

## **Permanent Plan of the Safeguards Sectors in Algeria (PPMVSS): the case of Algiers old urban nucleus**

ABDESSEMED-FOUFA Amina<sup>1, a</sup>, ZEKAGH Abdelwahab<sup>2, b</sup> and  
MEROUANI Houria<sup>3, c</sup>

<sup>1</sup> Department of Architecture. Faculty of Engineers Sciences, University of Blida, Algeria

<sup>2</sup>High School of Architecture, Algiers, Algeria

<sup>3</sup>CNERU, Algiers, Algeria

<sup>a</sup>foufa\_a\_dz@yahoo.fr, <sup>b</sup>zekaghwahab@yahoo.fr, <sup>c</sup>gcneru@cetic.dz

**Abstract** In Algeria, several old urban nuclei are decayed or severely damaged. Numerous are the factors related to these damages: the age of constructions (many centuries), the bad or absence of maintenance, the natural disaster (earthquake, landslide, and floods) and sometimes the abandonment.

Since 2003, the law 98-03 related to the preservation of cultural heritage and its application decree was implemented. In fact the first safeguard sector plan in Algeria was applied to the Casbah of Algiers which is classified as a World Heritage. This old urban nucleus presents an important decay. The different problems related to its aspect are principally the age of constructions; some of them date from the 10<sup>th</sup> century and the majority of the 16<sup>th</sup>; the absence of maintenance and recently in 2003 the impact of the earthquake.

The project is still under investigation and is established by the CNERU Group (National Center in Urban Research and Studies). Furthermore the work on these areas was done under constraints. The Casbah of Algiers is a World Cultural Heritage, what induced us the installation of emergency measures (propping up), then in parallel an in situ investigation in order to determine the vulnerability of constructions was done (minor and major inheritance, houses and buildings) in order to elaborate the manual of rehabilitation and the safeguard plan and its regulation. This paper presents the adopted methodologies in this area and the different actions as the emergency measures, the constructions propping up and the manual of rehabilitation.

**Keywords:** Historical nucleus, urban, cultural heritage, emergency measures, propping up, manual, rehabilitation.

### **Introduction**

The Casbah of Algiers is initially a traditional urban unit which keeps the marks of knowledge of ancestral architecture and construction it has also a rich archaeological underground with vestiges from millennium several times. The Casbah is a history in charge of emotions and feelings shared by the Algerian people, through the values produced during the centuries and translated under of various expressions, such building trades and the craft industry, the art of the miniature, illumination and music. During three centuries (1516-1830) Algiers was under the Ottoman Empire and was called Al Djazāir Al Mahrūssa it constituted the central place, of the Moslem force in the Mediterranean Basin. The urbanization process since the French colonization (1830), led to, as well as, its physical and socio-economic marginalisation. Indeed, its marginalisation made that the Medina became an “enclosure” being used as transit centre for rural people. The transfer of the economic activities towards the colonial city, the thickening and the ageing of the frame had induced the degradation of this inheritance. The Algerian Government has engaged for several years (1980 - 2010), expenditure in different state of “rehabilitation” in order to safeguard this cultural heritage. But the decay of this site has extended. In 2005 the Casbah was set up as a safeguarded sector and the study started in 2006 in accordance with the regulation of the PPMVSS.

### Contents of the Permanent Plan of the Safeguards Sectors in Algeria (PPMVSS)

The PPMVSS covered an introductory report which highlights the actual position of the architectural urban and social values, for which is established the safeguarded sector and statement the measurements adopted for its conservation and development. It also reveals the following aspects:

The state of the layout of the networks of roadway systems, water supply as well as the evacuations.

The regulation as a legislative text (law) which indicates the generals rules of land use as well as the operations of the development.

The PPSMVSS also covered appendices which include the graphic documents which highlights the homogeneous areas while emphasizing the state frame of conservation, all the networks, the materials and the techniques of construction. Fabric structure, constructive and architectonic typologies will be presented in the form of a handbook being used as guide to various works of restoration and conservation. The PPMVSS is elaborated through three phases:

The diagnosis and the emergency measure project if needed.

