

Technology of the desert

31.6900, -4.9479

ALT 1018m

Workshop of ARCHITECTURE

22-28 OCTOBER 2026

Goulmima oasis, Morocco

Organized by



In collaboration with



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Goulmima, 1944



Goulmima, 2010



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1. The workshop at a glance

¹ See Chapter 11, p.34-39

Professors

Participants

Take-away

Language

Technology of the Desert is a one-week architectural, urban and territorial design workshop held in the oasis of Goulmima, in southeastern Morocco, from 22 to 28 October 2026. It is organized by Taller & Patrimoine (Paris) in partnership with the cultural association Nostoi (Milan), INTBAU Morocco and Association Ghris pour la Culture, le Sport et les Activités Sociales (Goulmima)¹, it brings together students, researchers, architects, and local inhabitants around a single question: how did a society make habitable land out of scarcity, and what can that intelligence teach us today?

The workshop combines fieldwork, guided walks led jointly by local inhabitants and disciplinary experts, thematic inventories, collective mapping, and lectures. Its outcome is a documented corpus of the built forms of the oasis and a collective interpretive map of Goulmima in two historical states, laying the first stone of a referential base of analytical and design tools proper to oasis territories.

Prof. Aba Sadki (Université de Montréal)
Arch. PhD Cecilia Fumagalli (NOSTOI)
Prof. Jean-Luc Debbar (ENA Fès)
Eng. Rkia El Mahmoudi

Open to students, recent graduates and practitioners in architecture, landscape and urbanism; as well as artist-researchers interested in documenting oasis heritage!
The workshop is open to maximum of 20 participants.
And 10 local participants from Goulmima.

- +Immersing in the oasis territory, engaging directly with its landscapes, rhythms and inhabitants.
- + Developing a methodology for collecting and representing data, learning to observe, record, and structure field information across scales.
- + Exploring drawing and mapping as tools of thought, using representation not only to document but also to understand and speculate.
- + Critically engaging with heritage as a living resource capable to transform and being transformed.
- + Participate in building a collective reference of tools of analysis and design of the oasis territory.
- + Situating architecture within a reading of its milieu, grasping the interactions between built form, environment, the communities that inhabit it and the relationship between immaterial and material heritage.

English, Moroccan, French

Application and enrollment

Participants are invited to submit an application form sent to tallerpatrimoine.contact@gmail.com titled **Goulmima_SURNAME_Name** consisting of one pdf document (max 8MB) including :
+ one motivational letter
+ CV
+ Portfolio
Applications must be submitted by **20 September 2026**.

Applications will be reviewed by the organizing team, based on each applicant's motivation and background. The results will be published on **23 September 2026**.

Participation in the workshop will be effective upon payment of the participation fee within five days of receiving the acceptance e-mail. If payment is not received within this period, the place may be offered to a candidate on the waiting list.

Participation fee is approximately **4500 dhs, 420€** (the final amount may be subject to small variations - lower or higher - according to the actual number of participants and final expenses).

- The fee includes:
- 6 overnight stays in Goulmima;
 - All meals during the programme, including breakfasts, lunches, dinners, snacks, and meals during travel days;
 - All scheduled transportation within Morocco, including group travel to and from Goulmima, and transportation throughout the workshop;
 - The full workshop programme, including guided fieldwork, thematic walks with local inhabitants and experts, lectures, and tutoring sessions;
 - Workshop materials and documentation;
 - Access to all organised visits, field activities, and collective workshop sessions.

- The fee does not include:
- Participants' flights to and from Morocco;
 - Transfers or visits undertaken during free time;
 - Personal expenses;
 - Anything not included in the list above.

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Participation fee

Contact

2. The issue:
the oasis as
negotiated
territory

The vernacular architecture of southern Morocco — particularly its ksour and kasbahs — has been the subject of extensive scholarly documentation. Numerous publications provide detailed descriptions of these settlements through maps, measured drawings, photographs, and architectural surveys. While the tangible heritage of these remarkable earthen settlements has been relatively well documented, a fundamental component of this heritage remains largely absent from the existing literature: its immaterial architectural knowledge. Rather than viewing vernacular architecture solely as a historical legacy, the workshop will argue for its continued relevance as a source of technological innovation, environmental adaptation, cultural continuity, and architectural identity in twenty-first-century Morocco.

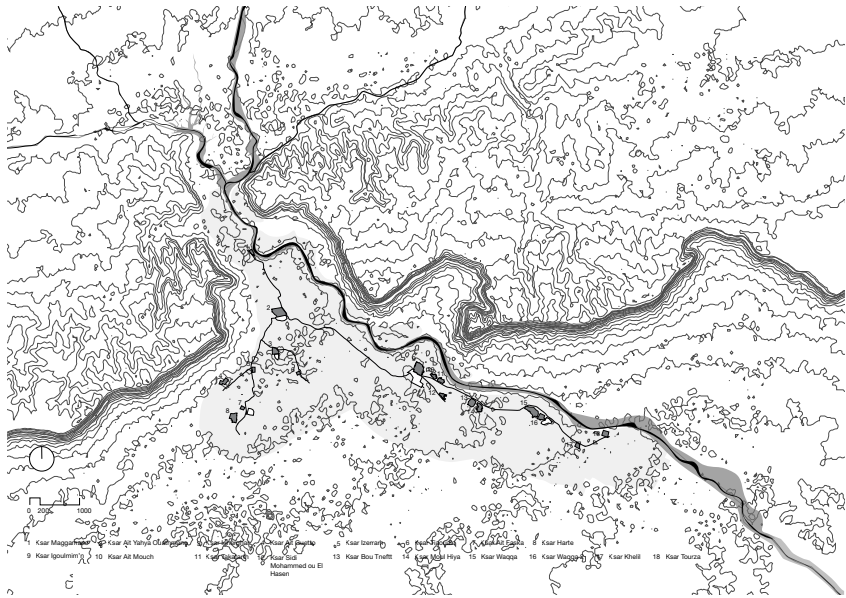
Oases are territories born from an agreement between people on how to manage a scarce resource: water. They are, in this sense, not only agricultural landscapes in the desert but negotiated ones — ecological, economic, material, and socio-cultural systems bound together by a single collective decision, continuously renewed. The workshop seeks to understand the oasis as precisely such an interconnected territory, and to ask what kind of settlement these conditions produced.

Like investigators, we will analyse the systems that generated the built form, collect this immaterial knowledge, and trace how each system produced its own morphology and its own uses, following ten proposed thematics: food production, water management, energy production, governance bodies, collective space (public and semi-public), mobility and exchange, defense and protection, dwelling, knowledge transmission, and waste management.

Over the last century, however, these systems have been profoundly changed: potable water networks, electricity, roads, schools, security from tribal conflicts, and a governance structure that grants decision-making power to those who do not inhabit the oasis have all altered the dynamics of agreement from which the territory originally emerged. To look at these transformations closely, we will read them through the framework of the original systems, analysing how each mutated and how those mutations reshaped the built environment.

The objective is to collectively map the dynamics of the oasis, before and after these changes, and thereby to make visible what may be called the technology of the desert: the collective territorial and local intelligence through which a society rendered scarcity habitable. Once this intelligence is understood, together with the built forms it generated and the transformations they have undergone, the workshop aims to establish a referential base of tools for analysis and design proper to oasis territories.

17th century



2026



2050

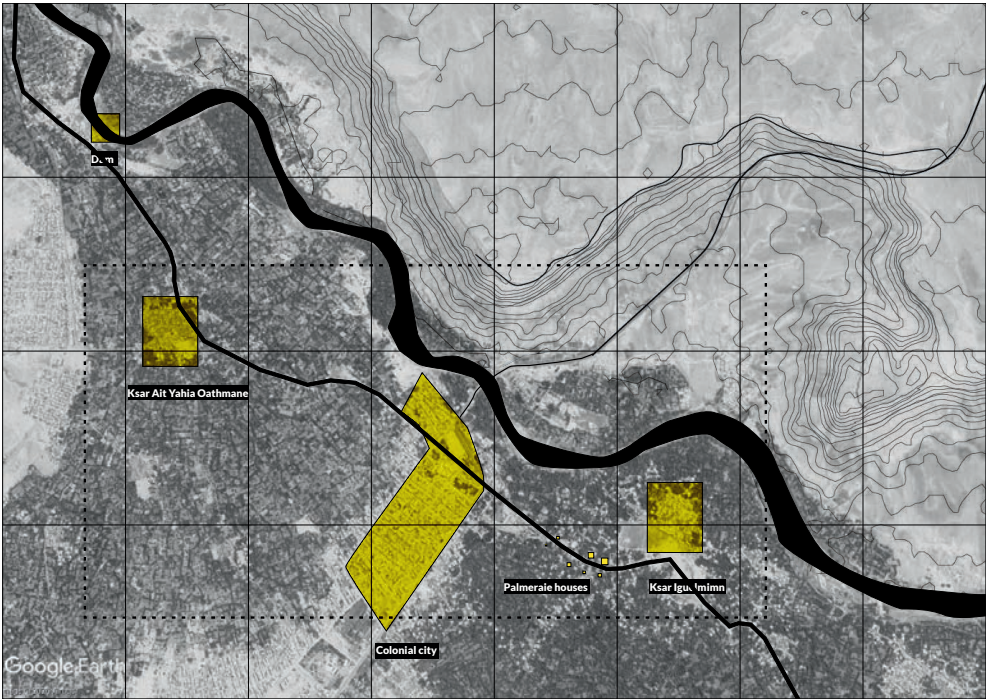


3. Site of intervention

Goulmima oasis, Morocco
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The workshop will focus on the site between Ksar Ait Yahya Ou Othmane and Ksar Iguelmimn, the two great ksour whose relationship has shaped the dynamics of the oasis. During the protectorate, colonial settlement was established precisely in the link between them: a linear city developed along this axis and ruptured the connection between the two ksour.

