

ALGERIAN DEMOCRATIC AND POPULAR REPUBLIC
MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH
SAAD DAHLEB UNIVERSITY BLIDA 01
INSTITUT OF ARCHITECTURE AND URBANISME

Title of the Communication

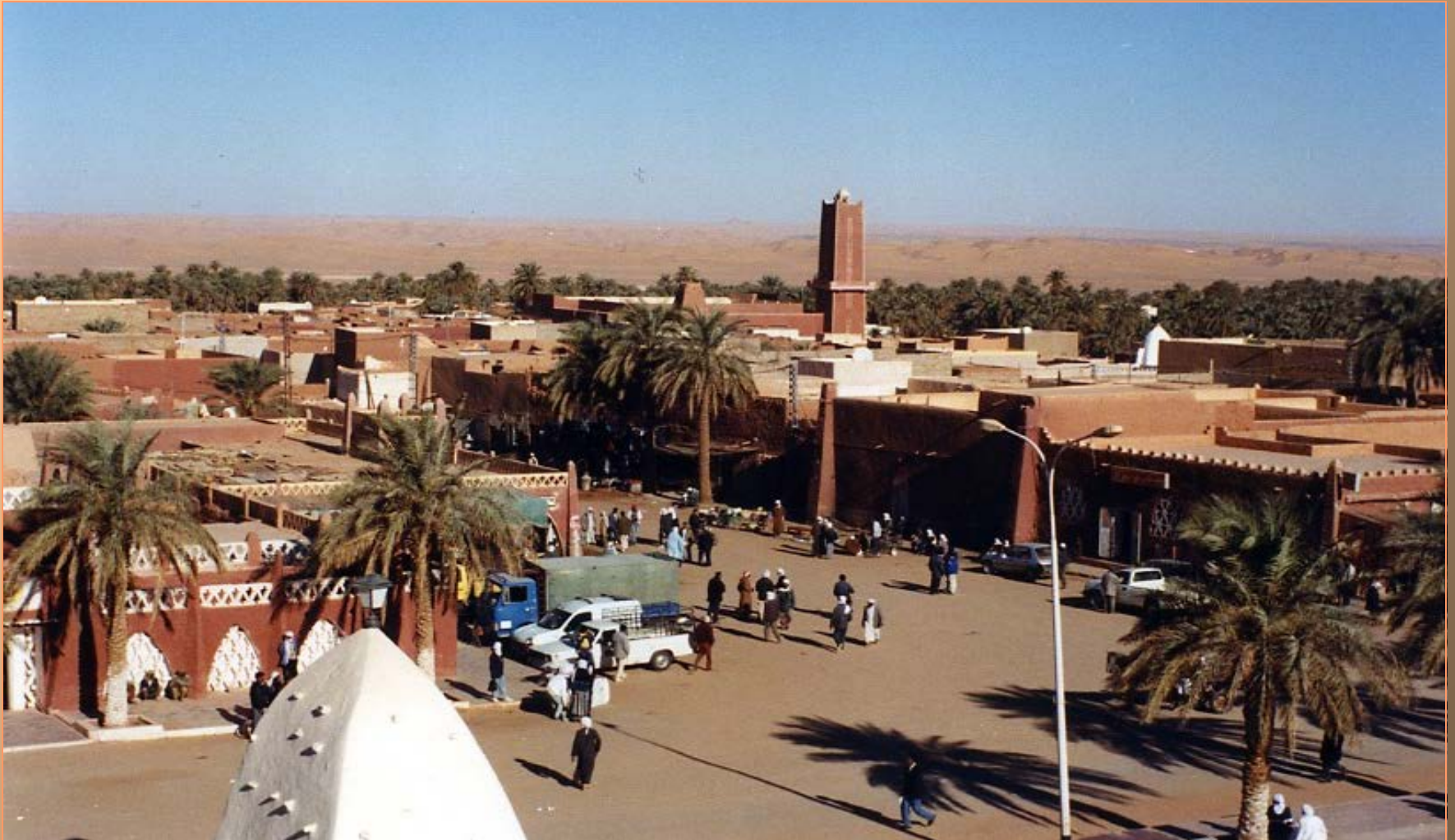
**« The Preservation Of the Traditionnal Building System In the Saharan
Environnement as Factor of Sustainability »
Case of Study ; South of Algeria .**

Présenté par :

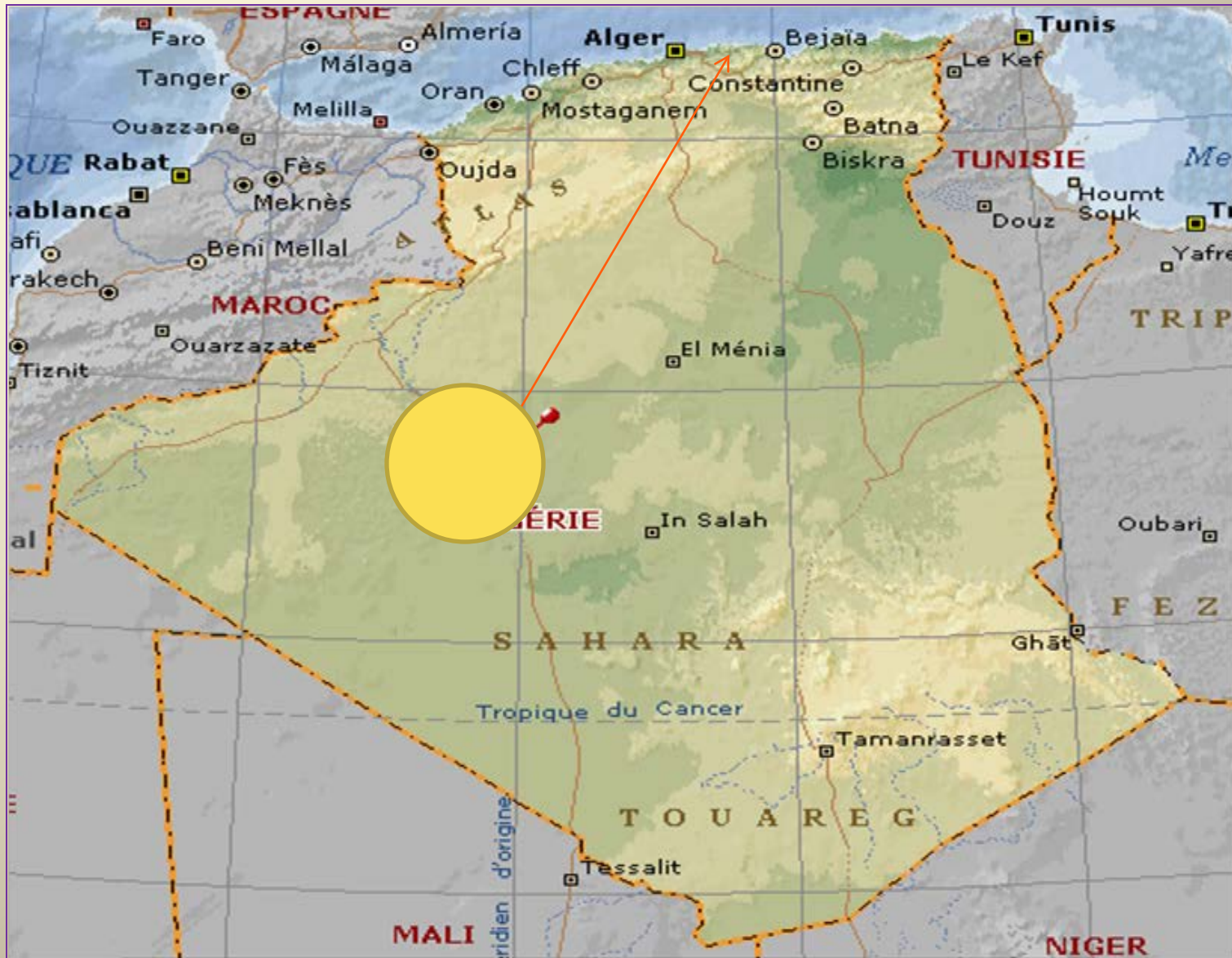
Dr / ARCh. MOURAD MAROC

**Expert Architect of Monuments and Protected Sites
Ministry of Culture .**

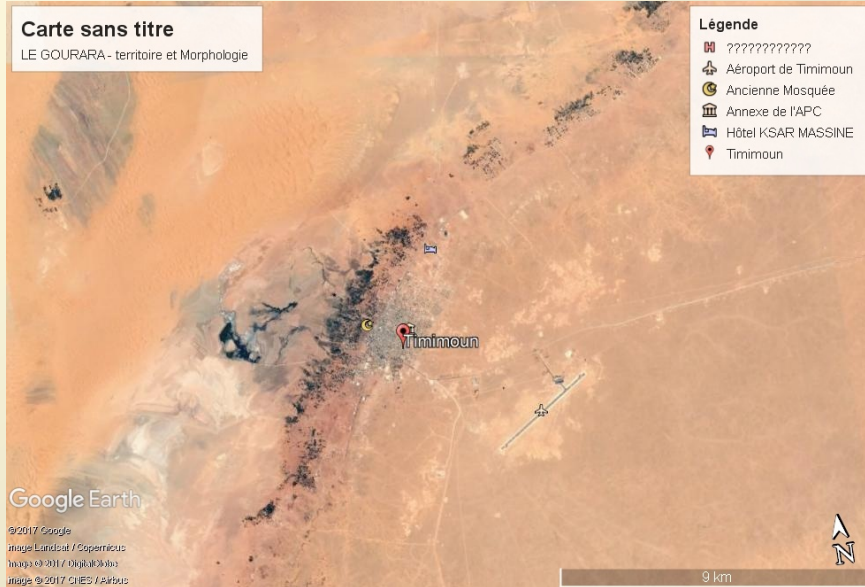
TIMIMIMOUN " the " Red Oasis " Sanctuary of Saharan Architecture



