

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Abstract

My university thesis deals with the preservation of the architectural heritage in the Southern Mediterranean Countries, particularly with a proposal for a renovation of the ksar Zenaga in the Figuig oasis, Morocco. This job is part of a wider project integrated in "The renovation of the cultural heritage in the Figuig oasis", coordinated by the NGO Africa 70. My participation in this project was made possible thanks to the cooperation between the Politecnico di Torino and the Italian NGO Africa 70. My proposal for the renovation plan of the Ksar Zenaga is based on the idea of improving the quality of life of the Figuig population, helping them in the best exploitation of the resources of their own territory and in making their homes healthier.

Figuig oasis is located in the Oriental region, close to the desert, in north-western Morocco. It consists of seven ksours and their respective seven palm groves. The ksar is a fortified village surrounded by a wall with four towers with one or more entrances. The interior consists of a tangled structure of buildings located one close to the other, separated only by roads (roofed in most cases). The Figuig ksar is mainly built in the adobe constructive technique. The oasis was once part of a circuit of caravan routes. Numerous historical events and finally the closure of the Algerian boundary caused it to lose part of its territories and even one ksour (it initially comprised eight ksours). This isolation condition also caused a crisis in its economic and social system.

The traditional house in the oasis, located inside the ksar has a patio type structure. This solution is particularly necessary for the ventilation and brightness of the building. My project develops essentially in six phases: a) The choice of the ksar; b) The ksar subdivision into micro-areas; c) The setting up of a reference classification; d) Inspections for the relief and filling-in of the classification form; e) Creation of a database for electronic data processing of the collected information; f) Final analysis with the consequent writing out of some town-planning indications. The idea of filling-up a classification form was given from the need to obtain an instrument to classify the ksar buildings and to understand the different types of decay in order to operate as effectively as possible on its fabric.

The database contains all information collected during the detection activity and supplies an overview of the classification work progress. The architectural quality of the ksar building concept appears evident. It witnesses the history of a society but also of a construction technique, which is still sustainable and perfectly adapted to the climate and style of the local requirements for homes. The object of this paper is to spotlight how maintenance works, renovation, healthier environment of the buildings and a constant strict relation with the inhabitants of the oasis will allow the abandonment of the ksar and the consequent process of decay.

1. INTRODUCTION

My university thesis develops essentially in two parts: phase one, the bibliographic research, which was necessary for the approach to the wide theme of preservation of the architectural heritage in the developing countries; and phase two, a practical component, which was dedicated to the proposal of a renovation plan for the Ksar Zenaga, through a period of internship in the oasis of Figuig, in Morocco.

The first phase of the research was crucial not only as a preparation to the project, but also as a personal study, since the preservation theme is normally treated in academic studies only with reference to 'western' architecture. During the period of my internship, I could observe how the aims of the work adapt to the project requirements, and how the research is applied to the reality of the project.

This work was made possible in particular thanks to the cooperation between the Politecnico di Torino and the NGO Africa 70, which allowed implementing a comprehensive and suited project to the oasis territory.

2. THE RESEARCH

The starting point of the whole idea was the importance of the architectural heritage within a country, as well as the responsibility of each individual for the architectural heritage preservation. By investigating the definition of 'citizen of the world' and also the way the mass-media have influenced, and still influence, the idea of hierarchy among countries (developed countries and developing countries), the need for a critical approach becomes evident. This is possible most of all thanks to the cooperation experiences.

Secondly, the analysis dealt with the issues related to the architectural project: these types of interventions are in fact, part of the cooperation processes among nations, where the concept and the needs of preservation can have different meanings and interpretations. The main encountered difficulties by the western project-researcher are related to the geographical and technical distance from the location in which the project takes place and also the lack of adequate regulations which they can refer to. Each project is independent from the other ones. Technology and solutions change depending on the different environment. However, in order to ensure the right approach, it is necessary to know the quality of the product to which the intervention is applied, to study the context and the local culture, to know the social implications and the specific construction techniques and the materials used. Finally, it is a priority to keep alive the contact and the relation between the technological development and the historical heritage.

The choice of concentrating the analysis in the Mediterranean area was suggested mainly by the intent of exploring the differences and the similarities among the territories of this area. In spite of the geographical closeness, they have gone through different developments because of their respective historical and cultural background.

