

ksar Boukais in Béchar, its reality and preservation mechanisms.

قصر بوكايس ببشار، واقعه وآليات الحفاظ عليه

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Abstract:

The desert areas were known and characterized by the architecture of traditional clay palaces, which inspired many scholars interested in studying the architectural heritage of such areas. desert palaces are a city that pulsates with many religious, customary and social values and a sincere expression of the local community adhering to its customs, traditions and values, despite the abandonment of many children and grandchildren for various circumstances to modern housing, but they are still witnessing a set of activities and the visit of many tourists. all this and that requires study in order to preserve and value such material heritage in the desert areas of Algeria .

In order to study such a cultural heritage, we will highlight the boukais Palace, one of the palaces of the north, along with the mougul and lahmar in the state of Bechar in Algeria, which was distinguished by its architecture and its watering and water distribution system, which surprised many researchers, and its customs and traditions, to personalize its current reality, especially since parts of it were demolished and obliterated due to neglect, and we propose a set of solutions that contribute to some extent to preserve and value it in light of the Algerian state's policy aimed at exploiting architectural heritage as an important tourist

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resource in activating desert tourism and preserving authenticity, since a physical witness of a historical epoch that marked such societies in the midst of the world's cultural diversity.

Keywords: architectural heritage; desert ksar; boukais ksar; damage factors; preservation mechanisms.

- Abstract in French:

Les zones désertiques étaient connues et caractérisées par l'architecture des palais traditionnels en argile, qui ont inspiré de nombreux chercheurs intéressés à étudier le patrimoine architectural de ces zones. Les palais du désert sont une ville qui vibre de nombreuses valeurs religieuses, coutumières et sociales et une expression sincère de la communauté locale adhère à ses coutumes, traditions et valeurs, malgré l'abandon de nombreux enfants et petits-enfants pour diverses circonstances dans des logements modernes, mais elle est toujours témoin d'un ensemble d'activités et de la visite de nombreux touristes. tout cela et cela nécessite une étude afin de préserver et de valoriser ce patrimoine matériel dans les zones désertiques d'Algérie .

Afin d'étudier un tel patrimoine culturel, nous soulignerons le palais boukais, l'un des palais du nord, avec le mougul et lahmar dans l'état de Béchar en Algérie, qui se distinguait par son architecture et son arrosage et distribution d'eau. système, qui a surpris de nombreux chercheurs, ainsi que ses coutumes et traditions, à personnaliser sa réalité actuelle, d'autant plus que certaines parties ont été démolies et oblitérées par négligence, et nous proposons un ensemble de solutions qui contribuent dans une certaine mesure à le préserver et à le valoriser dans à la lumière de la politique de l'État algérien visant à exploiter le patrimoine architectural comme une ressource touristique importante pour activer le tourisme du désert et préserver l'authenticité, en tant que témoin physique d'une époque historique qui a marqué de telles sociétés au milieu de la diversité culturelle du monde.

Mots clés : patrimoine architectural ; saharienne ksour ; ksar Boukais; facteurs de dommages ; mécanismes de préservation

- Abstract in Arabic:

عرفت وتميّزت المناطق الصحراوية بعمارة القصور الطينية التقليدية التي ألهمت العديد من الدارسين المهتمين بدراسة التراث المعماري لمثل هذه المناطق، فالقصور الصحراوية مدينة تنبض بالعديد من القيم الدينية والعرفية والاجتماعية وتعبير صادق للمجتمع المحلي المتمسك بعاداته وتقاليده وقيمه

بالرغم من هجران العديد من الأبناء و الأحفاد لظروف متعددة إلى مساكن حديثة، غير أنها مازالت قائمة تشهد مجموعة من النشاطات وزيارة العديد من السياح، وكل هذا وذاك يتطلب الدراسة بهدف الحفاظ والتثمين لمثل هذا التراث المادي في المناطق الصحراوية بالجزائر.

ويهدف دراسة مثل هذا التراث الحضاري سنسلط الضوء على قصر بوكايس أحد قصور الشمال إلى جانب موغل ولحمر بولاية بشار بالجزائر، الذي تميز بعمارته ونظام السقي وتوزيع المياه به الذي ادهش العديد من الباحثين، وعاداته وتقاليده، لنشخص واقعه الحالي خاصة وأن اجزاء منه تعرضت للهدم والطمس بسبب الإهمال، ونقترح مجموعة من الحلول التي تساهم لحد ما في الحفاظ عليه وتثمينه في ظل سياسة الدولة الجزائرية الرامية لاستغلال التراث المعماري كمورد سياحي مهم في تنشيط السياحة الصحراوية والحفاظ على الأصالة بما أنه شاهد مادي لحقبة تاريخية ميزت مثل هذه المجتمعات وسط التنوع الحضاري في العالم.

