

Guardians of Heritage: The Fortifications of the Moroccan Amazigh Atlas Region

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Abstract

The collective granaries of the Anti-Atlas region in Morocco, known as *Igoudar*, as well as the *Ksour* and *Kasbas* of the High Atlas stand as architectural treasures deeply rooted in the cultural heritage of indigenous Amazigh communities more commonly known as Berbers. They serve a multifaceted purpose; preserving vital resources, providing adapted housing, and offering a stronghold during times of conflict or invasion. This paper explores their distinctive characteristics and cultural significance, showcasing the role they have played as protectors of the rich heritage within in the Atlas region. Additionally, it delves into the challenges they face in modern times and emphasizes the importance of preserving these structures as an integral part of our cultural heritage, ensuring that they endure as poignant symbols of the past for generations to come.

Keywords: Igoudar, Ksour, Kasbas, Moroccan vernacular architecture, Amazigh communities.

1. Introduction

The Atlas region in Morocco, covering the towering peaks of the High Atlas, the cedar-filled valleys of Middle Atlas, and the rugged landscapes of the Anti-Atlas, is an expanse of diverse and rich cultural and architectural identity. Their Amazigh villages intertwine an architectural heritage with robust fortifications, seen prominently in the form of *Kasbas* and *Ksour* housing. These structures, along with the collective granaries (*Igoudar*), stand as tangible testaments to the region's historical defensive strategies and resource safeguarding practices.

Collective granaries in Morocco are fortified citadels, strategically built in elevated locations, integrated into the rugged cliffs of the Anti-Atlas mountain range. Surrounded by protective walls and watchtowers, their rich history traces back to the late 12th century (Meunié, 1944). These architectural marvels, bearing the Amazigh name “Agadir” (plural: “Igoudar”), were originally constructed with a dual purpose of defense and storage.

Furthermore, in Moroccan vernacular architecture, the “Ksour”, the plural form of “Ksar”, which originally means palace and, by extension, refers to a village, is a significant element to our purpose (Hensens, 1973). These organized settlements, known in the Amazigh language as “ighrem”, are densely populated agglomerations predominantly located on the southwest slopes of the High Atlas. They are scattered in the palm groves anchored along the beds of dried-up rivers or clinging to the slopes of hills. “Kasba”, on the other hand, denotes a large patriarchal house with multiple levels, distinguished by its defensive character with four corner towers. It may sometimes include secondary houses for service personnel or family members around it.

Within this paper, we aim to delve into the distinctive characteristics of *Igoudar*, *Ksour* and *Kasbas*, as forms of fortification, shedding light on their role as guardians of resources and culture for the Amazigh communities.

2. Characteristics of *Igoudar*: Geographical Distribution and Architectural Composition

The clustering of *Igoudar* in Souss-Massa region within the Anti-Atlas Mountains, in close proximity to the towns of Tafraoute, Taliouine and Tata, is a notable phenomenon that reflects the unique geographical characteristics of this area.

Various types of collective granaries exist, strategically positioned on rocky outcrops like the meticulously restored *Amtoudi* granaries. Others, such as the cliffside and troglodyte *Agadir N'ifri n'Imadidène* in Taliouine region, blend into the natural landscape. Oasis granaries, exemplified by the renowned *Tiskmoudine*, demonstrate a distinct architectural approach, showcasing communities' adaptive ingenuity in integrating storage solutions into oasis environments (Naji, 2006).

The clustering of collective granaries corresponds to specific geographical regions and demonstrates a fascinating aspect of their distribution. The availability of local limestone stones in the studied area is a critical factor that significantly influenced their architectural composition (1). Their abundance and suitability for construction materials have been instrumental in shaping the architectural landscape of the Anti-Atlas Mountains.



Fig. 1- Cliff Citadel: *Tasguent Agadir*, village of Amzrou (Terrier, 2018).