3. THE PROJECT

The oasis area boasts an important architectural heritage, including the Ksars, a peculiar water canalization system, several palm groves surrounding the oasis, and beautiful sights, all over the territory.

In spite of this value, the geographical, political and social contexts have dramatically influenced the destiny of the city; the French colonization in the first place and, secondly, the split of the territories with Algeria, have definitely isolated the oasis, causing a strong migration flow and a consequent dramatic decrease in resources. The consequences hit the weakest part of the population, who, for physical and social reasons, could not leave the oasis: especially, women, elderly and children.

The problems of this territory can be summarized in three points:

- Absence of a commercial and economic system;
- Reduction of the water resources, crucial for the oasis survival;
- Physical and social constraint represented by the boundary with Algeria.

The architectural quality of the Ksar building concept appears evident as it witnesses the history of a society, but also a construction technique which is still sustainable and that perfectly adapts to the climate and style of the local requirements for homes

3.1. Content

The Figuig oasis is located in the Oriental region, close to the desert, in northwestern Morocco.

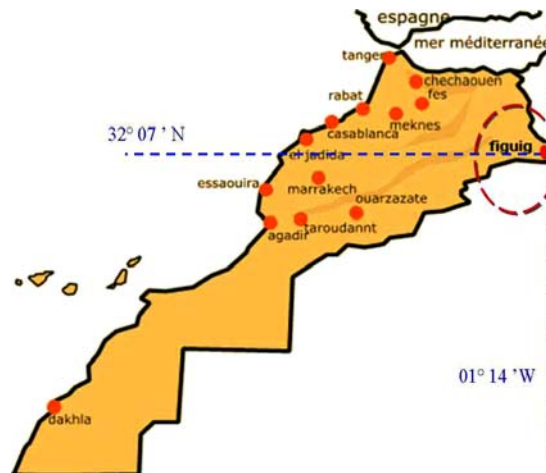


Fig.1: The position of Figuig in Morocco (www.maps-store.it)

The Figuig ksars are mainly built of earth. They are composed with the adobe constructive technique. The position of these settlements is functional to the water sources located in their proximity, which has been ensuring the population survival in time. These also allowed the palm groves to develop and dates to be harvested, being the main resource for the oasis. The oasis was once part of a circuit of caravan routes but numerous historical events and finally the closure of the Algerian boundary caused it to lose part of its territories and one ksar (it initially comprised eight ksours). This isolation condition also caused a crisis in its economic and social system.

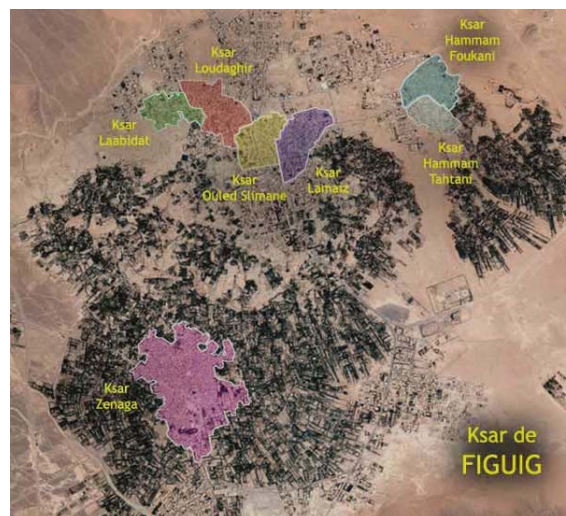


Fig.2: The different ksar of Figuig (photo by Googl Earth)

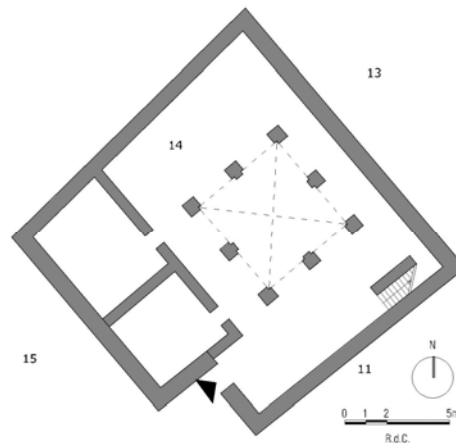


Fig.3: A patio type structure (image by Ianira Vassallo)

This solution is particularly necessary for the ventilation and brightness of the building that does not show any opening to the outside, just a window; when the house is fitted with a room positioned over the appurtenance roofed road. The house can have one or two above-ground levels, for a total height of 8-10 meters. In the inside, the house develops its residential functions. It is used as a stall and for food stockage, and sometimes becomes a shop for handicraft activities. The terrace then becomes a semi-public place for the life of women.