Keywords: -التراث المعماري؛ القصور الصحراوية؛ قصر بوكايس؛ عوامل التلف؛ آليات الحفاظ.

- Introduction:

Desert palaces are an architectural and civilized legacy that reflects the cultural diversity that our country abounds in. The subject of preserving desert deficiencies is one of the important subjects that researchers have taken in the form of academic studies, such as university theses, articles in refereed journals or interventions at national and international conferences and in the form of university training projects. But the problem is why these shortcomings remain so poorly preserved that they get worse by the day. What are the most important obstacles to the preservation of such an architectural heritage? How can it be overcome? Is Algeria applying a clear policy of preserving the various monuments of all kinds and whereabouts?

Thus, the policy of preserving these shortcomings, including the Boukais Palace, is accessible, given the fact that there are line programmes to protect heritage monuments in the state of Bechar concerning Q'sar al-Qanadsa and Taghit, which are classified in List of National Heritage (Official Gazette of the People's Democratic Republic of Algeria, No.87, Shaaban 30th, 1420, Corresponding to December 08th, 1999: 26) , while others are marginalized and are still under request for classification in the additional inventory such as Boukais Palace.

To address the issue and answer the questions, we will try to shed light on the shortness of As a sample study by introducing it and its reality, to propose a set of practical solutions with

a view to preserving, protecting, reviving and sustaining it, Especially since it still preserves its architectural features compared to other palaces in our country that have completely obliterated what we fear and do not want to repeat. When we enter the palace, we find waste and filling in many parts, especially abandoned and demolished houses, despite the fact that most of their features remain in place and can be rubble, prepared, restored and revived. Why don't residents' palace agree by preparing it, visiting it every weekend and staying overnight with tourists and visitors, since the area is known with generosity, hospitality and generosity, If we talk about the mosque and the school, the inhabitants can cooperate with each other in what is known in their customs as the Tawfizah to restore them and benefit from them by reviving them through praying, reading, memorizing, teaching the Qur'an and other suggestions that we will present in this study.

In order to achieve the desired results, we have used a descriptive approach based on the analysis of the architectural and social structure of minors, as well as its damage factors, and then proposed mechanisms for its preservation and protection of the legal, administrative and technical mechanisms.

1. General concepts:

We can link the concept of desert palaces to such concepts as:

1.1. Architectural heritage: It can be defined among urban and rural real estate clusters, which include reeds, towns, palaces, villages and traditional housing complexes, which are characterized by the predominance of the residential area, and whose homogeneity, architectural and aesthetic unity are of historical, architectural, artistic or traditional importance that can justify its protection, repair, rehabilitation, and valuation (Official Gazette, 1998: 10)

The total number of buildings, installations and tissues that were the product of the relationship between the building and the environment that preserved their authenticity and value in the face of various changes and challenges, which enabled them to be the living record, the memory of society and the reference that chronicles and embodies the relationships, interaction of human society, and its environment; In addition, it is a barrier to contemporary cultural incursions; This heritage encompasses all historical and cultural monuments, both inside and outside cities, such as individual complexes or buildings, with

their different history, architectural nature, building materials and techniques (Belguidoum , Filah,juin2022:1047)

1.2 Traditional architecture or local architecture, which are architectural installations which are subject to a specific environment, climate, customs and traditions of the construction process, such as the direction and height of the doors, the roofing system and its materials, the presence of facilities such as mosques, squares, houses and places within the construction, and local materials, which include desert palaces that are subject to a particular regime we are in the process of its study.

1.3. Clay buildings: All buildings built with mud, bricks, wood, stones and sand, including desert palaces, are included in this concept; The mud buildings or mud palaces are the carnivorous apartment complexes, consisting of a group of houses, squares, paths, narrow streets, a mosque, a corner and a Quranic school, which have been constructed.

In particular, milk mud keeps cold in the summer and warm in the winter because of its abundant properties in desert areas and has been used alongside stones.