One of the most prominent characteristics of *Igoudar* is their compact and imposing composition. These structures are marked by thick, earthen walls, constructed primarily from locally sourced materials such as adobe and stone, projecting solidity and strength reminiscent of medieval fortresses. Their compactness not only

maximizes the use of available space but also enhances their defensive capabilities. Also, their placement in relation to villages exhibits fascinating variations, revealing the adaptability of these structures to different contexts. In some cases, they are situated at a distance from residential villages, often several kilometers away, as exemplified by the *Tasguent* granary. This spatial arrangement is thought to have been motivated by factors such as security and safeguarding essential resources and goods - including family harvests, manuscripts, deeds, etc.,- from potential threats. In simple terms, they can be likened to the "bank" of the Souss Massa tribes, but more importantly, they symbolize a harmonious tribal organization.

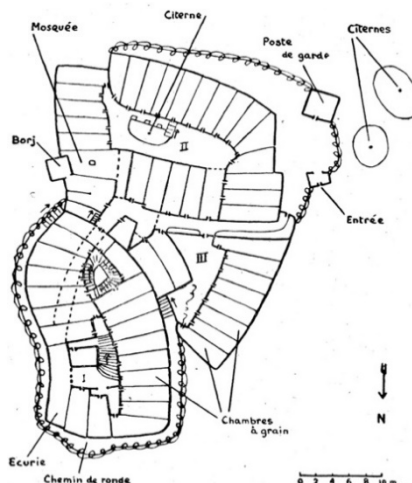


Fig. 2- Original floor Plan of *Tasguent Agadir* (Meunié, 1944).

Tasguent Agadir, situated atop a cliff roughly ten kilometers from the inhabited village, emerged in the 12th century to safeguard the *Idouska Oufella* tribe's harvests. Its expansion was shaped by factors like family growth, increased storage needs, climate conditions, and topography.

This granary spans 60 meters in length, rising six floors with three gates and galleries connecting 209 individual storage chambers, each allocated to a family (Naji, 2006). Notably, *Tasguent Agadir* differs in layout from many *Igoudar*, featuring courtyards granting access to multiple chambers. Protection is ensured by a single fortified enclosure, overseen by a designated guardian, known as the "amine," chosen by the community.

In contrast, other villages have evolved around a centrally located *Agadir* within the fortress walls. The *Ksar* or Village of *Tissekmoudine* serves as an example of this configuration. Here, its *Agadir* serves as the nucleus around which the community thrives. This arrangement not only ensured the protection of resources but also facilitated a communal way of life, with residents in close proximity to essential storage and defense structures.



Fig. 3- 3D modeling of the *Ksar* and *Agadir Tiskmoudine*, by Mehdi Benssid, within a project directed by Salima Naji, and supported by the Global Heritage Fund. Legend: 1. Irrigation Canal (Séguia), 2. Reservoir/Laundry Basin 3. Palm Grove 4. Ksar Entrance 5. Welcome Square 6. Covered Passage 7. Prayer Hall 8. *Agadir Tiskmoudine* 9. Inhabited Houses

Moreover, *Igoudar* integrate various protection mechanisms that further emphasize their role as defensive fortifications. For instance, they feature fortified gates, constructed to be robust and secure, often serving as the primary points of access. Additionally, watchtowers positioned at corners and vantage points provide an elevated position from which guards could monitor the surrounding terrain and respond to potential threats effectively.

These *Igoudar* share common traits of central orientation and inward-facing layouts, encircled by stone walls and thorny barriers. Fortified gates, corner watchtowers, and firing positions enhance their defense while safeguarding neighboring structures such as mosques, cisterns, mills, and houses.

3. *Ksour* and *Kasbas*: Exploring Traditional Rural Dwellings in Draa Tafilaleet

In the pre-Saharan regions of Morocco, especially within the Tafilaleet region including the valleys of Dadès, M'Goun and Draa, the *Ksar* (plural: *Ksour*) commands attention as a clustered arrangement of individualized *Kasbas*, and stands out prominently in the realm of vernacular architecture.

The close relationship between socio-economic life and the organic design of the *Ksour* further emphasizes their significance. Far beyond being simply “fortified villages”, these structures are authentic expressions of communal living, forged within the challenging natural and economic conditions of the region. The harsh climate, reliant agriculture, and the need for collective effort define the purpose and form of these communities (Ichter, 1967). It is noteworthy that these structures primarily serve the community's needs: housing, defense, and religious and social activities governed by the “Jemaa”. The “Jemaa”, an assembly that oversees the application of customary law, regulating daily life and sharing collective responsibilities among inhabitants.