This is what makes the site pertinent for the workshop. The space between the two ksour condenses, in a few hundred metres, the entire question the workshop poses: a territory generated by negotiated systems, and the mutation of those systems under a new order. Studying this link — broken, transformed, and still inhabited — is how the workshop approaches the mutation of the dynamics of the oasis itself.



Map showing the site of intervention. featuring :

- Dam
- Ksar Ait Yahya Oathmane
- Colonial city
- Palmeraie houses
- Ksar Iguelmimn

How were they linked ? How were those links 'spatialized' ?				
				
Ksar Ait Yahya Oathmane				
What commons did they share ? What forms did they have ?				
Goulmima oasis 31.6900, -4.9479 ALT 1018m				
		Ksar Iguelmimn		

4. Thematics :
10 lines of
inquiry

Themes :

Professors :

To read a territory as layered and complex as the oasis, we had to develop a methodology capable of unfolding all these layers; a transversal method able to grasp the system as a whole.

The equilibrium of the oasis relies on a rhythm between water, agriculture, and the built environment. In line with the issue this workshop addresses, we propose to organize our analysis around three main themes: resource, knowledge, and built environment. Each professor is interested in one of these categories, bringing their own expertise and sensibility to it, forming together a collective intelligence capable to understand the sensibility of the territory.

Resource

Knowledge

Built environment

Rkia El Mahmoudi

Aba Sadki

Jean-Luc Debbar

Cecilia Fumagalli

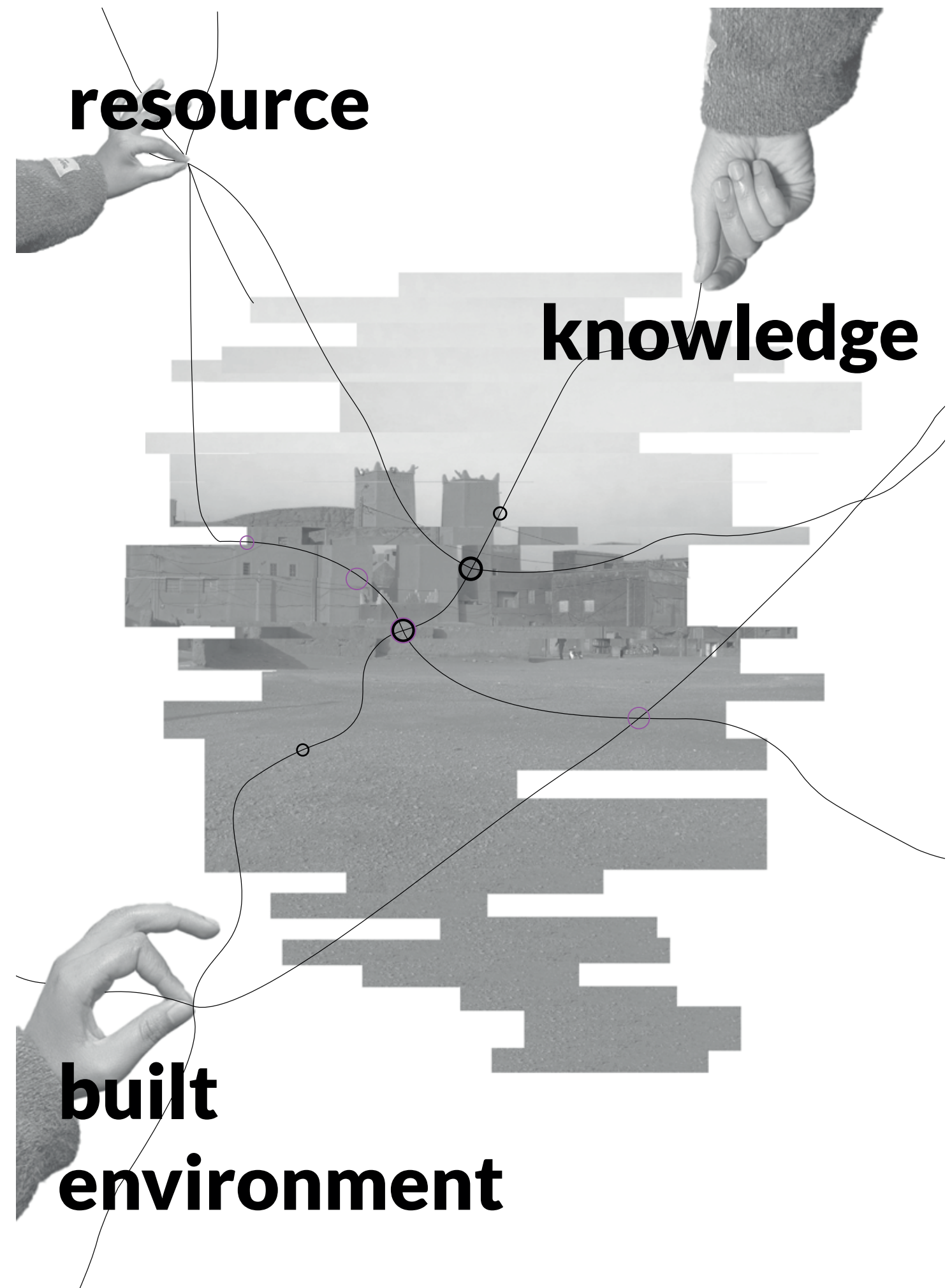
From these three themes we have drawn out sub-thematics, and it will be compelling to see how each resonates and connects during the walks, informing one another to compose a general image of the oasis. These sub-thematics take the form of ten thematic lines, each explored through the built forms it produced: food production, water management, energy production, waste management, governance bodies, collective space (public and semi-public), mobility and exchange, defense and protection, dwelling, and knowledge transmission. Each group is assigned a thematic line and collects the built forms it generated, from the object to the architectural, urban, and territorial scale.

The choice of these thematics is also grounded in an article by Jean Hensens ², in which he demonstrates that the ksar was produced by interlinked systems of necessity, each of which left a precise spatial configuration.

Reading the territory through these thematics allows us to:

- Dissect the elements composing it through those its balance relies on, understanding its very specific technology.
- Draw a relationship between material and immaterial heritage.
- Capture and understand current forms as they evolve in relation to a specific built typology.
- Make visible mutated dynamics and relationships, and the different shapes and forms these might take.
- Reveal an overview of the evolution of collective memory and the ever-changing relationship between form and usage.

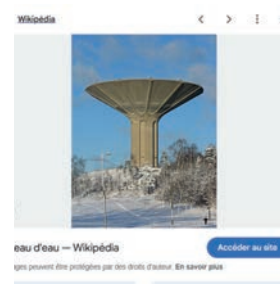
²Hensens, Jean. "Habitat rural traditionnel des oasis Presahariennes : Le qsar - Problèmes de rénovation". Paideuma 18 (1972): 42-59.



Food production



Water management



Waste management



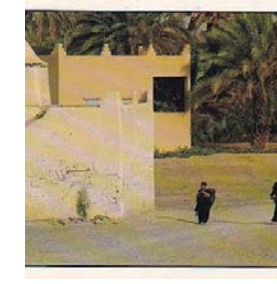
Energy production



Governance bodies



Mobility / exchange



Collective space (public and semi-public)



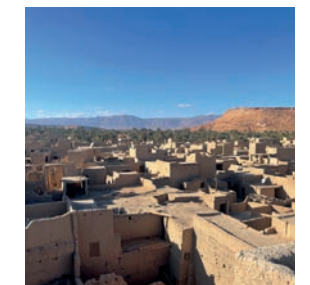
Knowledge transmission



Defense / protection



Dwelling

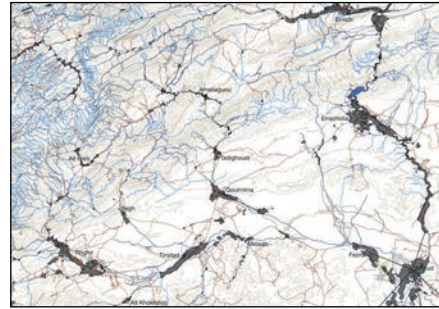


5. Scales of inventory

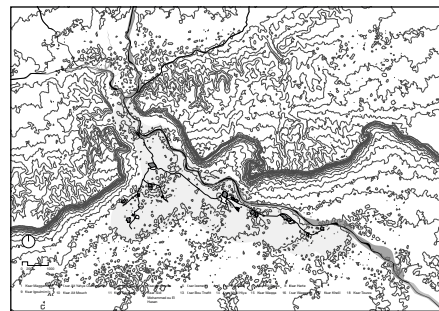
Territorial

These thematic lines will also be understood at different scales, according to the territorial reach of each.