Geographical situation of Timmimoun



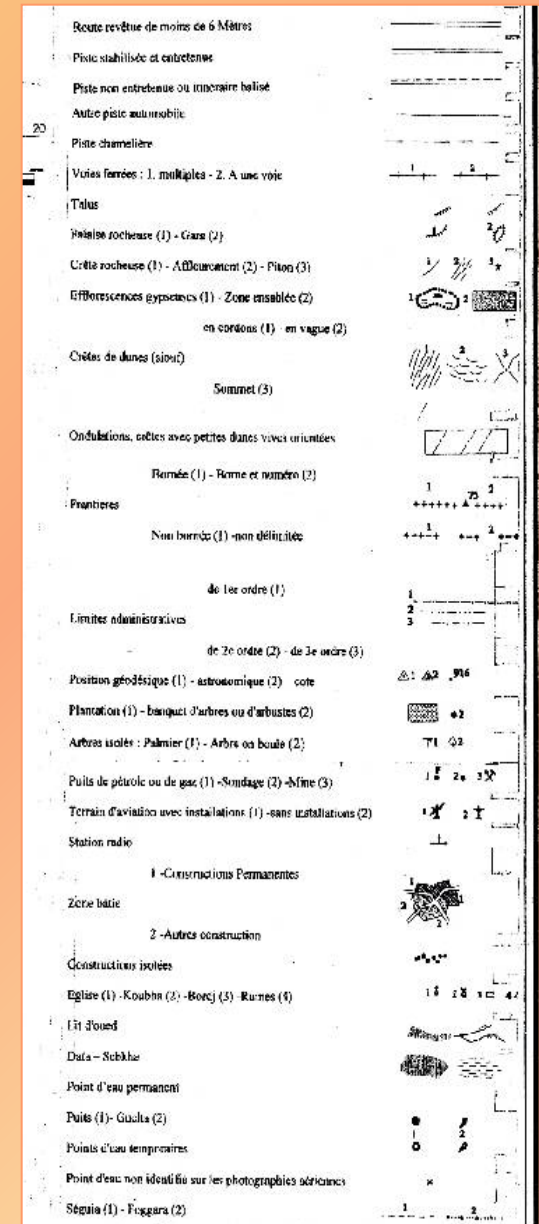
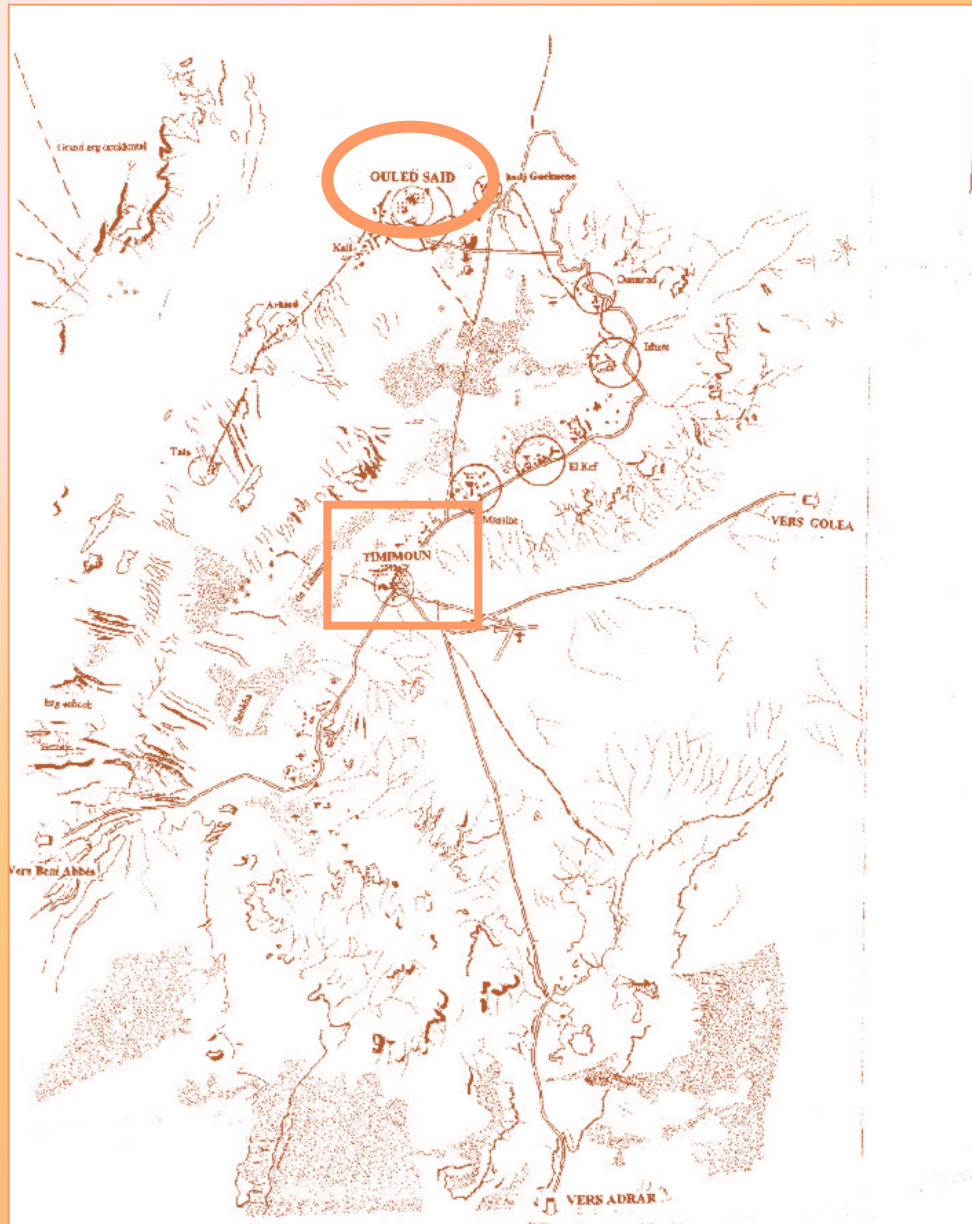
Presentation of the territory of « Timmimoun »



Gourara
au centre
du Sahara



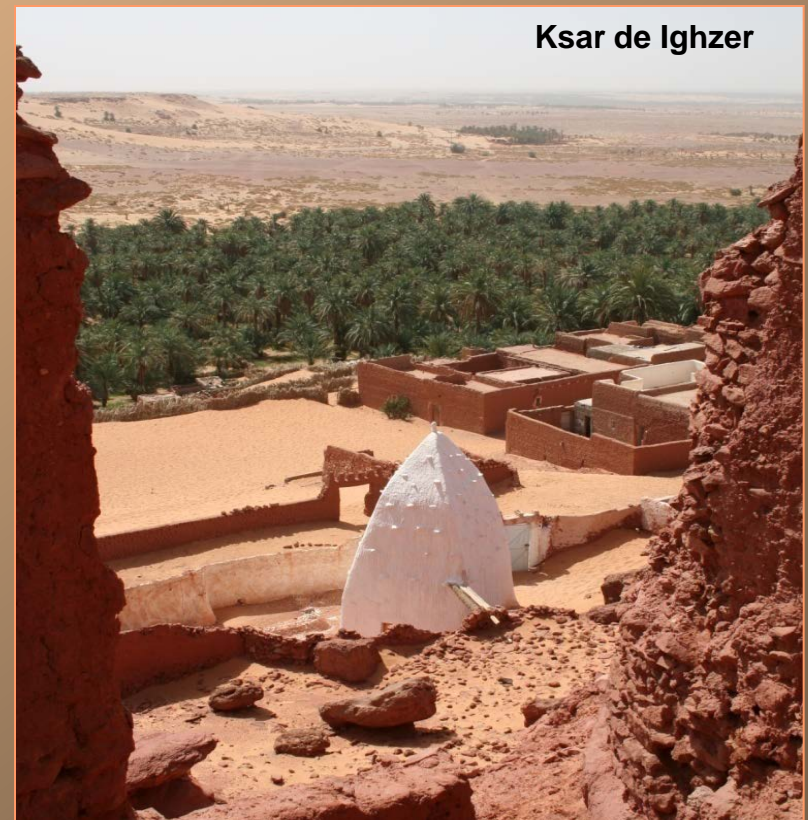
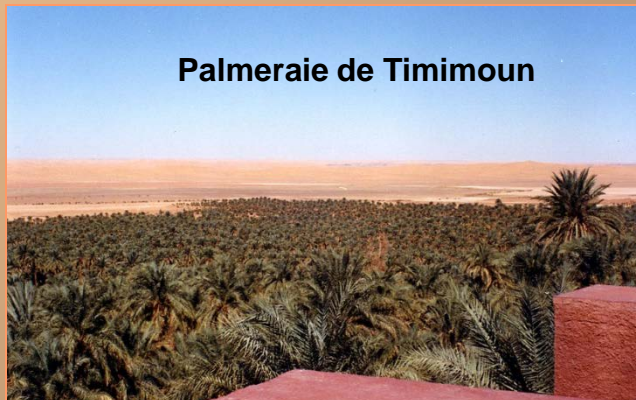
Situation of the Timimoun Ksour (Old City) territory