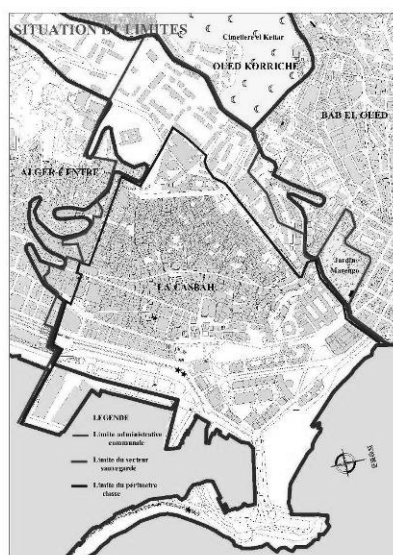
The historical analysis and typologies studies followed by a preliminary draft of the PPMVSS project.

The final drafting of the permanent plan of safeguard and development (PPMVSS).

### Work Plan

The approach aims at identifying characteristic parameters of the potentialities of the safeguarded sector as well as the various aspects related to its vulnerability. The work carried out through three phases. The superposition and the correlation between the three phases provide the anticipated result.

**Diagnosis and Emergency Measures** The work started by an in situ investigation in order to evaluate the state of degradation inside the entire perimeter of the safeguard sector. As a result, the emergency measures proved to be necessary following the first state of the diagnosis. The emergency plan will cover the diagnosis and the emergency measures which must make it possible to stop the whole of the processes of degradation (natural and entropic). The goal is being to stop definitively the cause's degradation.



*Figure 1: Limites of the safeguard sector of the Casbah of Algiers 105 ha. (executive decree N°05.173 May 9th, 2005 creation and delimitation of the Sector Safeguarded the "CASBAH of ALGIERS")*

In the methodology phase we shared the safeguarded sector into nine (09) under sectors. Each under sector is dealt by multi-field team. The investigations are carried out on the basis of typology card, the state of the frame and the networks, socio-demographic environmental and economic aspect.

The state of the specifying frame carrying out where the extreme state of degradation, the state of advanced degradation, the state of average degradation, the state of surface deterioration, ruins, vacuums, illegal constructions and/or precarious, renovated constructions, works in progress, electricity and gas and the current location of the environment are studied. At the end of these different studies we elaborate the synthesis plan (superposition of the phenomena of degradation). The emergency measures are conforming at the parcels. They are classified in four categories:

The decayed constructions which need internal strengthening.

The reports established on site are illustrated by photographs. The project manager (architect of the historical buildings and sites), establishes the diagnosis and the emergency measures building by building. In same manner, a diagnosis is established for the sections or defective works of the various networks.



Figure 2: State of building in one of the under sectors Amar Ali



Figure 3: State of the network system in one of the nine under sector Amar Ali

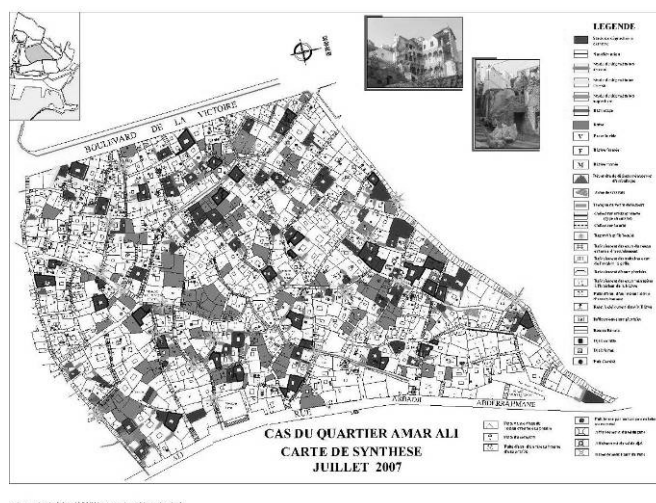


Figure 4: Synthesis plan of one of the nine under sector Amar Ali

A handbook of propping is drawn up: document appendix II.