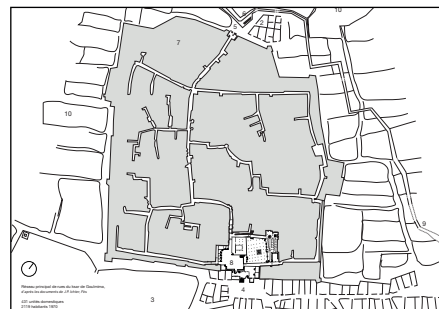
Relations between oases



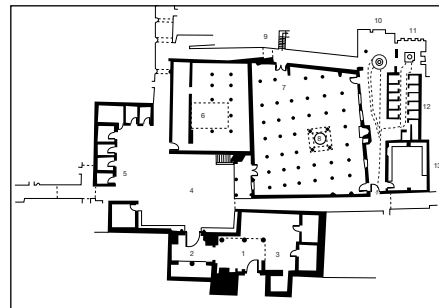
Relations between ksour settlements



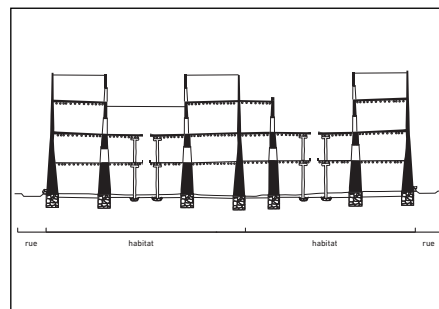
Relations inside the ksar settlement



Public space inside the ksar settlement



Housing inside the ksar settlement



Domestic

6. Method: walking with a local and an expert

Walking is our primary methodology for understanding the territory. Each walk is led jointly by a local inhabitant, who carries the lived knowledge, memory, and everyday experience of the place, and by an expert, who contributes disciplinary tools for observing, documenting, and interpreting it, all meant to reconnect local and academic intelligence. The workshop is therefore conceived as reciprocal learning, and the collaboration with AGCSAS helps ensure that the knowledge produced remains rooted in the territory and accessible locally.

For the purposes of fieldwork, the ten thematic lines are organised through three broad and overlapping lenses: **resources, knowledge, and built environment**. These lenses structure the observation of the oasis across different sites and scales. Each thematic is associated primarily with one lens while also extending into the intersections between two or three of them, such as the water management category that occupies the intersection of all three lenses given that it is simultaneously a resource, a collectively regulated system, and a territorial infrastructure.

The resources lens examines the material cycles that sustain the oasis: water, food, energy, and waste. It focuses on how these resources are collected, shared, transformed, stored, and returned to the territory. Food production and waste management belong mainly to this lens, while energy production also depends on the organisation of buildings and dwellings.

The knowledge lens focuses on the rules, institutions, practices, and forms of transmission that organise collective life. It includes governance, customary rules, local vocabulary, maintenance practices, mobility and exchange, and the transmission of technical knowledge between generations. These forms of knowledge are closely linked to the spaces in which they are practised.

The built environment lens studies the physical forms produced by these systems, from the dwelling to the settlement and the territory. It includes houses, streets, gates, walls, wells, canals, cultivated plots, meeting places, and construction details. Dwelling belongs most directly to this lens, while energy, collective space, defence, and knowledge transmission also connect it to the other two.

The thematic lines are therefore not treated as isolated categories. Their position within and between the three lenses reflects the interconnected character of the oasis: resources are governed through shared knowledge and practices, while both are translated into built and territorial forms.

Therefore, our walking methodology aims to make these intersections observable and provide the common analytical basis for the workshop's inventories and collective interpretive map.

7. Program

The schedule is flexible and adaptable depending on circumstances.

Thursday 22 October/ Arrival & Orientation

- + 10h00, journey to Goulmima from Rabat
- + Arrival, settling in, and shared meal.
- + Opening conference : Introducing the data collection matrix: what to collect, how, and why alongside an overview of sensible methods of representation. The session sets the tone for the week: learning through curiosity rather than pressure.

Friday 23 October/ Reading the Territory

- + 07h00, Breakfast
- + Conference : Cecilia Fumagalli, *Transformation as a Tool for Conservation*.
- + Territorial walk, Following the water: tracing the hydraulic logic that structures the oasis.
- + Panoramic viewpoint over Goulmima to read the territory at large. Lunch on site.
- + Production : Work at the territorial scale.
- + Dinner

Saturday 24 October / Between the Two Ksour

- + 07h00, Breakfast
- + Conferences : Aba Sadki, *Living Knowledge Behind Oasis Architecture*. Followed by Jean-Luc Debbar, *The Role of Tradition in Contemporary Moroccan Architecture*.
- + Walk between the two ksour, reading their outer limits and thresholds without yet entering.
- + Lunch and production : Work at the scale of the two ksour.
- + Dinner

Sunday 25 October / Inside the Ksar

- + 07h00, Breakfast
- + Conference : Rkia El Mahmoudi, *The Circular Economy in the Light of Oasis Knowledge*.
- + Walk : Inside ksar Iguelmimn.
- + Lunch and production : Work at the scale of the ksar.
- + Dinner

Monday 26 October / Synthesis

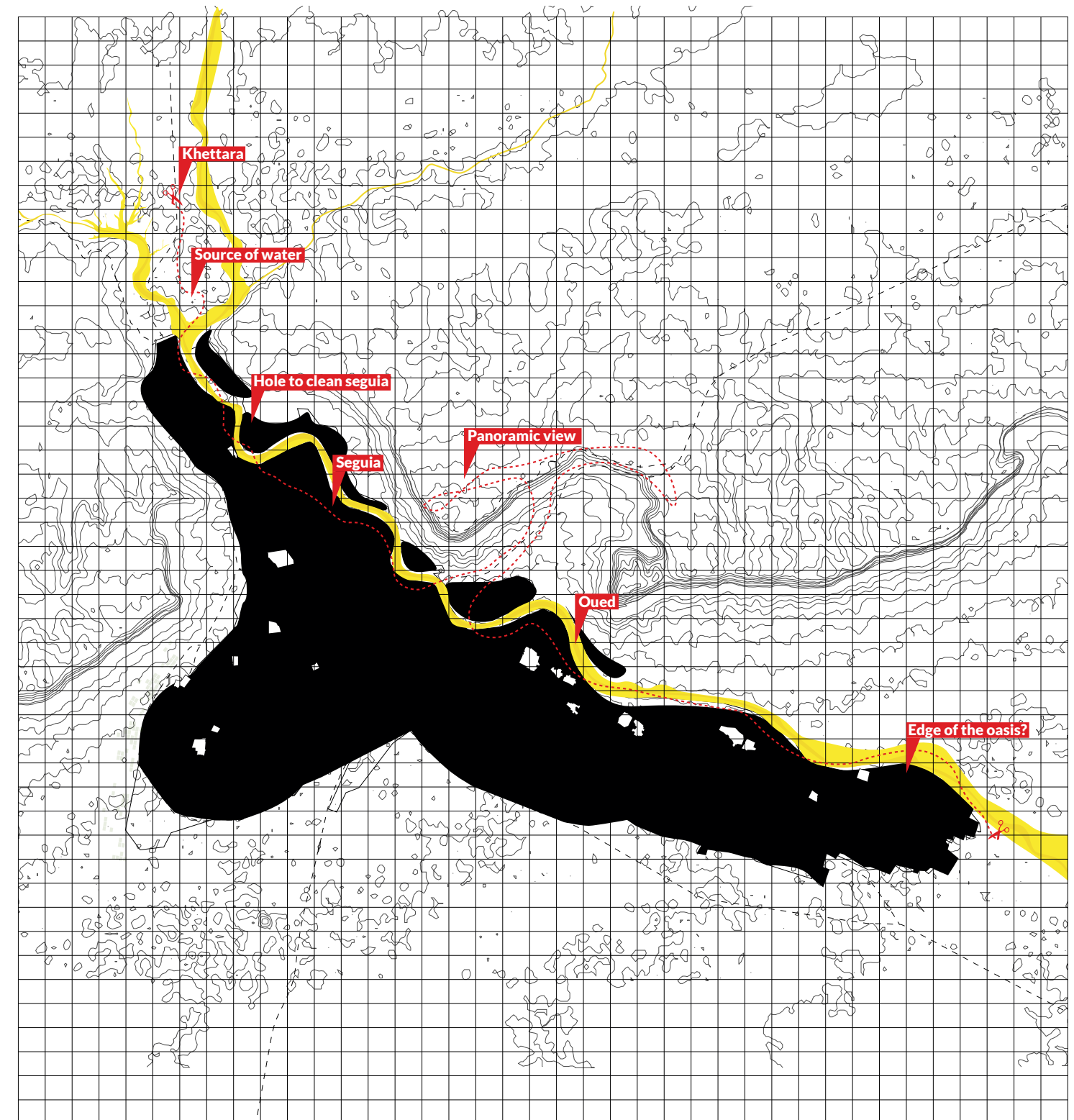
- + 07h00, Breakfast
- + Review & discussion : Collective review of the work, exploration of possible project directions, and identification of any further walks needed.
- + Lunch and production : Final development.
- + Dinner

Tuesday 27 October / Presentation

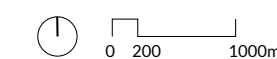
- + 07h00, Breakfast
- + Lunch + informal review during the day.
- + 16h00 : Final presentation with guests from INTBAU.
- + Evening : Ahidus celebration and dinner at Mahajja.