Identification of geomorphological components of the Timimoun Ksour territory



Different forms of landscapes: nature / culture of the Timimoun Ksour



Identification of intervention themes on the Timimoun Ksour



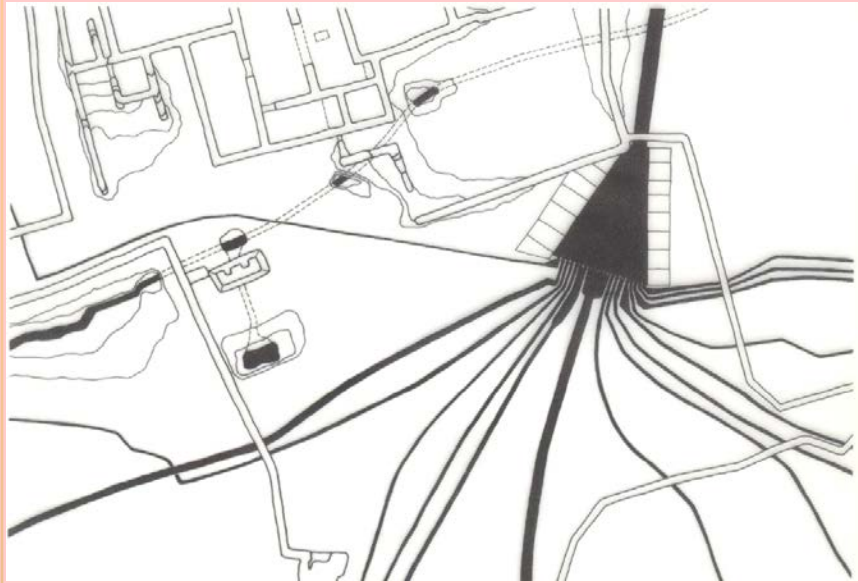
Degradation of the Ksar



Identification of intervention themes on the Timimoun Ksour



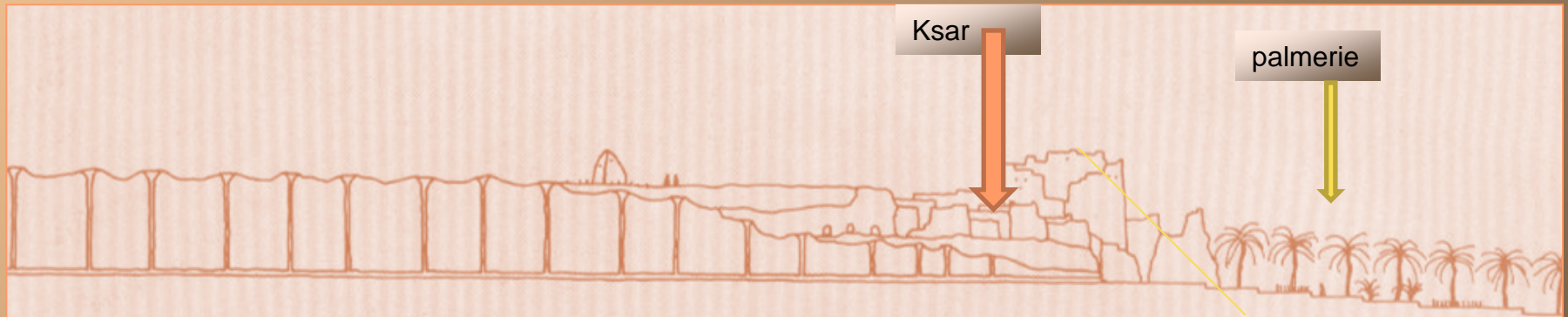
Water as a structuring factor (système OF FOGGARA)



VIEW in plan of the Kasseria Of Foggara

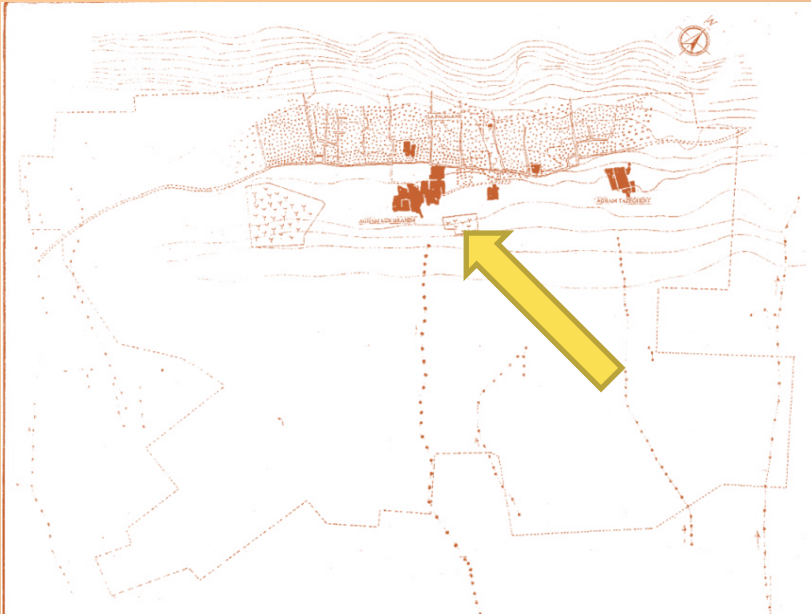


Overview of the Kasseria

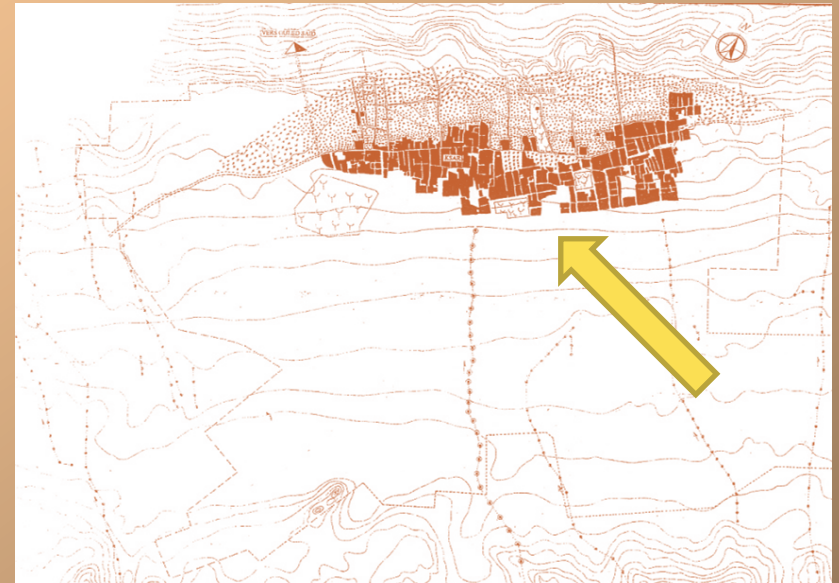


Cross section on the Foggara system

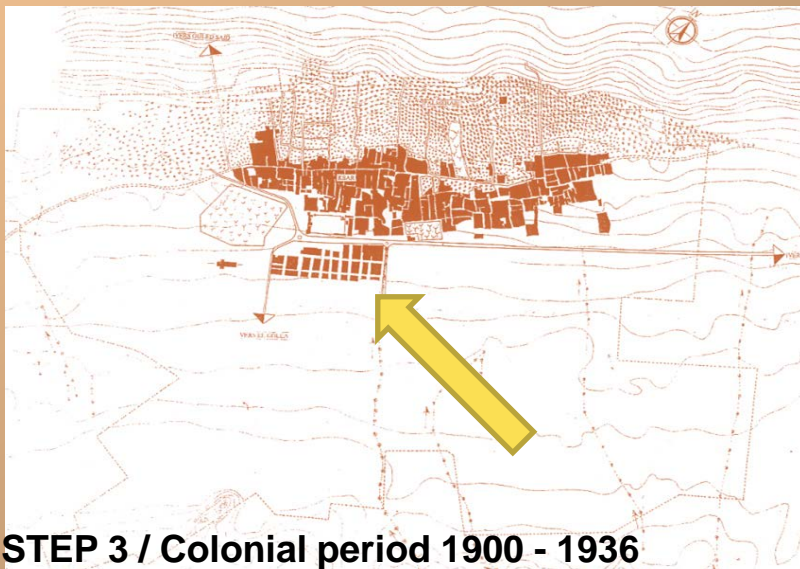
Historical process of formation / transformation - Ksar de Timimoun