3.2 Objectives and specific effects of the project

The renovation plan of the ksar also provides for specific objectives referred to the single building and to the general structure of the oasis. As far as concerned with each single house, the topographical relief and the classification allow evidencing the structure and composition characteristics of the building, aiming to the preservation and integrity of the entire structure. This also supplies a fresh mapping of the present status and decay of the ksar. The analysis of the buildings gives relevance to the hygiene problems of the various homes and of the entire Ksar, promoting an improvement of the inhabitants' health conditions. The maintenance works, the renovation, the healthier environment of the buildings and a constant strict relation with the inhabitants of the oasis will allow avoiding the abandoning of the ksar and its consequent process of decay.

3.3 The project methodology

The project is essentially developed in six phases:

- The choice of the ksar
- The ksar subdivision into micro-areas
- The setting up of a reference classification
- Inspections for the relief and filling-in of the classification form
- Creation of a database for electronic data processing of the collected information
- Final analysis with the consequent writing out of some town-planning indications

3.4 The classification form

The idea of filling-up a classification form was given from the necessity to obtain an instrument to classify the ksar buildings and to understand the different types of decay in order to operate as effectively as possible on its tissue. The ksar building tissue is very complex and apparently it does not follow any composition rule. Therefore, it is very hard to orientate within the tissue.

The lack of any cartographic material to be used as a reference, the total lack of regulations regarding the building construction and the evident very bad preservation condition of some buildings, required a classification that highlighted the most critical points within the ksar. This classification started before the arrival in the Figuig oasis, thanks to the consultation of some sample classifications prepared for similar studies.

Once in the oasis, the classification was subject to changes to adapt to the requirements of the project and the ksar peculiar characteristics. The subsequent modifications were functional for the analysis of the morphological characteristics and the architectural quality of the buildings. The present classification form was experimented on the ksar Zenaga - the largest ksar for dimensions and number of houses. This is also the ksar with the highest number of inhabitants, and the best preserved ksar, although, this implies a higher number of excrescences in its interior.

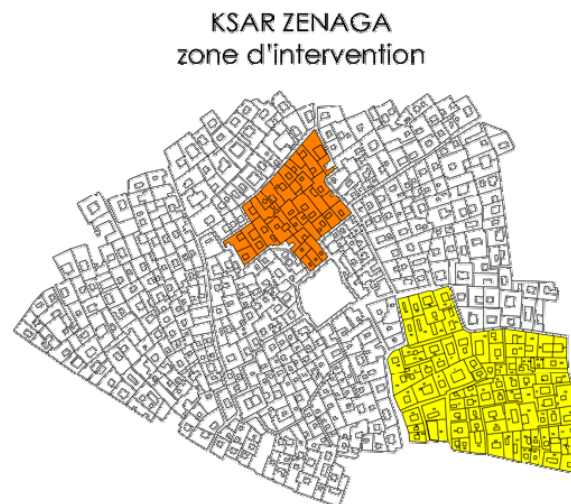


Fig.5: The two sub areas of the ksar (image by Ianira Vassallo)

During my stay in the Oasis, an analysis was conducted on a sample of 2 sub areas in this ksar (out of a total of 9 sub areas), for a total number of 137 detected houses. The instrument obtained was prepared in an emergency situation and with no possible reference to similar instruments previously composed. Because of these considerations, the collected information was divided into four categories.

The first part of the classification form collects information on the building location and property and includes a planimetry of the building. The second part of the classification form detects the relationship between the number of inhabitants and the built areas. A third part focuses on the structure of the building, indicating the materials used in its different parts and their degree of decay. The last part, concentrates in the analyses of the building morphology and its architectural quality.