Wednesday 28 October / Departure

- + 07h00, Breakfast, return journey to Rabat.

**Title : Territorial walk; following water****Legend**

- | | |
|--|---|
| Oued (the river) | Road |
| Ksour settlement | Road |
| Palm groove | Road |



At this scale, we will be interested in following water: the social organizer of the oasis. How does it organize the geometry of the settlement configurations? How is it managed? Where does it start and where does it end? We will explore the ksour as objects in the landscape and try to understand their relationships from far away, seen from the top of the mountain. As Carlo Moccia observes: "the repetition of the delimited form of the ksour, the sequence of urban 'unities,' gives sense and measure to the continuous form of nature, constituted by the complex system of the palmerie."¹

¹ Carlo Moccia, *Ksour. Città di terra* (Bari: Aiòn Edizioni, 2012), 25.



Title : Between two ksour : crossing the post-colonial city

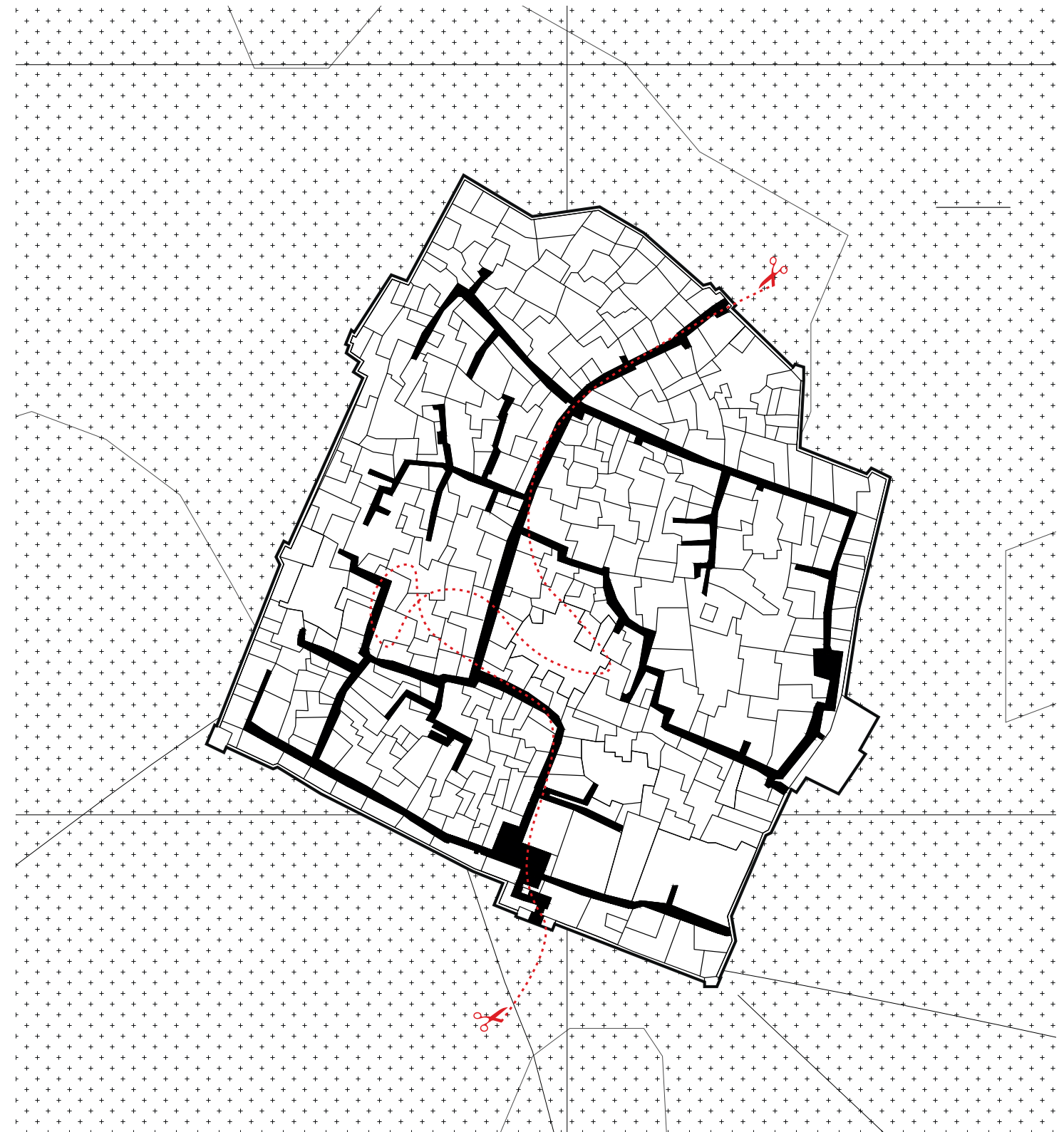
Thematic : KNOWLEDGE

- Oued (the river)
- Ksour settlment
- Palm groove
- Colonial city
- Walk path
- Road
- Auberge d'étape Amced



At this scale, we will be interested in understanding the relationship between the two biggest ksour in Goulmima: how do they communicate, what links them? How are those links spatialized?

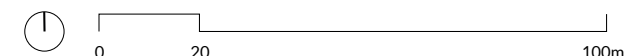
The French colonizers settled down in the area between them; and from that point, new ways of settlement got developed that largely ignore the ksour logic of configuration built up over generations. Where is that knowledge? Can we catch it? Are there remains of it? Where?



Title : Domestic scale; ksar settlment.