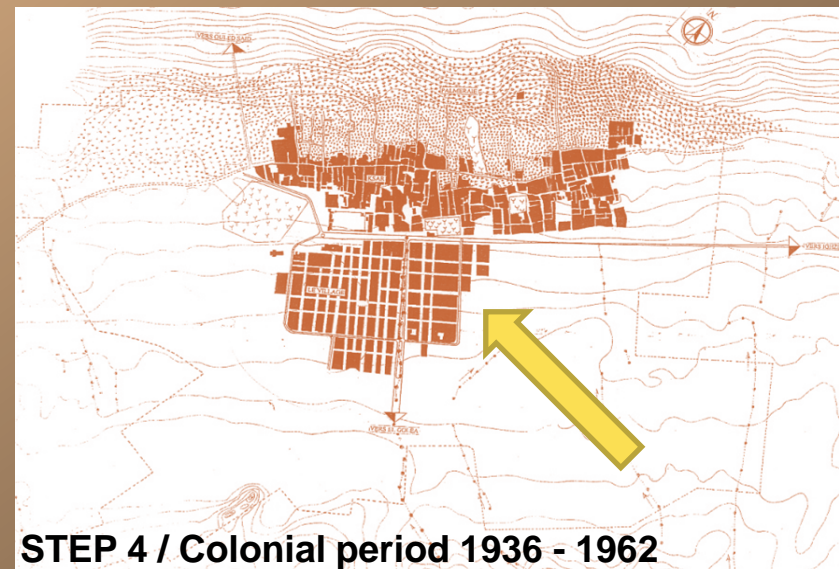
STEP 1 / Intramural period 300 AJC



STEP2 / Period extra- muros X in the 19th century

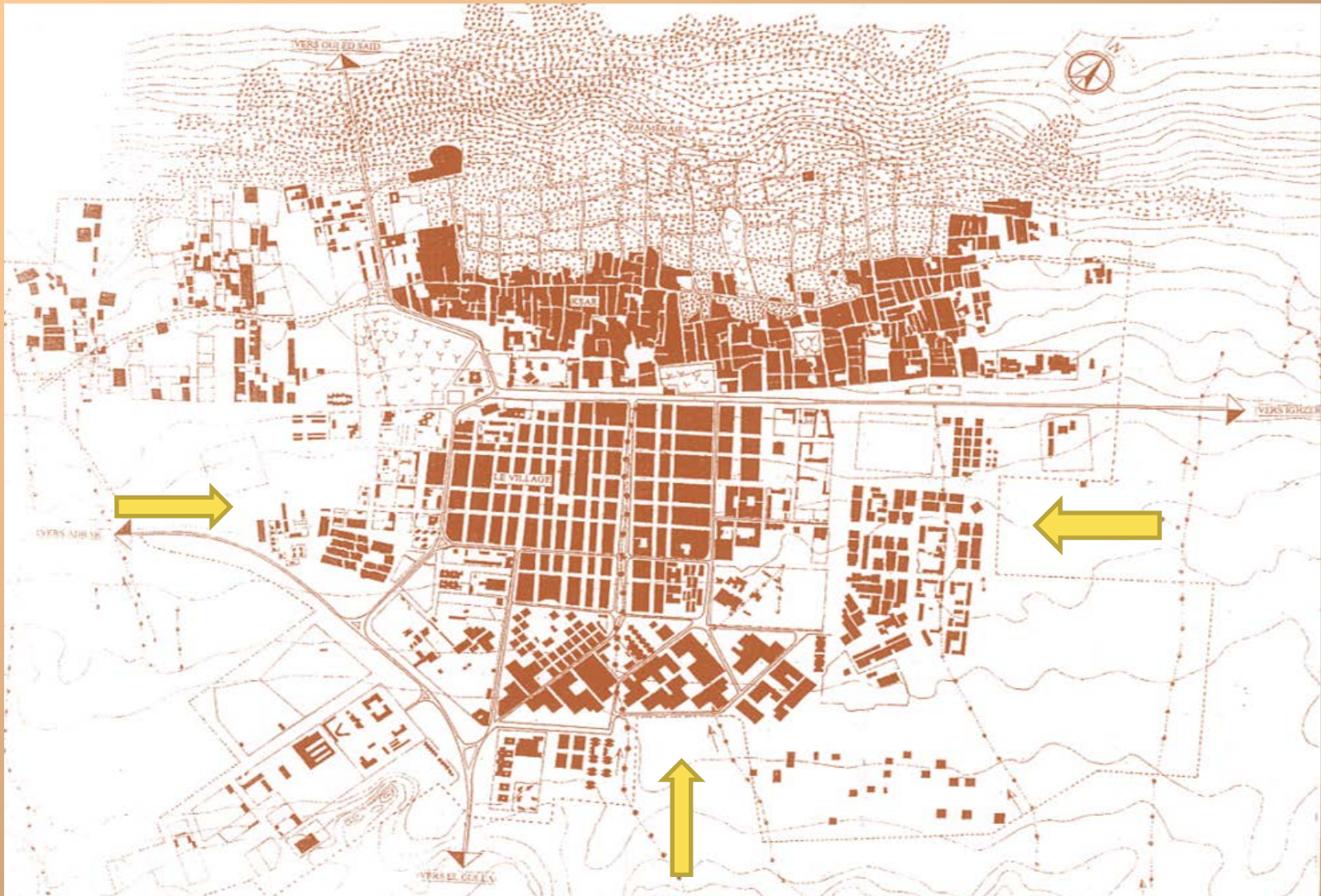


STEP 3 / Colonial period 1900 - 1936



STEP 4 / Colonial period 1936 - 1962

Historical process of formation / transformation - Ksar Of - Timimoun



STEP 5 / Post-colonial period 1962 -1992

Presentation of the city of Timimoun

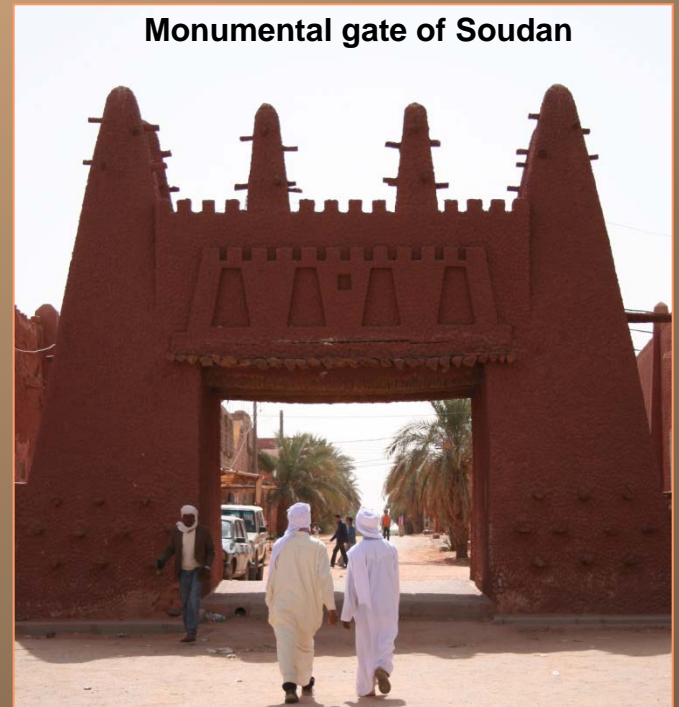
Central market place



Administrative Headquarters

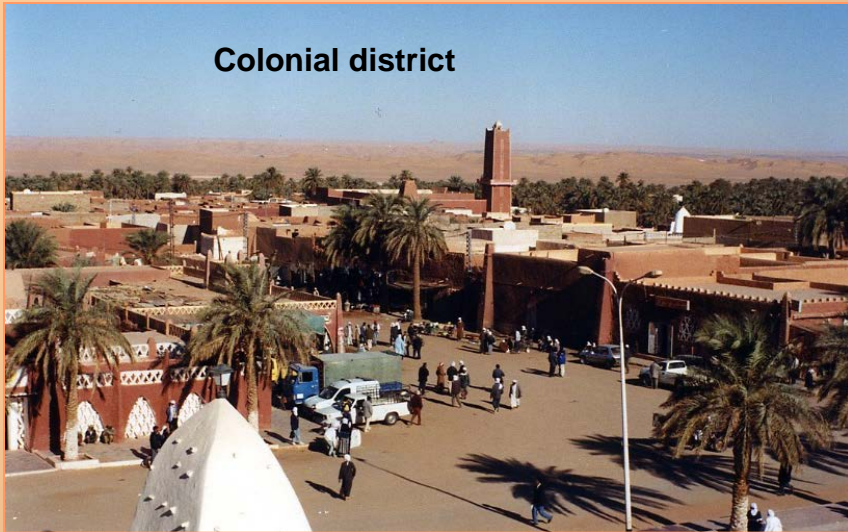


Monumental gate of Soudan

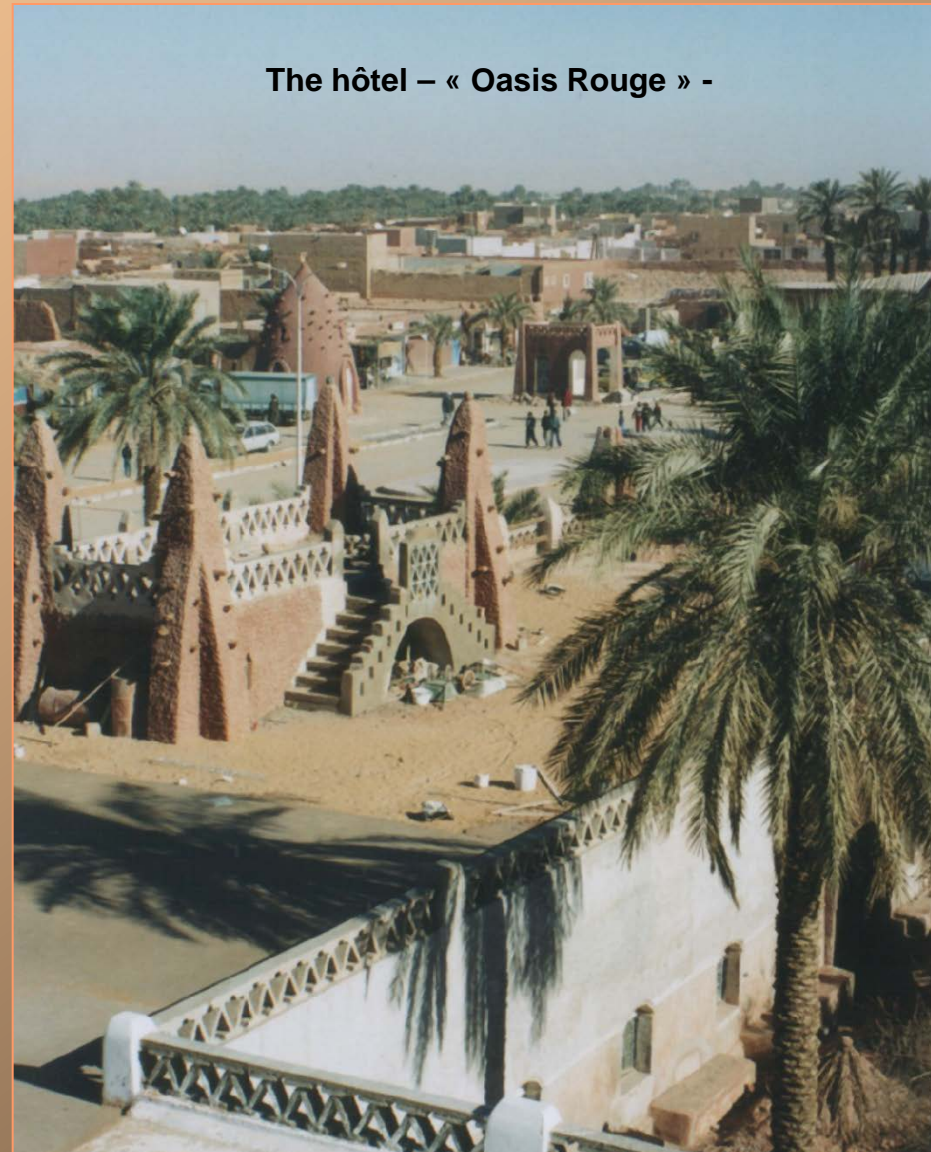


Presentation of the city of Timimoun

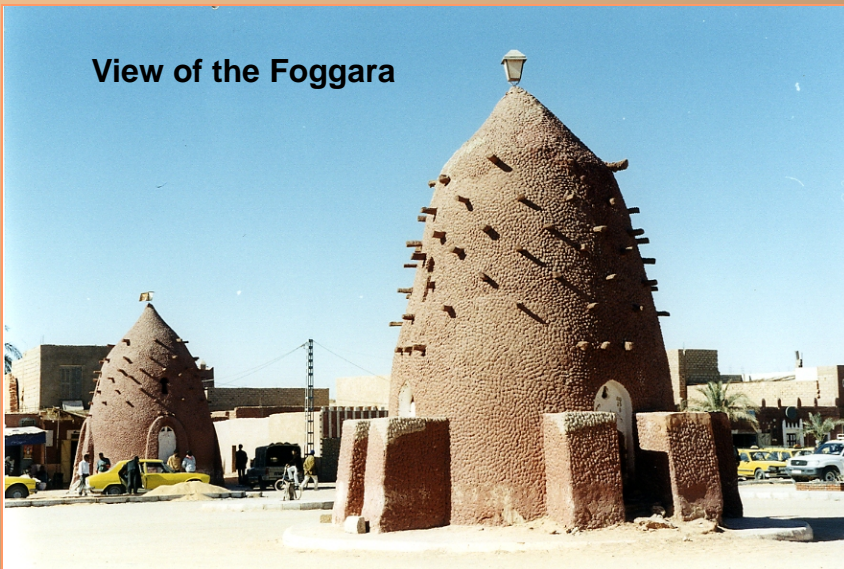
Colonial district



The hôtel – « Oasis Rouge » -



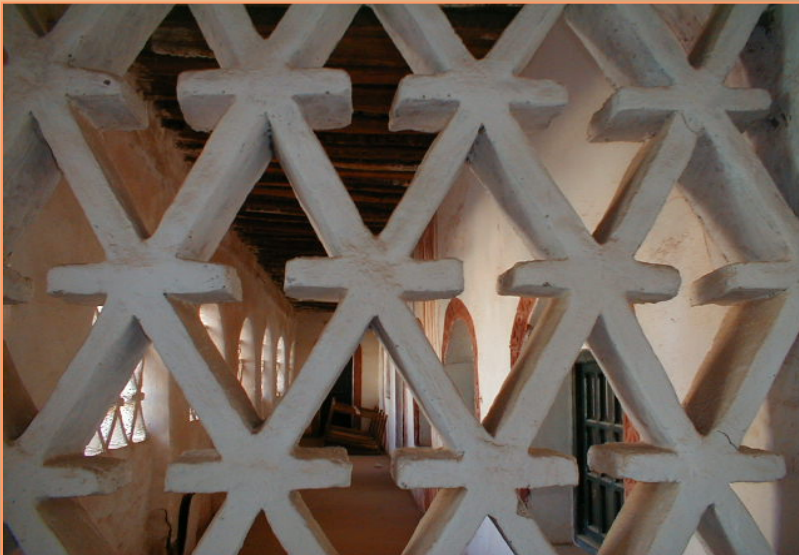