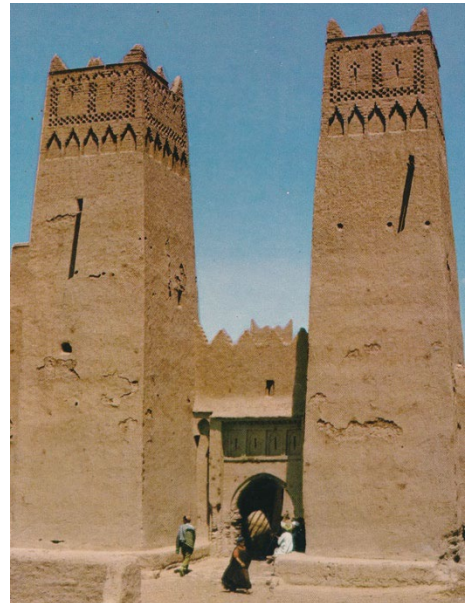


Fig. 4- The main gate or “Imi akhatar” of the *Goulmima Ksar* in the 1970s. Postcard from the author's personal collection.

Built in non-cultivable areas within the communal palm groves, the *Ksar* follows an organic plan. A chicane entrance, controlled by a guard post - often designed as a real meeting hall - regulates access to the main square around which the Mosque with its hammam or the ablution rooms, the Quranic school, the *fondouk* for passing foreigners, workshops for artisans are organized.

From the square, one or more streets depart, forming a circuit according to some basic patterns reminiscent of those found in the *Igoudar*. These streets, with an average width of 2 to 2.50 meters, are often covered by constructions, the 'Saba', from the 1st floor upward, allowing light to enter through narrow openings whose dimensions and rhythm reflect the architectural genius of the community and its "maalmine" (2). On the exterior, open-air stables, date-drying spaces, and the cemetery are arranged while minimal decorative elements adorn the entrance gate, the Mosque's entrance, and occasionally, the corner towers. They feature decorations that often incorporate Amazigh symbols (3), serving as a reminder of the citadel's defensive function.

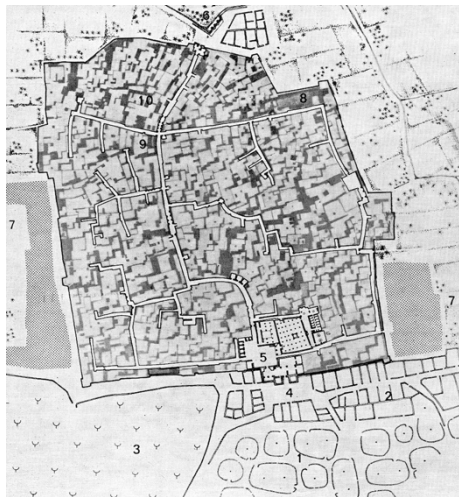


Fig. 5- Surveyed plan of the *Goulmima Ksar* in the 1960s. Legend: 1: Threshing areas, 2: External stables, 3: Cemetery, 4: Entrance and guard room, 5: Main square, 6: Washhouse-drinking trough, 7: Extension, 8: Internal stables, 9: Former east gate, 10: Jewish quarter (Mellah). Source: A+U n°5.

Primarily constructed using rammed earth, with walls ranging from 1.00 m to 0.60 m thick, *Ksour*

employ sun-dried mud bricks for upper parts, pillars, and stairs. Palm trunk beams and floors support a lattice of reeds or various branches covered with 15 to 30 cm of beaten earth (Ichter, 1967). While not unique, this technique produces astonishing architectural results. *Goulmima Ksar* serves as an example of architectural and cultural significance in the Oued Gheris valley.

It is situated approximately 2 km away from the new city center that's now organized instead along the national road connecting Errachidia to Tinghir. Home to 431 households and 2120 residents, it reveals a layout characterized by three branches radiating from the central square, which has been altered over time due to successive additions and transformations, adapting to the terrain (Ichter, Harald, 1967). Built within a palm grove, this agglomeration has retained the imprint of the agricultural irrigation network in its layout.