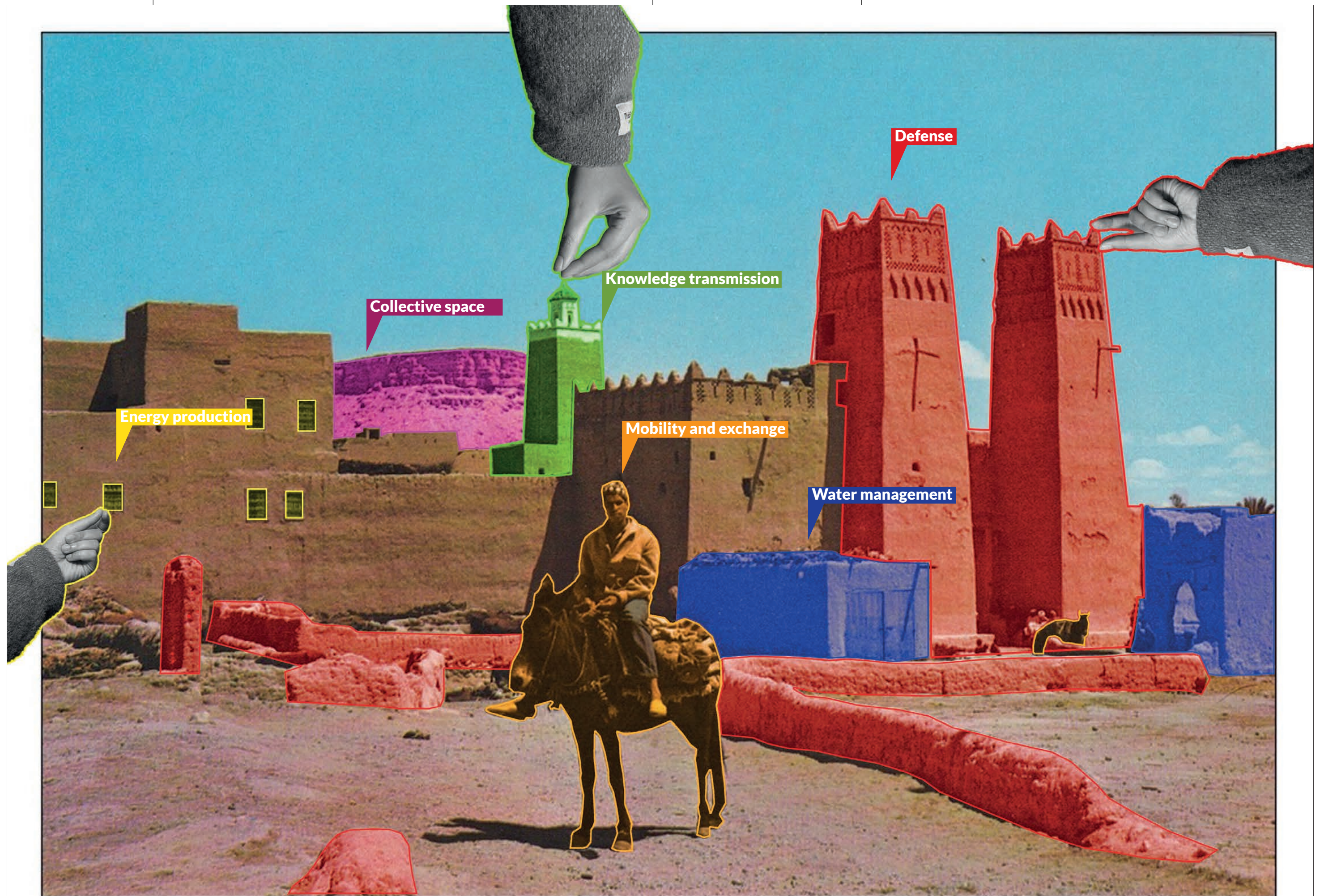
Thematic : BUILT ENVIRONMENT

- Palm groove
- Walk path



At this scale, we will be interested in the relationships inside the ksar settlement. What logic governs it? What elements compose it, and how do they relate?

We will delve deeply in the domestic scale to read the typology of the habitat, and to understand it as an answer people found to living in this climate, under these conditions of scarcity.



8. Deliverables

1

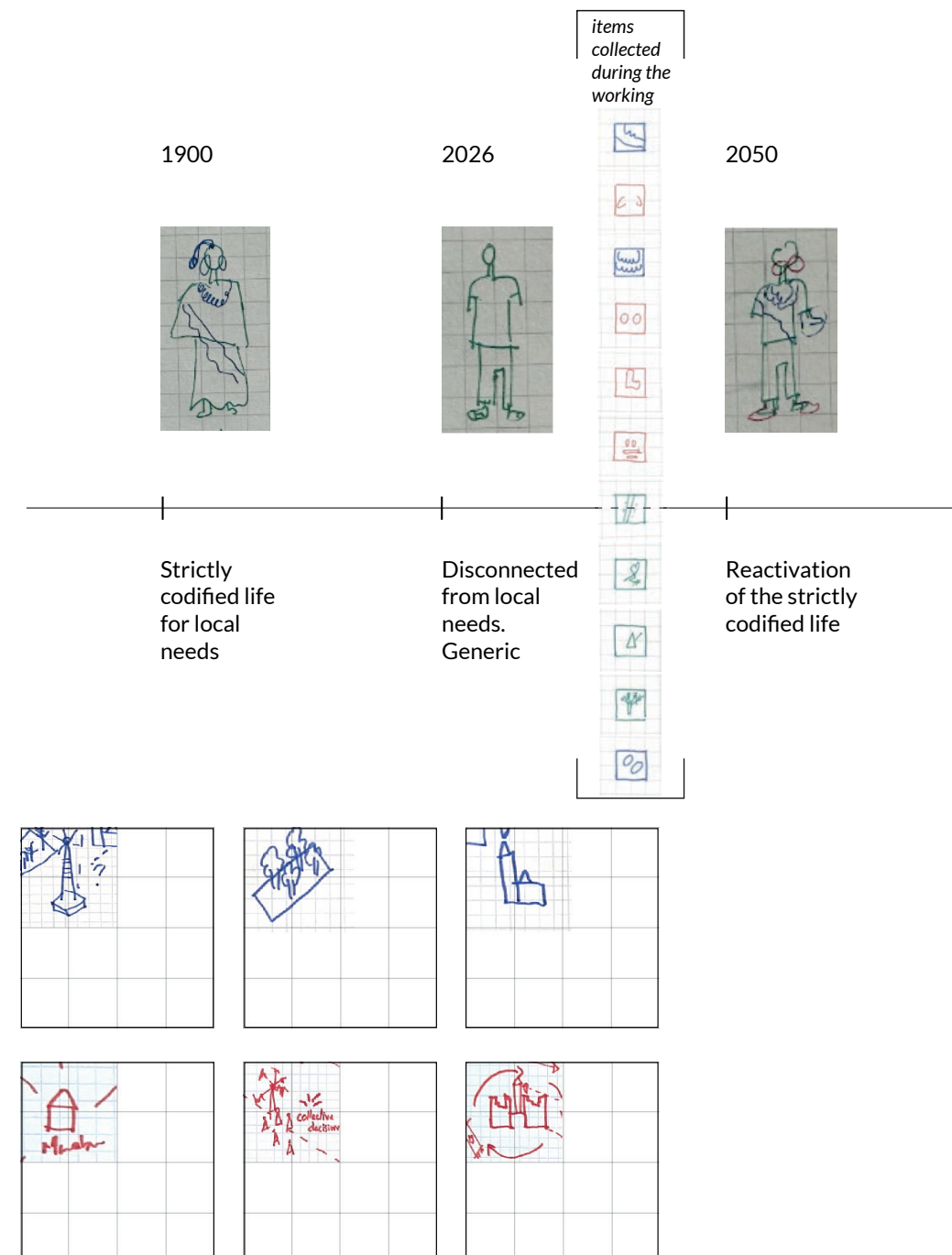
Survey sheets: an inventory of built forms

drawing showing the potential of embedded territorial intelligence to reactivate a territory

For each thematic line, the built forms encountered during the walks are documented in survey sheets of a homogeneous format. Each sheet records:

- the thematic line to which the built form belongs;
- the actors that sustained it;
- its relation to the territory;
- the type of flux that runs through it — economic, cultural, etc.;
- the practices developed to maintain it.

The survey sheets make the immaterial knowledge of the oasis legible through its material traces, and constitute a corpus that can be extended, compared, and reused beyond the workshop: **knowledge inherited across generations, re-examined, and made available to architectural teaching and practice.**



2

Collective interpretive map of Goulmima

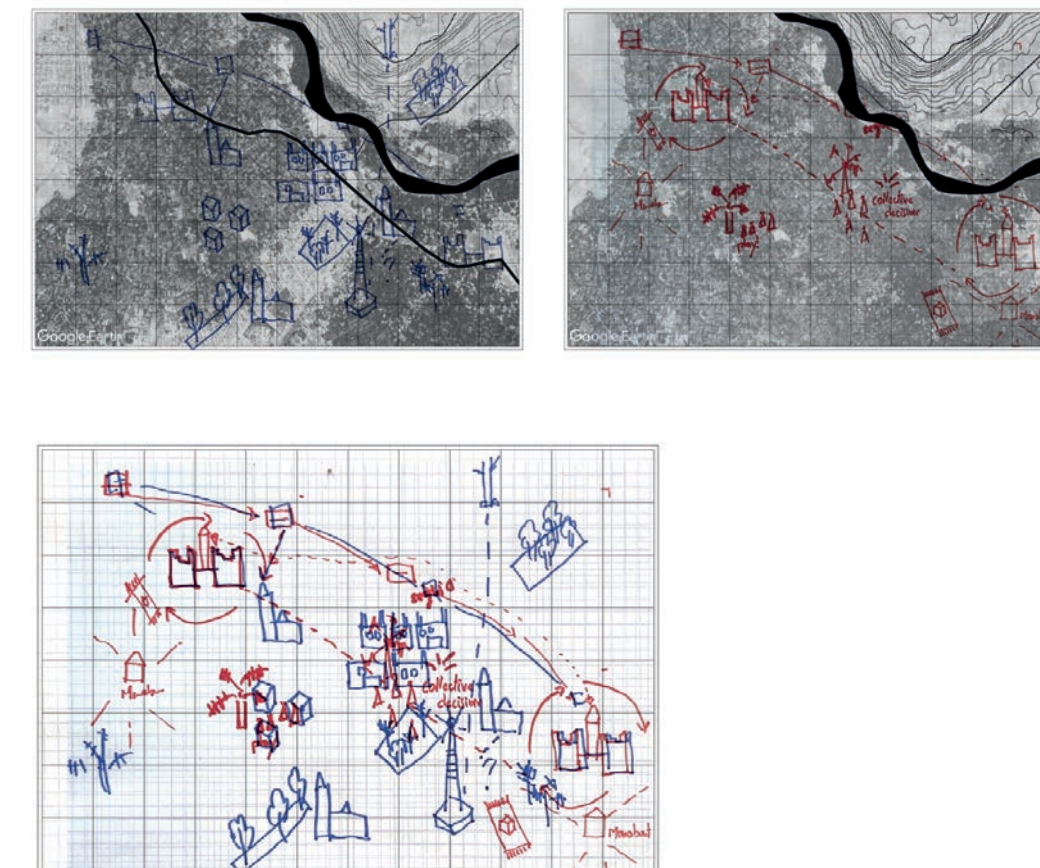
example of map portrait of "between settlement" scale

superposition of the two maps : possible projects

To make visible the dynamics of Goulmima and their evolution, the documented built forms are positioned on a collective interpretive map of the territory, drawn in two states: before the protectorate and after it. The protectorate is taken here as the moment at which transformation accelerated most sharply; the periodization itself remains open, and is among the questions the workshop will put to debate.