View of the Foggara



Different views for the l'hôtel – RED Oasis -



Architectural details OF the hôtel – Red Oasis -





urban dwellings



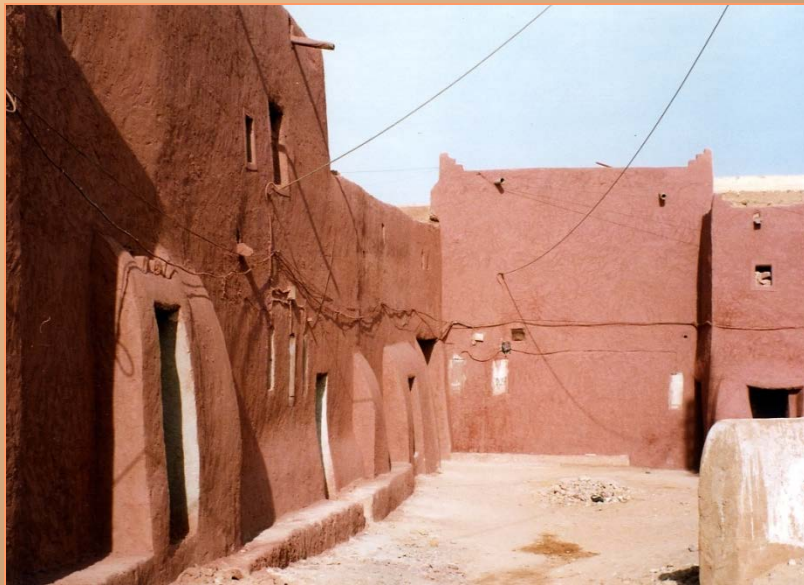
Distribution system for the traditional compact ksours fabric



View of the Rahbas (plots)



the routes

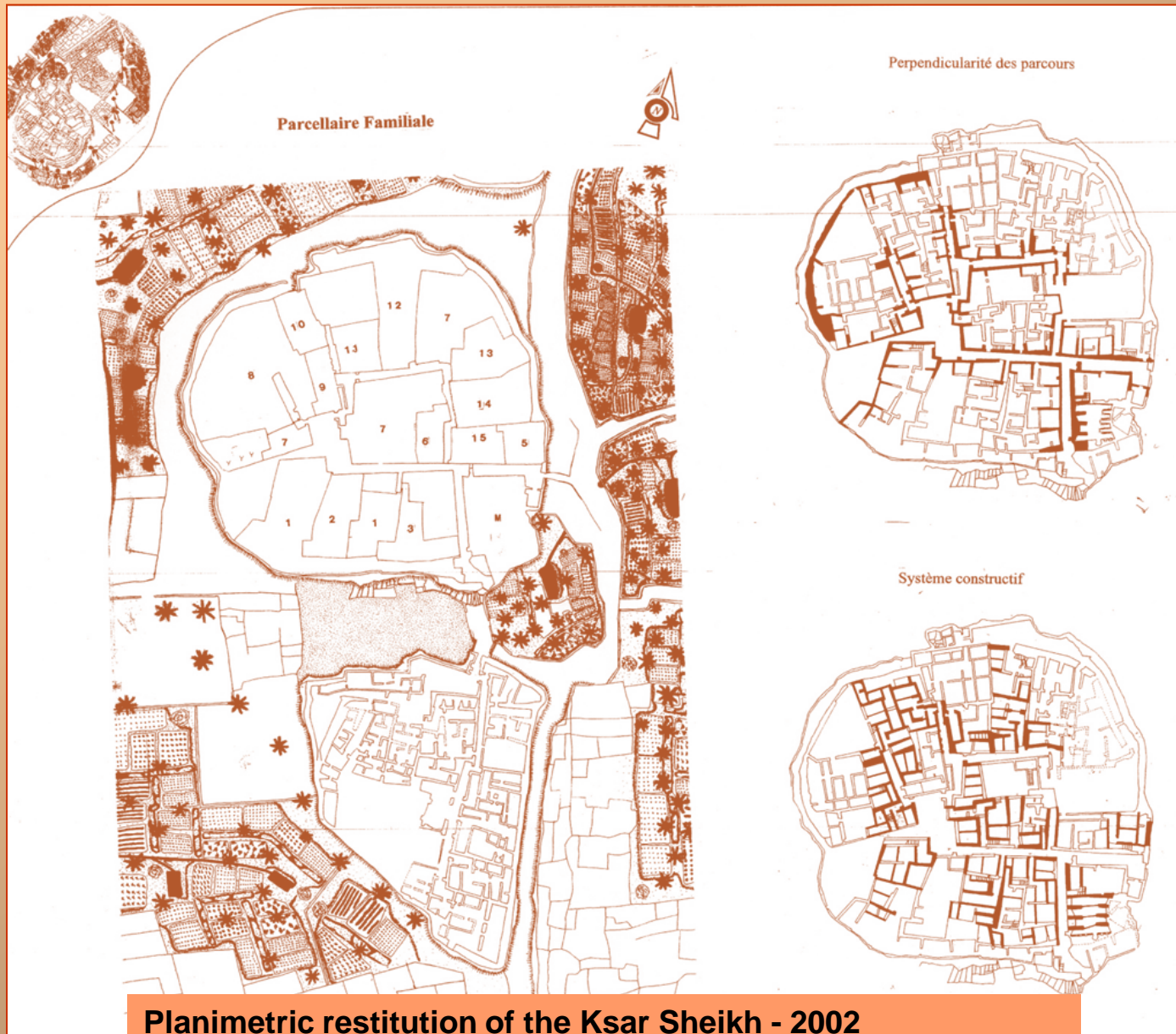


Historical process of formation / transformation -of the Ksar

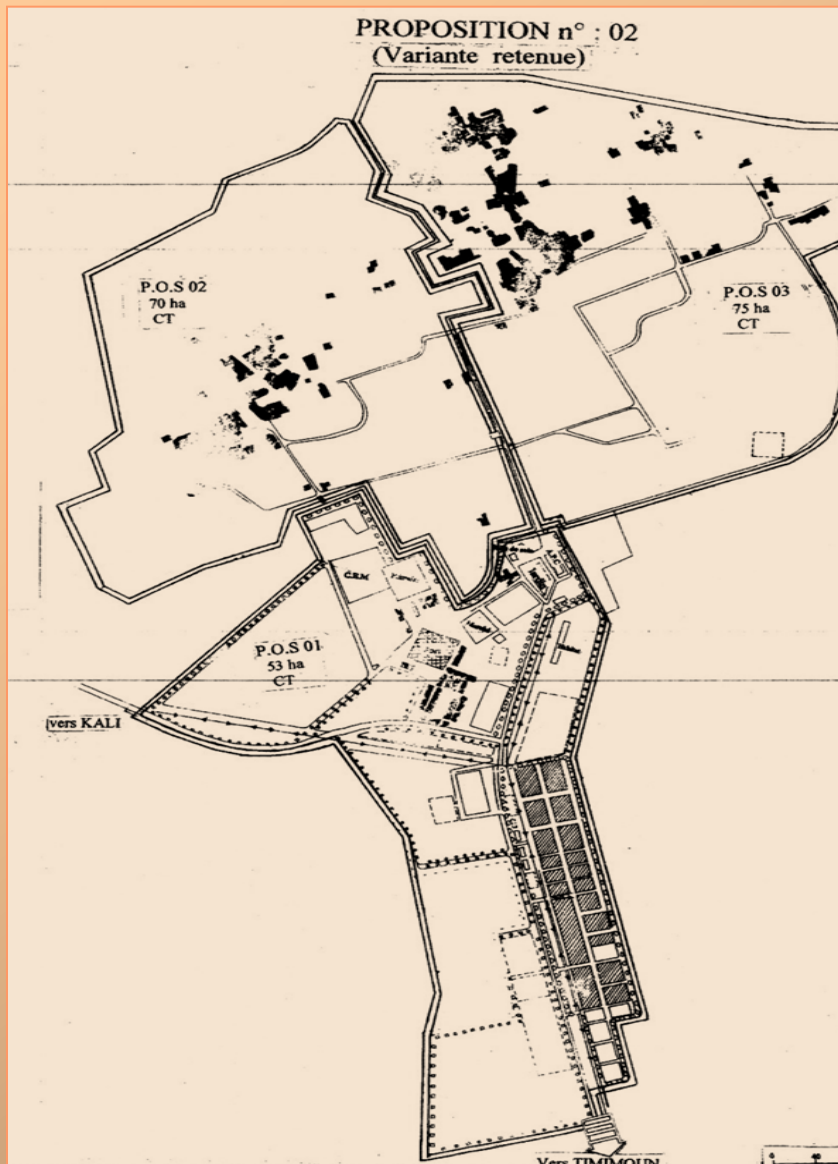


Planimetric restitution of the Ksar Sheikh - 2002

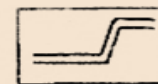
Historical process of formation / transformation -of the Ksar



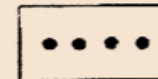
Historical process of formation / transformation -of the Ksar



LEGENDE



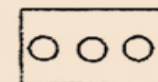
Périmètre urbain.