3. Transition to Modern Times and the Preservation Challenges of *Igoudar*

The transition from the 12th century to the second half of the 20th century in Morocco was marked by significant transformations and challenges. During this period, Morocco grappled with the complexities of colonization, intricate questions of identity, and profound social and political issues. Following decolonization, the country embraced modernist architecture to convey a compelling message of modernity while simultaneously interweaving elements of its local architectural heritage through the use of forms and materials (Kulterman, 1966).

Within modern architecture, there are notable examples that, despite being constructed in concrete, draw inspiration from the vernacular architecture, including elements inspired by the *Kasbas*, the ancient medinas, and the *Igoudar* fortifications. For instance, the former Club Med in Ouarzazate, constructed in 1969 and designed by Armand Amzallag, along with the works of Abdeslam Faraoui and Patrice De Mazières from the early 1970s, such as the Gorges du Dades Hotel (1974-1976) and the Ibn Toumart Hotel in Taliouine (1972-1975), exemplify a unique blend of brutalist design with raw red plaster finishes. These structures showcase a successful fusion of modern construction materials with the timeless elements of vernacular Moroccan architecture.

Later on, architecture and urban planning took various directions over the decades, guided by different visions and policies. Nevertheless, regardless of the paths they followed, if the *Igoudar*, *Ksar* and *Kasbas* represent an invaluable source of knowledge, the question of their preservation today raises various challenges.

Despite their cultural significance, many *Igoudar* face neglect and deterioration. An exemplary case illustrating the challenges associated with their preserving is the *Tissekmoudin*, where houses were nestled within a palm grove surrounding the fortified collective granary. Today, it stands as a poignant example of architectural gradual decline. Factors like rural-to-urban migration, agricultural difficulties, population growth, emigration beginning in the 1950s to the Europe have led to households gradually relocating from the palm grove. As a result, the granary, primarily constructed using earth mortar or adobe since this area has limited access to stone, stands in ruins today, abandoned and deteriorating due to the erosion of earthen mortar and a lack of maintenance. Natural incidents, including the lowering of the water table, soil salinization, and a decrease in precipitation, have further compounded the challenges faced in the region.

Additionally, over the past century, the population of Tafilalet has almost doubled, while its agricultural resources have seen only a slight increase despite significant infrastructure efforts. Also, overcrowding has led to the division of built property and the proliferation of constructions on the outskirts of the *Ksour*, and even within the palm grove where those seeking improved hygiene and comfort, distancing themselves from the densely populated traditional city. The communal organization of this traditional city is being challenged by modern administration, resulting in a weakening of internal order.

In areas experiencing relative economic prosperity, large *Ksour* remain viable: construction, repairs, and enhancements continue. However, it is important to specify that the recent rehabilitation carried out by the Al Omrane Group in 2015 in *Goulmima Ksar* are seen as less respectful of the overall appearance, in contrast to the restoration work led by Salima

Naji in *Igoudar*, which is more aligned with the context and respects ancestral techniques.

Furthermore, the recent earthquake that struck Morocco's Haouz province in September 2023 serves as a stark reminder of the vulnerability of historic structures and underscores the urgency of preserving the remaining ones, not only as cultural heritage but also as structures that have demonstrated their resilience over time.

4. Conclusion:

Igoudar in the Anti-Atlas mountains of Morocco, *Ksour* and *Kasbas* in Tafilalet region stand as timeless guardians of resources and culture, embodying the spirit of indigenous Amazigh communities. Their architectural characteristics, historical importance, and contemporary influence illustrate the enduring legacy of these remarkable structures. Modern architectural examples, demonstrate how new designs can incorporate elements of traditional fortifications from the southeastern Moroccan region while contributing to the region's architectural continuity and resilience. As Morocco navigates the complexities of the modern era, it is imperative to preserve these architectural treasures as a testament to the region's rich heritage and resilience. Facing challenges of time and changing demographics, these structures present an opportunity for architects, urban planners, and policymakers to contribute to their survival through sociological studies, technical rehabilitation, and thoughtful planning that respects both tradition and contemporary needs.

Notes

- (1) These limestone stones, resulting from detrital deposits dating back to the Cambrian era, followed by limestone platform sedimentation, have played a crucial role in the construction of *Igoudar*.
- (2) *Maalmine*: Plural of "maalem" - mason.
- (3) The same decorative elements are found in carpets, jewelry, ceiling painting patterns, pottery, and wooden objects, as they are still crafted today.

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