The superposition of the two states is the analytical heart of the workshop. It renders the mutations visible: links that have been created, links that have disappeared, built forms whose flows have changed, actors who have withdrawn or emerged. From these legible mutations, project hypotheses arise. Where a link has disappeared, should it be re-established? The mosque, for instance, once carried a double flow of religion and culture; today the cultural flow has thinned — can it be reactivated? Where a system lacks a link or a form, can two needs answer each other? Food production may call for a cultural link; waste management may call for a built form of recycling — brought together, they sketch a project.

The map is thus not only a tool to record but also an instrument: a shared analytical ground from which spaces and spatial relationships better suited to the territory can be proposed.



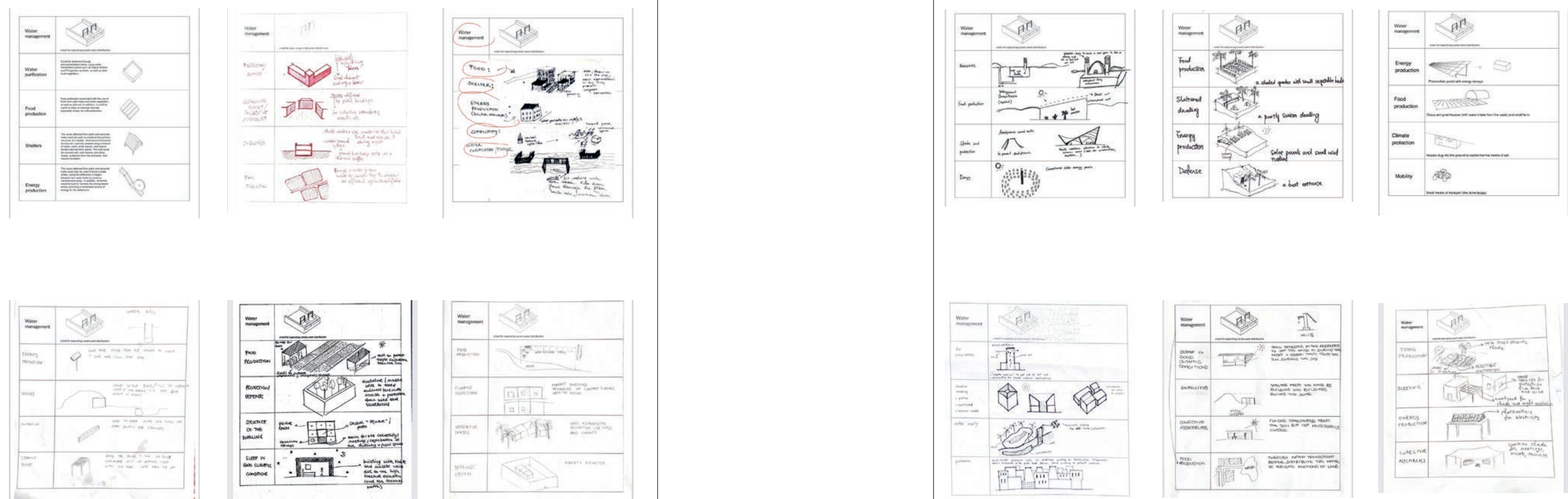
9. Conclusion

What we will have in Goulmima at the end of the week is a documented corpus of built forms and a collective interpretive map of the oasis in two historical states: two tools for the territory. The survey sheets make immaterial knowledge visible through its built form — knowledge inherited across generations, re-examined, and made available to architectural teaching and practice. The map is an instrument: a shared analytical ground from which spaces and spatial relationships better suited to the territory can be proposed.

Together they make visible what may be called the technology of the desert: the collective intelligence through which a society rendered scarcity habitable. They establish the first elements of a referential base of tools for analysis and design proper to oasis territories — tools that read built form as the visible result of negotiation, and that treat the oasis as the place where environmental and socio-cultural sustainability have never been separable.

The workshop is conceived as a reciprocal exchange: external participants bring disciplinary expertise and tools, while local participants bring the lived, situated knowledge of the territory. Through this exchange, knowledge is shared, transformed, and developed within the territory.

Examples of reflection on built form in the desert, following thematics from the Nostoi-organized workshop *On the Edge of the Sahara*, M'hamed El Ghizlane 2026.



10. Professors



Aba Sadki
Geographer, archaeologist, urban planner

Presentation

Aba Sadki holds a PhD in Geography from the Université de Montréal (2023) and has an interdisciplinary background in archaeology, cultural heritage, urban planning, and environmental management. His work focuses particularly on the oases of southern Morocco, especially the Drâa-Tafilalet region: water management, date-palm related knowledge and crafts, local forms of cooperation, and the transmission of knowledge between generations.

Topic of interest

The oasis is understood here as a living system in which architecture, agriculture, water, crafts, social organisation, and local knowledge are closely connected. Ksour and kasbahs are not only collections of buildings: their forms reflect ways of managing water, organising collective work, using local materials, producing food, resolving conflicts, and adapting to environmental constraints. The contribution to the workshop is to help identify and document the knowledge, practices, customary rules, and forms of cooperation that supported oasis settlements, and to contribute to discussions with inhabitants, craftspeople, farmers, local associations, and other knowledge holders. Particular attention is given to water and to the date palm, which connect agriculture, food, construction, crafts, environmental adaptation, household life, and local identity.

Lecture: Living Knowledge behind Oasis Architecture

This presentation examines how the built environment of southern Moroccan oases was shaped by living knowledge and collective practices. It highlights the relationships between water management and settlement organisation; date-palm crafts and everyday life; agriculture and the use of oasis space; local materials and construction skills; collective institutions and shared resources; oral knowledge and intergenerational transmission. It also examines how roads, modern infrastructure, migration, new materials, and changing forms of governance have transformed these relationships — connecting the physical study of ksour and kasbahs with the people, practices, knowledge, and social arrangements that created and maintained them, in support of a practical reference framework for understanding, documenting, and designing within oasis territories.

10. Professors



Cecilia Fumagalli
Architect and researcher

Presentation

(Milan, 1983) Cecilia Fumagalli obtained her Master's in Architecture from the Politecnico di Milano in 2009. From then on, she became involved in several urban and architectural conservation projects in Morocco, Malaysia, and Mauritania. Convinced of the close link uniting theory and practice, she enrolled in 2013 at the Doctoral School of the Politecnico di Milano, where in 2017 she defended her thesis entitled "Transformation as a Tool for Conservation: Cities of the Islamic World and Heritage Institutions in the Field." Between 2006 and 2019 she collaborated as a teaching assistant at the Politecnico di Milano and the Politecnico di Torino and, from 2017, as Adjunct Professor of Architectural Design at the Politecnico di Milano. Since 2019 she has been Assistant Professor at the School of Architecture of the International University of Rabat (UIR). Her research on the architectural heritage — both historic and modern — of Islamic cities has been presented at several international conferences and through numerous published essays, including Tools for Reading and Designing the 'Islamic City': Italian Urban Studies at the Crossroads (2019); Transformation as a Tool for Conservation: Aldo Rossi's Legacy for the Design in the Historic Cities of the Islamic World (2019); The Travels of a Merchant throughout the Islamic World (2018); and Importare il centro storico: quale patrimonio per le città del mondo islamico (2015).

Topic of interest

In the 1930s, Henri Terrasse collected sketches, photographs, and texts describing the landscape of the Atlas Mountains and the oases of southern Morocco. In the 1960s, the group of Dutch architects Kasba 64 followed in Terrasse's footsteps and, in 1974, published Living on the Edge of the Sahara, bringing together surveys, photographs, and sketches documenting the dwelling forms and settlement types of the places on the edge of the desert that they studied. In the 1980s, William Curtis, probably following a personal journey to southern Morocco, published a short yet particularly insightful study on the collective dwellings of the northwestern Sahara.

In these regions, the hostile desert landscape, fed by a network of watercourses, provides the physical setting for the human settlements scattered along the river valleys while simultaneously representing a condition to protect against. Mostly fortified enclosures, the settlement types of southern Morocco are shaped by the need to protect against the surrounding hostile territory and, at the same time, to maintain a clear separation between the open and unlimited space of the desert and the inhabited space.

Lecture: Transformation as a Tool for Conservation

In 2012, I visited for the first time the places studied by these historians and architects. Since then, I have regularly returned to these settlements, studying them and documenting their transformations. Today, these places are either in an advanced state of decay or, conversely, the subject of often highly creative restorations intended primarily for tourism. Other settlement models, driven by the intensive exploitation of environmental resources, are irreversibly compromising the fragile relationship between productive capacity and settlement patterns that has historically shaped the oasis landscape. This process of indiscriminate transformation is not only continuing but is increasingly threatening the valleys of southern Morocco. Based on these and other considerations, this contribution to the workshop aims, first, to investigate the architectural landscape of these places and, second, to explore design proposals capable of demonstrating that an alternative to the uncritical transformation of the landscape and its settlements is not only possible but also desirable.