Périmètre d'urbanisation a court terme.



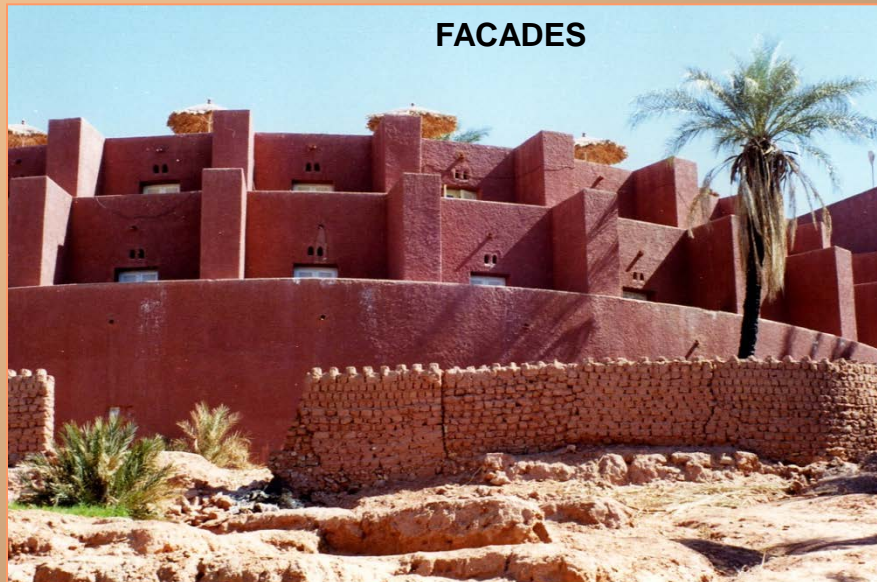
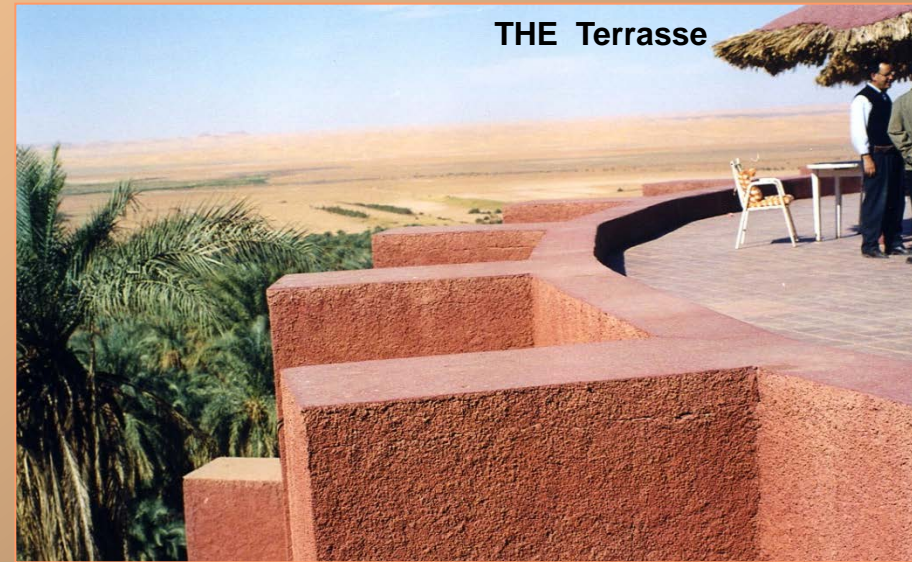
Périmètre d'urbanisation a moyen terme.



Périmètre d'urbanisation a long terme.

Hotel Gourara as a contemporary architectural reference in Timimoun

(Arch.F.Pouillon) - 1974 -



Hotel Gourara as a contemporary architectural reference in Timimoun
(Arch.F.Pouillon) - 1974 -