3.5 The database

The database was designed to make the classification work more consistent and easy consultation. The tool was subject to some modifications due to the necessity of

making it consistent with the programs of the local computers, as well as with the data processing knowledge of the engineers working in the project. The database contains all information collected during the detection activity and supplies an overview of the classification work progress.

In fact, the database includes all the collected information in the classification form of each single building, as well as the Autocad file of the corresponding planimetries. Additionally, when the plan preparation will be concluded, it will be used as a tool to evaluate the development work and the interventions within the ksar.

3.6 Data analysis

In this last phase, the different degrees of decay of the buildings were analysed and compared with the analysis of their structure and morphology. A classification was obtained according to different intervention areas.

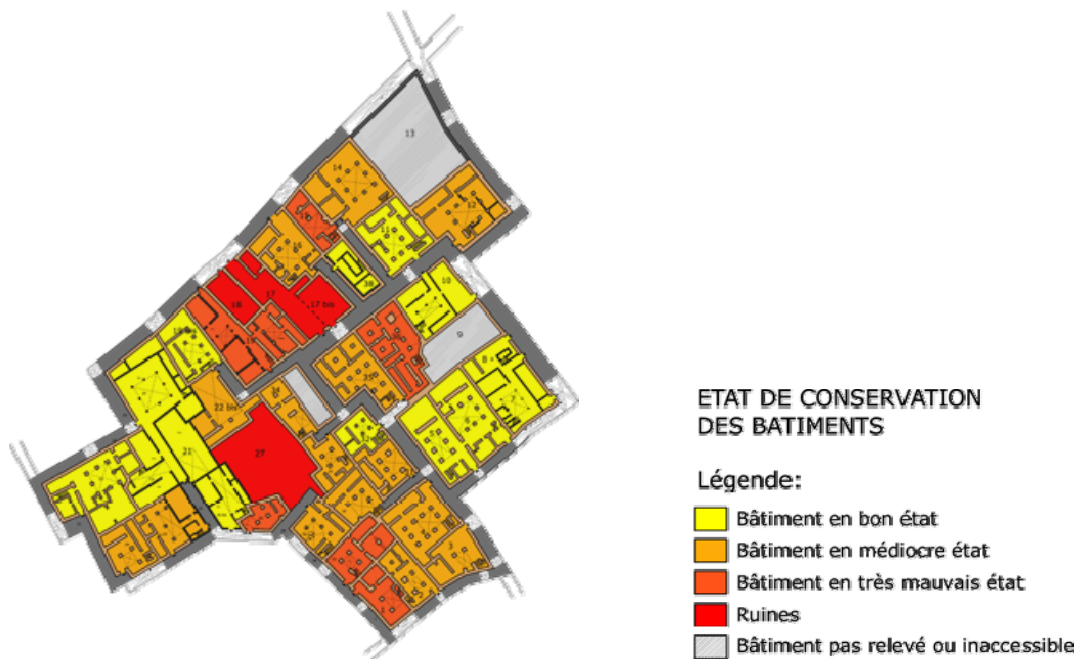


Fig.6: Sub area A, with degrees of decay (immagine by Ianira Vassallo)

Each building requires constant maintenance actions because of the local constructive material (earth in fact requires constant preventive intervention to ensure stability), as well as actions generated by new social requirements (construction of bathroom and closure of a room used as a kitchen). The study of a solution for ruins is also an emergency issue for the ksar, as this generates an extension of the structure deterioration that also affects the adjacent buildings. Subsequently, these considerations were developed to create a series of town-mapping indications that are now contained in a reference document available to the entire population of the oasis.



Fig.7: A ruin in Figuig ksar (photo by Ianira Vassallo)

4. CONCLUSION

Cultural heritage is a very important resource for a country. In fact, it is an expression of the society, of the history and of the culture of a place. Despite this, several countries prefer to build new modern houses rather than to preserve the old ones. Local population believes that this new typology of houses represents at best their new needs, but I personally believe that traditional architecture is already a perfect model for the place in which it is situated. Vernacular built heritage can be seen as “the essence of sustainability”, being constructed with local materials and the minimum wasted resources.

I believe that it is essential, for such an isolated place as Figuig, a proposal of cultural heritage renovation for sustainable tourism and local development.

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Curriculum:

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