**The Historical Analysis and Typologies Studies** This stages of work started simultaneously with the first phase. Indeed in order to carry out the diagnosis of constructions, a typological analysis of the latter was necessary. So, we started to study various architectural, constructive and architectonic typologies. Of course to study typologies required a return towards the history and thus we could determine the various phases the Casbah of Algiers construction. Algiers was built during four phases of constructions: the Phoenicians period when it was called Icosim; then Roman period and it was called Icosium. During the Berber period (from 9<sup>th</sup> to 15<sup>th</sup> century) it was called *Djazair bani Mazghenna* and during the Othoman Regency (from 16<sup>th</sup> to 19<sup>th</sup> century) it was called *Al Djazair Al mahrussa*. This historical stratification gave an Arab Islamic architectural typology, an Ottoman constructive typology in earthquake resistant matter. During the French colonization, the Casbah was completely restructured especially in the lower part. It subsists today only the higher part which is more or less homogeneous and is characterized by a traditional architecture.

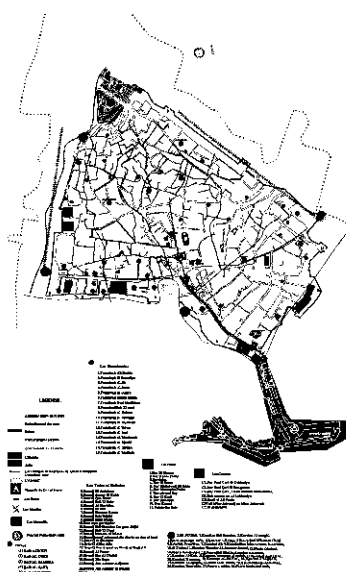


Figure 5: Algiers during the Ottoman period

A hand book of the architectural, architectonic and constructive typologies was drawn up (manual of rehabilitation).

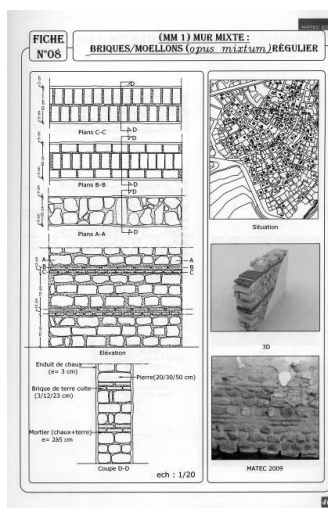


Figure 6: Manual of rehabilitation (load-bearing walls) example.

**The Final Drafting of the Permanent Plan of Safeguard and Development (PPMVSS)** This phase was devoted to the development of the regulation and the plan of protection. The regulation takes in charge all types of buildings (typology, materials and constructive techniques), the vacuums (upstream and swallows of buildings), and networks (streets, supply of drinking water, evacuation, etc.). The plan of safeguard and development draw the tendencies of the development in term of buildings, vacuums and networks.

**State of Progress of the Work** The first phase was finished during the end of 2008. The propping up of roughly 300 buildings started at that time and is still in hand. The strengthening of buildings will beguine at the end of 2010. The government will release a budget of assistance to repair, strengthening and rebuilding for the populations which wish to remain at the historical nucleus.

## Conclusion

The permanent plan of the safeguards of the Casbah of Algiers is the first one in Algeria. Its study started on the beginning of 2006. Today the study is finished and the propping up of the emergency measures is finished soon. The execution of this plan will begin at the end of 2010 when the Algerian government will bring a financial aid.

Since 2007 other PPMVSS started at different regions in Algeria as Dellys old nucleus which was seriously damaged by the 2003 earthquake of Boumerdes, Constantine in the East of the country and which present the same characteristics of decays then Algiers.

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