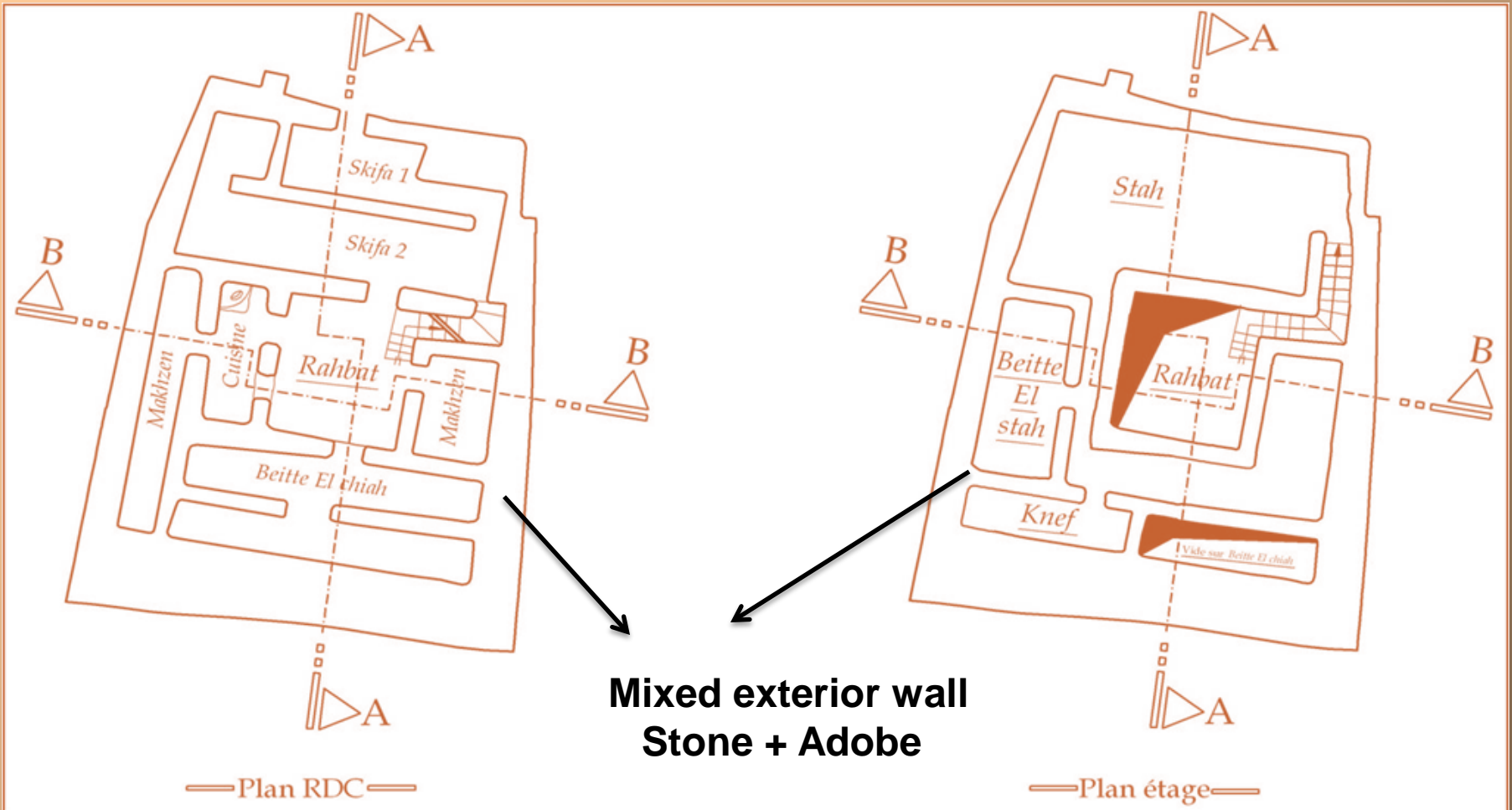
THE RESTAURANT



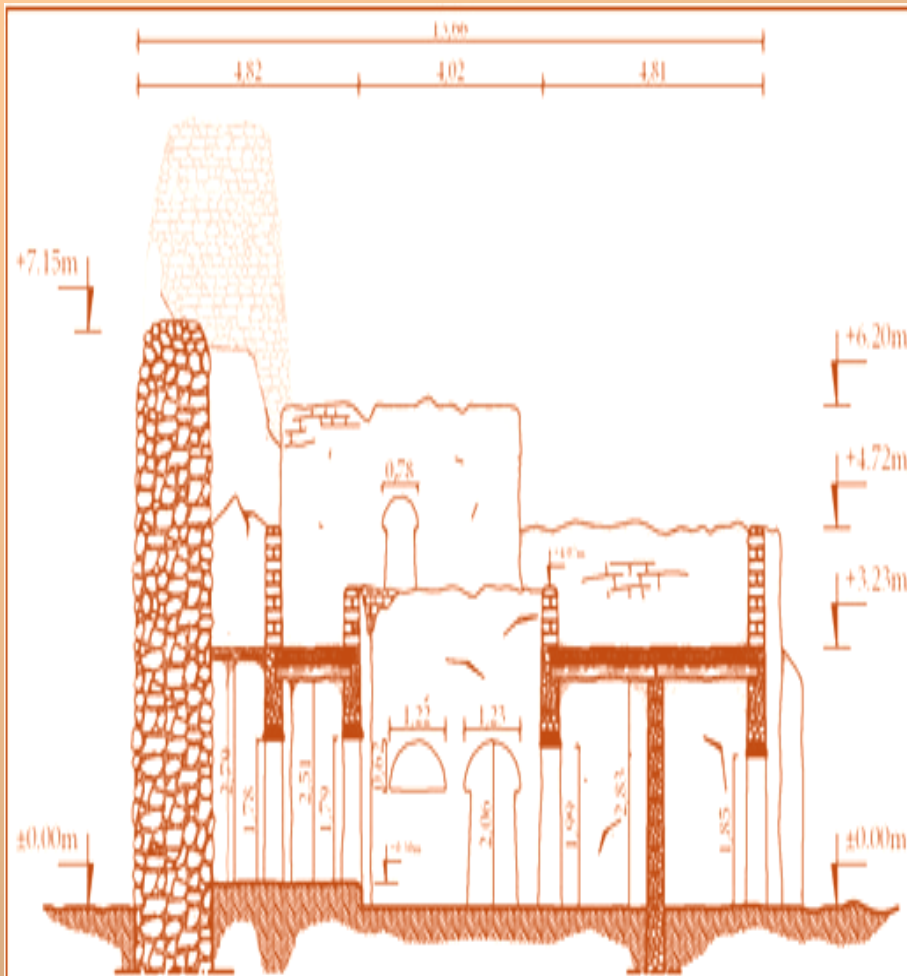
GARDEN AND SWEMING POOL



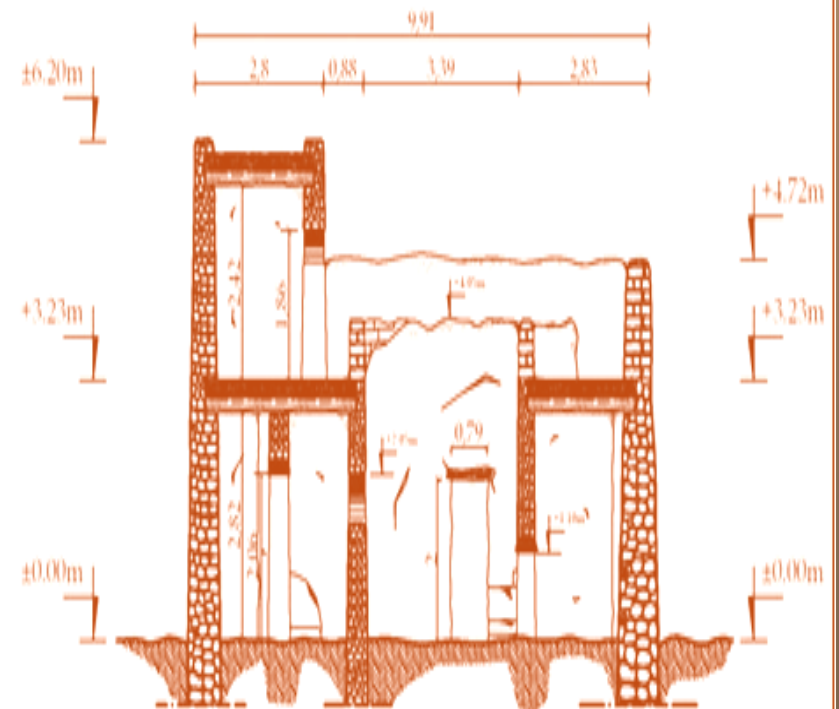
TYPOLOGICAL READING. CASE 1 / THE DWELLING UNIT



TYOLOGICAL READING .CASE 1 / THE HOUSING UNIT—



—Coupe AA—



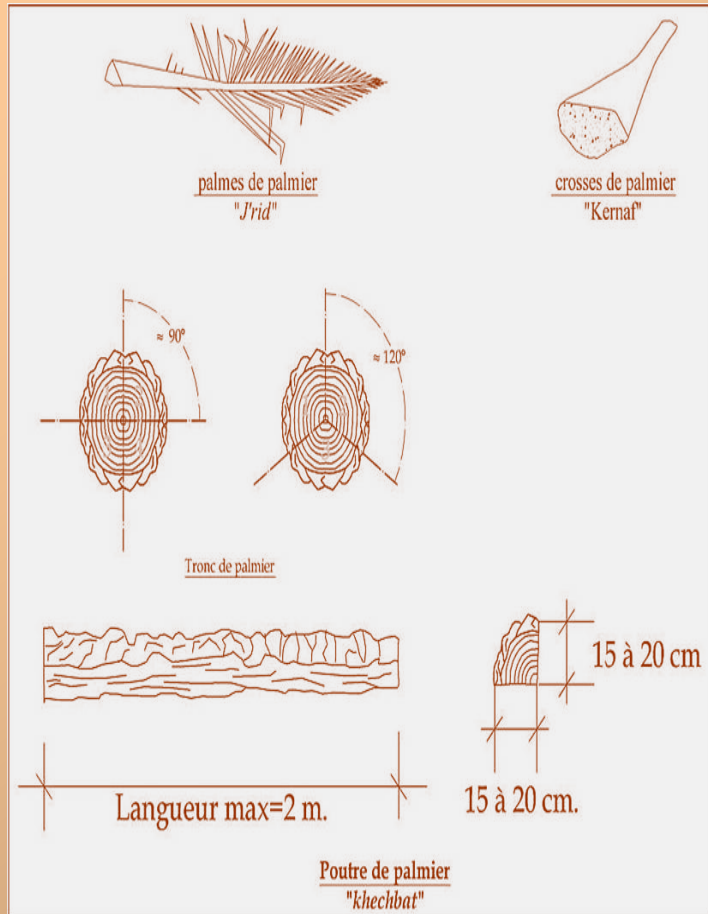
—Coupe BB—

The separation walls

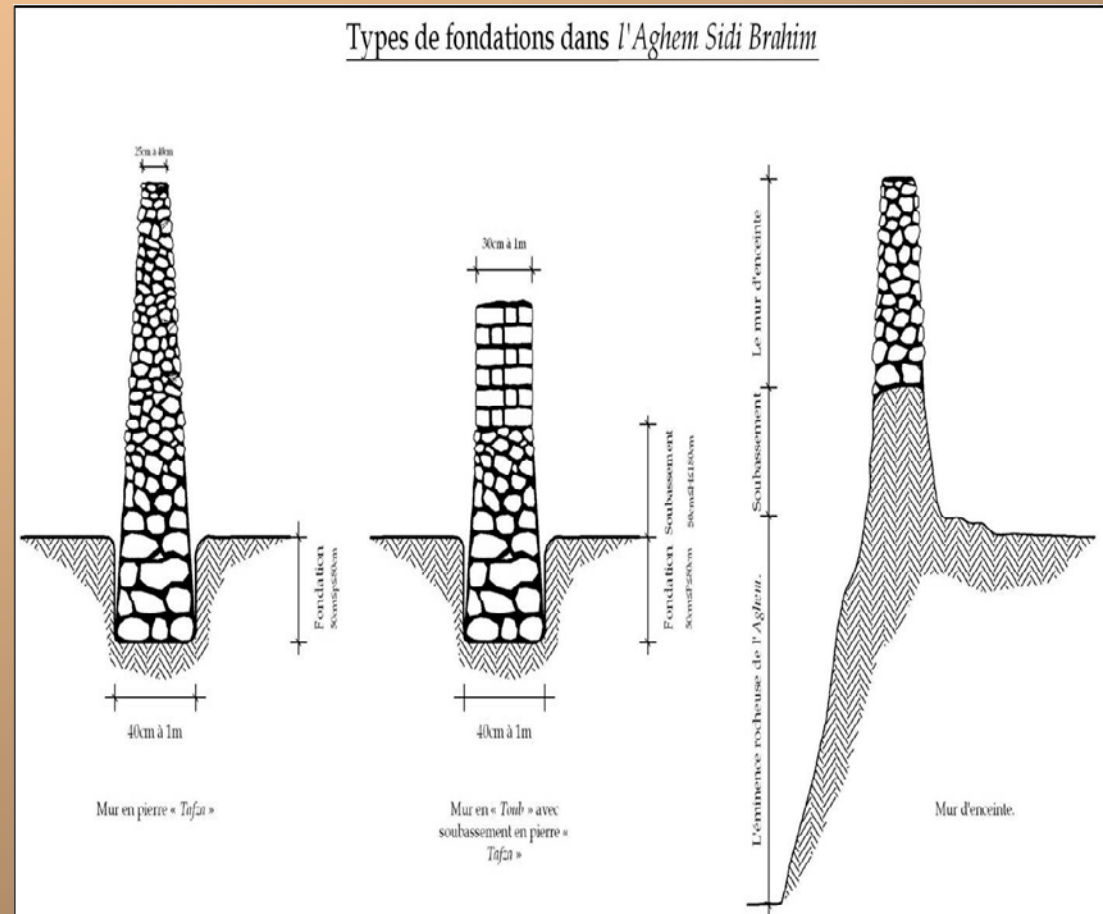


MATERIALS AND CONSTRUCTION TECHNIQUES"

« **THE ADOBE AS A LOCAL REFERENCE MATERIAL.** »



Palm wood as an accompanying material in the ceiling structure



Types of Foundations

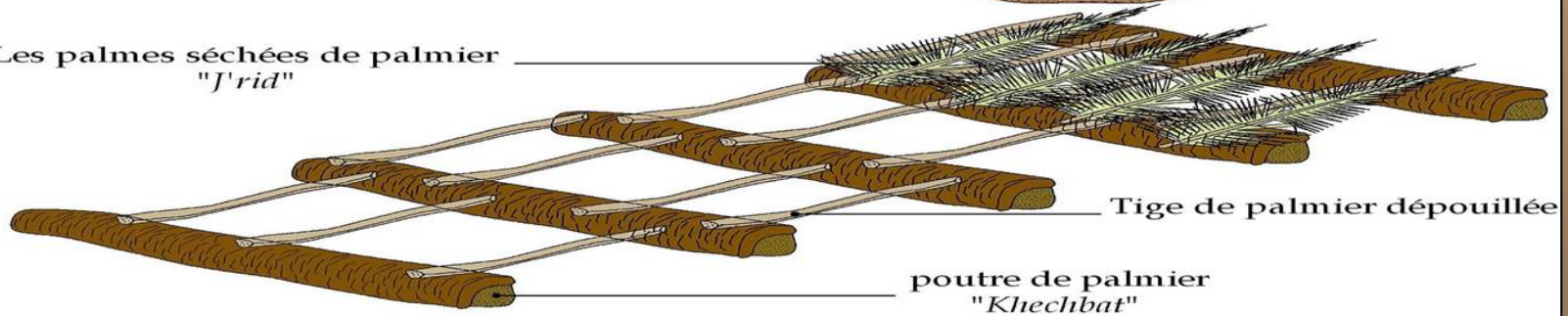
CONSTRUCTION MATERIALS AND TECHNIQUES

Plancher A:

Couche étanche d'enduit de chaux

Couche de terre argileuse compacté
 $20\text{cm} \leq \text{ep} \leq 25\text{cm}$

Les palmes séchées de palmier
"J'rid"

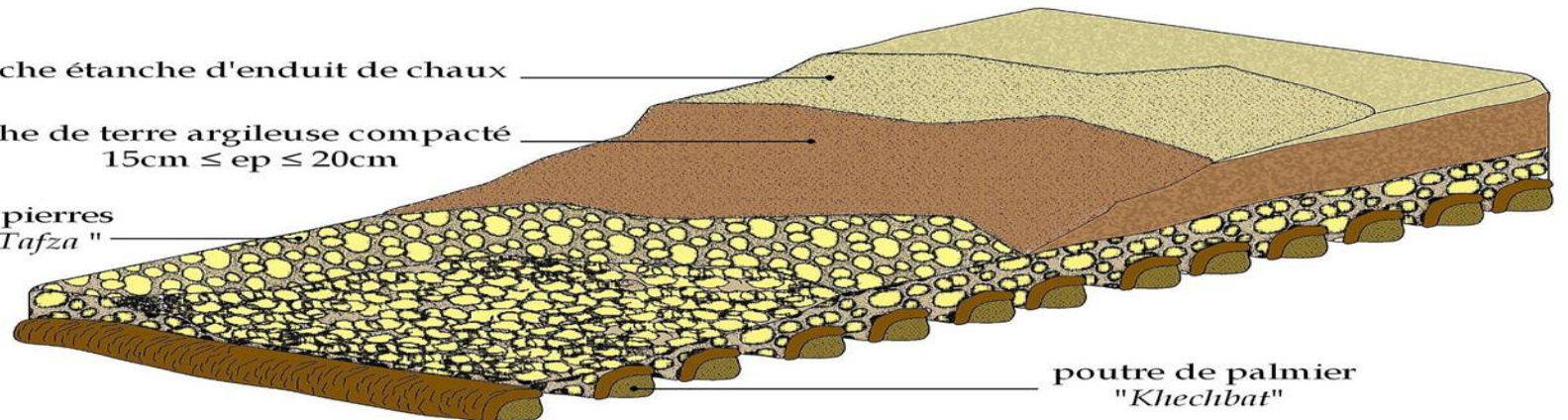


Plancher B:

Couche étanche d'enduit de chaux

Couche de terre argileuse compacté
 $15\text{cm} \leq \text{ep} \leq 20\text{cm}$

Couche de pierres
calcaires "Tafza "



TYPOLOGICAL READING .CASE 1 / THE HOUSING UNIT—

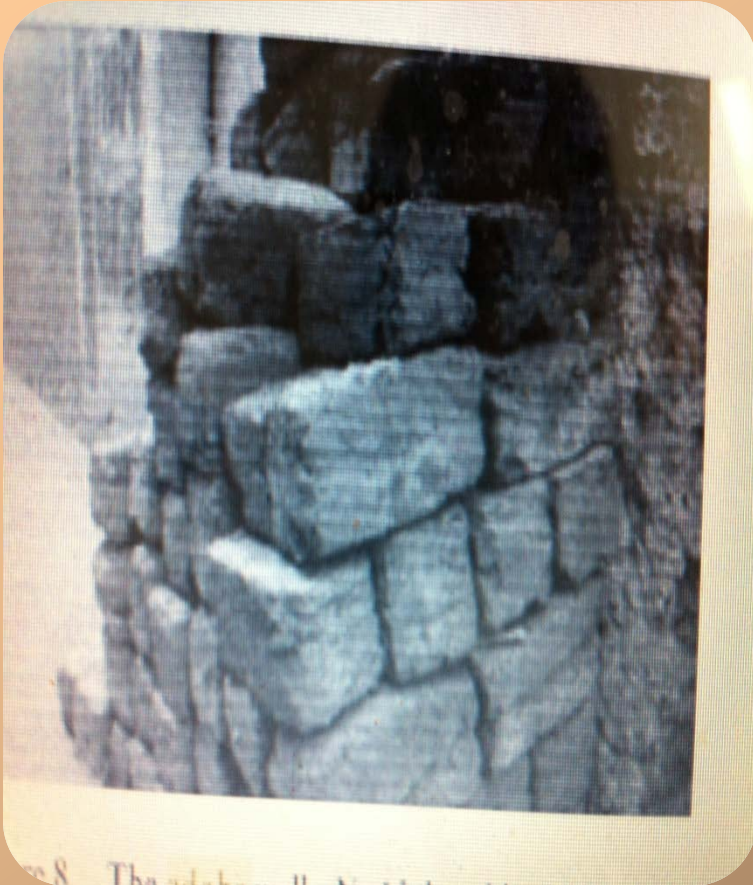


PHOTO 01



PHOTO 02

Questioning sustainable development.

Development implies structural modifications, where as sustainability supposes continuity. Which resources have to be preserved for the generations to come, if today we do not know which will be essential?

Sustainability makes the dead end on the fact that the history of humanity is an alternation of more or less stationary phases and brutal ruptures.

Can we really connect global and local scales in a large machinery, as if same principles governed the whole world and each single place?.

Actually, sustainable development dreams an unrealistic smooth world without clashes, conflicts, crises.

François Mancebo

ANSWERS

- Admittedly, in the first instance, its definition remains simple:
 - 1- It is about promoting development that meets the needs of societies today without compromising those of future generations.
 - 2- It is based on the awareness of the finiteness of our bio-physical environment.

But, with such a definition, sustainable development is relatively quickly placed at the heart of three contradictions that are difficult to reconcile:

- 1- compromise between the interests of current and future generations;
- 2- compromise between the priorities of industrialized and developing countries;
- 3- compromise between quality of life and ecosystem preservation.

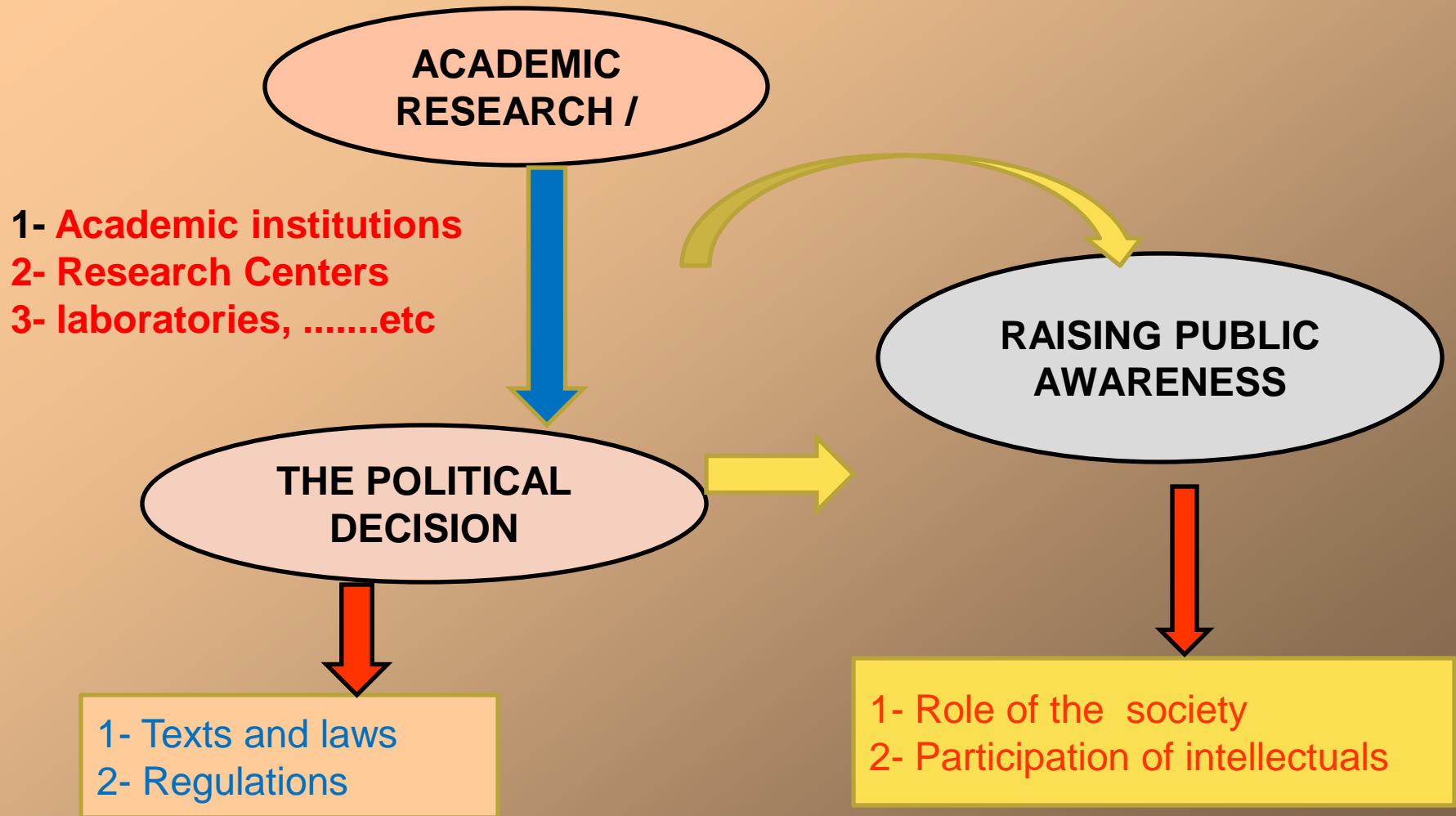
THE SOLUTION .

SHE'S IN TRAINING? --



THE SOLUTION .

SHE'S IN TRAINING? --



THE TRAINING PROGRAM

- ❖ Definition of construction composition elements
- ❖ Material resistance comparative aspect
- ❖ Structural bonding technique
- ❖ Site organization
- ❖ Properties of building materials and their roles
- ❖ Preventive technique for improving construction quality
- ❖ Special structures
- ❖ Glossary of terms



- **VIEWS ON THE APPLICATION**
- **Using Adobe Bricks**

Other Experiences with Students the New URBAN AREA



IVEAU DU SEMI COLLECTIF SITUÉ ET L'INDIVIDUELLE SITUÉ
RIDEAU VERT



THE MODEL OF THE PROJECT











• **THANK YOU FOR YOUR ATTENTION**