The lecture aims to place design at the centre of the discourse on the rehabilitation of oasis settlements. Rehabilitation, conservation, and restoration should not be understood as operations intended to crystallise a given condition. On the contrary, being themselves a specific choice, they are part of a broader process of transformation — when they are not its trigger. Transformation, in architecture, is regulated and made possible by a design process whose main aim is to project something in the present, inherited from the past, into a future condition. Architects therefore face the challenging task of connecting past, present, and future without betraying memory, while acknowledging contemporary needs and assigning new meanings to places and buildings. By enabling processes of transformation, architectural design can contribute to the conservation of memories, ideas, places, and architectures.

10. Professors



Jean-Luc Debbar
Architect, professor at
ENA

Presentation

Jean-Luc Debbar has more than four decades of international experience spanning architecture, construction, project management, and real estate development. Throughout his career he has led the design, delivery, and management of complex projects across Europe, the Middle East, North Africa, and the Pacific region.

He graduated as an architect from the Institut Supérieur d'Architecture de l'État — La Cambre in Brussels, and holds both a Diplôme d'Études Approfondies (DEA) and a Diplôme d'Études Complémentaires (DEC) in the History, Thought, and Civilisation of Islam from the Université Libre de Bruxelles. He is also a certified Project Manager accredited by the Association for Project Management (APM).

Since joining Atelier POD (Casablanca–Paris–Dubai) in 2022 as Operations Director, he has played a strategic role in the development and delivery of a portfolio of high-end hospitality projects. Previously he held senior positions with international contracting firms (Saudi Oger, BESIX), real estate developers (Qatari Diar, Musstir), and multidisciplinary consultancies (Samyn & Partners, CERAU, Halcrow), across Belgium, Egypt, Saudi Arabia, Oman, the United Arab Emirates, French Polynesia, and Morocco.

Alongside his professional practice, he teaches at the National School of Architecture of Fez and at the School of Architecture of Casablanca, where his teaching focuses on structural morphogenesis, conceptual structural design, and sustainability. He is presently pursuing a PhD in architecture, with research centred on the relationship between mathematics, architectural design, and design pedagogy.

Topic of interest

The terminology used by local communities and master craftsmen to describe the built environment constitutes an essential yet rapidly disappearing body of knowledge. This includes the indigenous names of buildings, architectural spaces, urban components, construction elements, structural systems, decorative features, building materials, and construction techniques. Together, these terms embody centuries of accumulated technical expertise and cultural memory. The absence of a comprehensive architectural lexicon represents a significant gap in the documentation of Morocco's vernacular heritage. The development of a multilingual glossary — beginning with Tamazight, accompanied by equivalents in Moroccan Arabic (Darija), Classical Arabic, French, and English — would constitute an invaluable contribution to the preservation, study, and transmission of this knowledge. The urgency of such an undertaking cannot be overstated: as traditional settlements are progressively abandoned and the number of craftsmen possessing this specialized vocabulary continues to decline, an irreplaceable corpus of technical and cultural knowledge is at risk of disappearing.

**Lecture: The Role
of Tradition in
Contemporary
Moroccan Architecture**

This lecture will examine how traditional Moroccan architectural knowledge — its spatial principles, construction techniques, material culture, and indigenous vocabulary — can inform contemporary architectural practice. Rather than viewing vernacular architecture solely as a historical legacy, the presentation will argue for its continued relevance as a source of technological innovation, environmental adaptation, cultural continuity, and architectural identity in twenty-first-century Morocco.

10. Professors



Rkia El Mahmoudi
Engineer, consultant, and
trainer

Presentation

Rkia El Mahmoudi is a State Engineer in Materials Engineering, a consultant, and a trainer. A former senior official within the governmental authority responsible for skills, education, training, and higher education, she brings more than thirty years of experience in the design, management, evaluation, and improvement of education and training systems, as well as in strengthening the capacities of public and private actors. Specialised in management systems, the circular economy, and sustainable modes of production and consumption, she supports organisations in their processes of continuous improvement, performance, and skills development. A certified auditor for ISO 21001 (management systems for educational organisations) and ISO 9001 (quality management systems), she works on the implementation of quality, governance, and continuous-improvement processes. She is also certified by the Circle Economy Foundation (Amsterdam) under the SWITCH2CE programme — Switch to Circular Economy Value Chains. As national coordinator of the SWITCH2CE Morocco Community of Practice, she contributes to capacity-building and to raising awareness among public, private, academic, and civil-society actors, in order to accelerate the transition toward sustainable modes of production and consumption and a circular economy.

Topic of interest

Several principles of the circular economy already find concrete expression in the ancestral practices of the oases: the collective management of water, cooperation between actors, and the preservation of scarce resources. The contribution to the workshop gains its full richness when representatives of the local communities, and those who hold these traditional practices, take part in the exchange — their testimony illustrating that the circular economy is not an imported model but a comprehensive approach to sustainable development, some of whose practices are already deeply rooted in this heritage.

Lecture: The Circular
Economy in the Light of
Oasis Knowledge

The lecture establishes a link between the territorial intelligence developed in the Moroccan oases and the contemporary principles of the circular economy. The collective management of resources, adaptation to a constrained environment, the transmission of knowledge, and local governance produced systems that were resilient and sustainable — and they show that the principles of circularity are not entirely new concepts, but are rooted in long-standing practices founded on the measured use of resources and cooperation between actors. Presenting the circular economy in its entirety, rather than reducing it to the recovery of waste, the lecture addresses the limits of the linear economic model and the reasons for the transition; the principles of the circular economy and the strategies for preserving value (the “R”s); the efficient use of resources; the reduction of waste and pollution; the extension of product lifespans through reuse, repair, refurbishment, and recycling; the preservation of natural resources and the reduction of greenhouse-gas emissions; and the environmental, economic, and social benefits of the circular economy.

11. Organizers

Taller & Patrimoine
Association, Paris



Taller & Patrimoine is an association that explores heritage as a tool for territorial action. Through restoration, research, and mediation projects, it supports the reactivation of vernacular architecture and collective spaces by drawing on the material, cultural, and human resources specific to each territory. The association works particularly in contexts where heritage faces abandonment, precarity, or the rapid transformation of ways of life. Its activities take the form of participatory rehabilitation worksites, heritage inventories, international workshops, and applied research programs bringing together residents, artisans, students, researchers, local authorities, and heritage professionals.

Developed at the interface between fieldwork and research, its methodology rests on immersion, mutual learning, and the collective production of knowledge. Surveys, investigations, mapping, and constructive experimentation become so many tools for understanding territories and supporting their evolution. Since its creation, Taller et Patrimoine has carried out projects in France, Mexico, and Brazil, and is today developing new collaborations in Morocco in connection with higher education institutions, public institutions, and local actors. This international experience informs a reflection on the links between heritage, habitat, environment, and local development, while remaining deeply rooted in the realities of the field.

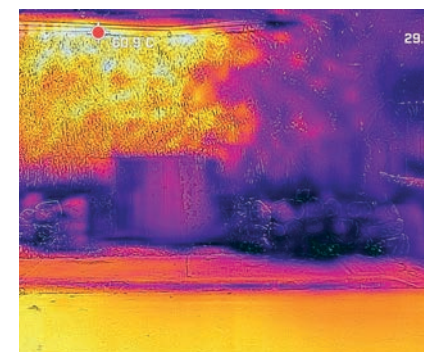
1. Workshop of Mayan house reconstruction, 2025

2. Workshop of Mayan houses inventory, 2026

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Taller & Patrimoine
Association, Paris



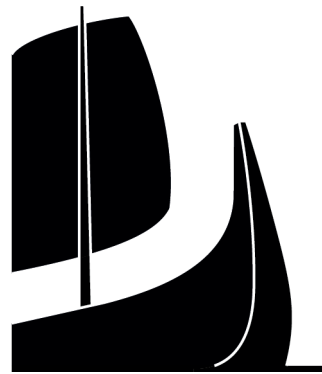
Marwa Ridoini (Rabat, 2001) Architect currently completing her HMONP and working as project leader at Taller & Patrimoine association, where she directs revitalisation strategies in the oasis of Goulmima, in southeastern Morocco — the territory she comes from. A graduate of ENSA Versailles, she is interested in developing tools of territorial reading of oasis environments and in intervening on vernacular earthen heritage, through the study of pre-Saharan ksour and kasbahs. Her work rests on the conviction that heritage becomes a resource for local development when it is seen as an active force, placed in the service of inhabitants; she builds fieldwork founded on listening, dialogue, and co-construction with local communities, designing projects attuned to the cultural, environmental, and economic realities of each territory.

Kenza Afif (Rabat, 2002) Currently completing a dual master's degree in architecture and urban planning between ENSA Versailles and Tongji University in Shanghai, she has developed an international perspective on architectural, urban, and territorial issues through academic and professional experiences across France, USA, China and Morocco. Particularly interested in the relationship between space, society, and urban form, her research investigates how human settlements evolve through local interactions, everyday practices, and collective adaptations. Combining urban analysis, field observation, and systems-based approaches, she explores the hidden structures and patterns that organize cities and territories, seeking to understand the mechanisms of emergence, self-organization, and resilience that shape human environments over time.



11. Partners

Nostoi Association,
Milan



NOSTOI is a cultural association and research center based in Italy. It aims to promote, share, and develop all types of research and activities related to the regions and cultures of the Mediterranean, the Arab world, and the Middle and Near East. NOSTOI recognizes the importance of scientific research and strives to make it accessible and beneficial to fields that are generally excluded from it. In doing so, NOSTOI aims to improve the connection between theory (conducted through independent scientific research) and action in the real world, so that those responsible for improving our living environment can acquire the skills necessary to do so comprehensively. Likewise, we believe that theory without practice cannot be as effective. A constant and reciprocal exchange between practice and theory is essential for mutual benefit.

NOSTOI promotes and carries out research and studies aimed at deepening knowledge of various aspects of architecture, urbanism, art, etc., in their local and global dimensions. In doing so, NOSTOI organizes cultural activities such as trips, workshops, translations and publications of books, seminars and conferences, research, etc. Through a long-standing collaboration with the faculty of architecture at the Politecnico di Milano, NOSTOI supervises bachelor's and master's theses on subjects relevant to the association. More recently, NOSTOI has focused on Moroccan architectural heritage (Villes Minières/Mining Cities; Morocco. Cities of the South: Telouet; On the Edge of the Sahara).

3. On the Edge of the
Desert workshop, Vallée
Ziz, Goulmima 2025

4. On the Edge of the
Sahara workshop,
M'hamed El Ghizlane
2026

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INTBAU Morocco



INTBAU MOROCCO is the Moroccan chapter of the International Network of Traditional Building, Architecture and Urbanism (INTBAU), an active network of individuals and institutions dedicated to the creation of humane and harmonious buildings and places which respect local traditions.

INTBAU Morocco aims to promote Moroccan architecture and art in relation to the act of building, by highlighting local expertise, construction traditions, and architectural expressions that shape Morocco's built landscapes: cities, villages, and territories.

The initiative is part of a heritage, cultural, and forward-looking approach: preserving the knowledge derived from Morocco's built heritage while demonstrating its relevance to contemporary architecture and urban planning.

INTBAU Morocco acts as a platform for transmission, research, and dissemination, fostering the sharing of knowledge, expertise, and experiences between artisans, architects, urban planners, researchers, institutions, and communities.

Through its actions, INTBAU Morocco aims to integrate Moroccan building skills into the international dialogue on architecture, affirming their contribution to current issues of architectural quality, cultural identity, and sustainability.

11. Partners

AGCSAS
Association Ghris pour
la Culture, le Sport et
les Activités Sociales,
Goulmima, Morocco



Founded in 2000 and based in Ksar Goulmima, in the province of Errachidia, AGCSAS (Association Ghris pour la Culture, le Sport et les Activités Sociales) is a local association committed to the social and sustainable development of the Ghris Valley. Through its activities in education, social support, environmental awareness, health, and local capacity-building, the association works closely with the communities and realities of the oasis territory.

Its activities include support for education and literacy, preschool and educational support, the organisation of medical and social initiatives, income-generating activities, and programmes aimed at strengthening local capacities. The association also contributes to the protection and development of the oasis, including through environmental awareness and initiatives addressing the vulnerability of the palm groves.

12. References

Books

Map visualisation

Project tools

Hensens, Jean. “Habitat rural traditionnel des oasis Presahariennes : Le qsar - Problèmes de rénovation”. Paideuma 18 (1972): 42-59.

Moccia, Carlo. Ksour. Città di terra. Napoli: Aión Edizioni, 2012.

Kasba64 Study Group. Living on the edge of the Sahara. A study of traditional forms of habitation and types of settlements in Morocco. The Hague: Government Publishing Office, 1973.

Tsing, Anna Lowenhaupt. The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins. Princeton: Princeton University Press, 2015.

Aït-Touati, Frédérique, Alexandra Arènes, and Axelle Grégoire. Terra Forma: A Book of Speculative Maps. Translated by Amanda DeMarco. Cambridge, MA: MIT Press, 2022.

Fernand deligny*

Territory section*

Territorial clocks*

Speculative design*

Grand tapis pour Grand Paris, Rachel Rouzaud

Cartes et lignes d’erre, Fernand deligny

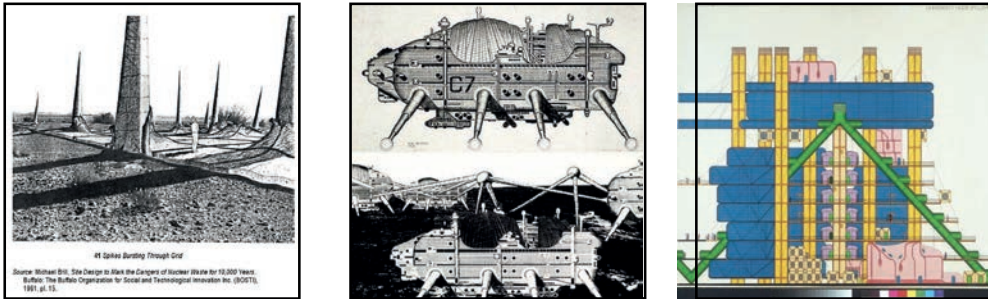
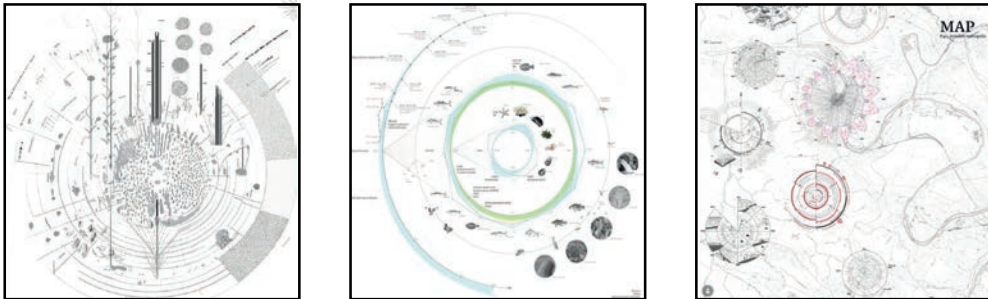
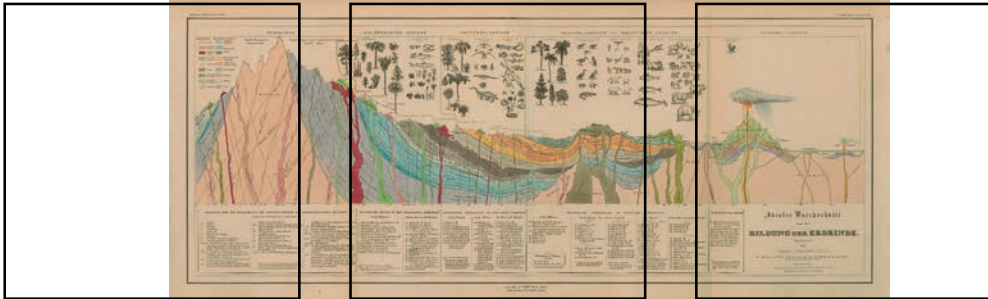
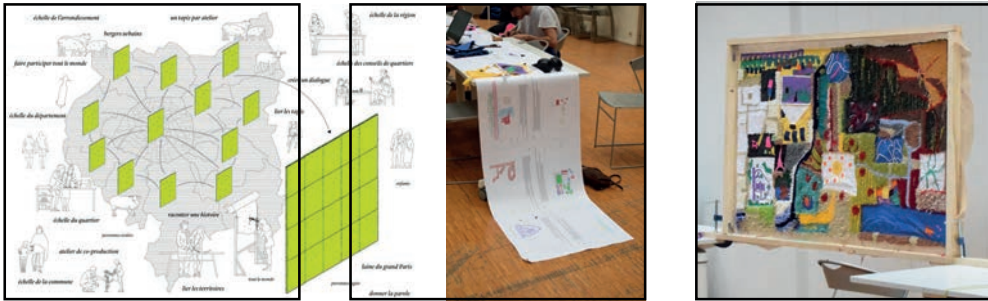
Cross-section of the earth’s crust, 1841, Alexander von Humboldt

Territorial clocks: designing temporalities, phases

Source : *P45 Invisible metropolis*, miv_TTT

Speculative design : design as a critical tool, not only a problem solver

- *Landscape of thorns*, Mike Brill
- *Walking city*, Archigram
- *Plug-in city*, Archigram





Goulmima oasis, Morocco
31.6900, -4.9479
ALT 1018m
22-28 October