1.4. Desert architecture: Associated with the geographical scope of desert areas, cities have been established in the desert, where the hot geographical environment, social structure and religious factor have imposed a certain pattern that suits them so that climate protection is available, Architectural formations have emerged at a high level of thoughtful planning closely linked to the Islamic architecture seized in its facilities as well as its planning, thus making desert architecture a genuine expression of the function and the prevailing natural and social environment, and have been able to find sound architectural solutions to protect against extreme weather factors, the buildings appeared fused or semi-fused in a twisted urban fabric, providing the largest shaded space. The integration and overlapping of spaces is one of the most important planning and design values of desert architecture, especially in residential buildings (Bamoun, 2015:23-24).

1.5. The concept of desert palaces:

The palace and its collection of palaces, a population divided into a group of neighbourhoods of each tribe or throne linked by a group of narrow and twisted streets with little exposure to sunlight that meet in the public square called the spaciousness, the palace is also surrounded by a thick wall fortified with terrace-reinforced towers and surrounded by a wide, deep

trench crossed by moving palm-wood doors such as in both the As'la Palace and the Sfisifa Palace, The wall may sometimes be replaced by the outer walls of the houses, which, as a result of their cohesion, form a real wall, and this phenomenon has manifested itself in both the Beni Ounif Palace, Boukais and Boualam Palace (Bamoun 2014-2015: 38) and in used building materials. Some of them were built with stones on a plateau such as a palace for Lahmar and Mazer in Bechar area; some of them were built with mud and stones, such as the Boukais palace under study, one of the palaces is what was called the names of places such "Boukais" Palace, "Kenadsa", "Taghit" in Bechar city, and "Tementit" in Adrar city and others, including the so-called personalities and tribes, such as Mubarakia Bint Al-Khas Palace in Al-Bayadh State.

Desert palaces therefore fall within the definition of urban and rural real estate groups mentioned in Article 41 of the Heritage Protection Law 98/04 as well as in the definition of historical monuments mentioned in Article Twenty-Seven (17) from the same law, it is therefore a rural real estate group and a historical landmark that testifies to the work and activities of man in the desert environment, which represents the desert palace society known for its customs and traditions adhering to its religious and customary values.

1.6. The origins and characteristics of desert ksours:

Before the inhabitants of the desert palaces lived in their palaces, they were originally nomads, and with the increase in wars, aggressions and a sense of insecurity, they moved to these safest buildings and because of the good life they had and they were originally stores and then kasbahs. Hence, it can be said that the palace is a turning point from the kasbah to the stores to the palace, according to some researchers, the nucleus of desert palaces are those collective stores imposed by the old customs shared under the name of the palace, and they said that the idea of establishing palaces stems from immunizing themselves from enemies (Ben Sghir, 2011: 139)

1.7. Characteristics of desert ksours:

Desert architecture was characterized by characteristics that were the result of a set of influences represented in the geographical, religious and customary environmental aspect, which we notice clearly in:

- ✓ The convergence and cohesion of dwellings is evidence of family interdependence, neighborhood synergy and kinship, on the one hand, and to provide shadows and reduce sun exposure, on the other.
- ✓ The absence of windows and the lack of correspondence of entrances in the houses in order to preserve the sanctity of the house and the absence of sound outside as well as the limitation of ventilation through the eye of the house open square opening in the middle of the roof of the courtyard or the courtyard in the middle of the house or in leaving the door open.
- ✓ The presence of the shed with low entrances to the houses in order to preserve the sanctity of the house so that the people of the house can hide and avoid the look inside or passing by to the center of the house, especially since the doors were often left open for ventilation in the absence of windows.
- ✓ The location of the mosque and the Quranic school at the front of the palace away from the residences that are separated from it by a group of narrow and twisting paths.
- ✓ Twisting, winding paths and roofing them in order to protect them from sandstorms.
- ✓ The palace is limited to main doors, each of which has its function as a door leading to the oasis, a door leading to the market, and others
- ✓ The use of local materials from wood and palm trunks in roofing, door making, building stairs, bricks and stones for the construction of walls and their foundations, sand and clay for their plastering.
- ✓ Building it on a plateau or a rocky height for security reasons as well as near water sources for watering oases, cattle, animals and for daily exploitation.

- ✓ The presence of the main entrances in all palaces, while the high walls and square-shaped towers in different corners of it we find them in some and we do not find them in all.
- ✓ On the other hand, the social life of the inhabitants of the oases is based on justice. The latter presents distinctive images of collective life characterized by different types of solidarity, the first of which concerns participation in the construction of oasis houses. All residents come together to lend a helping hand to those in need, and this participation is called in traditional local terminology "Tuwaiza" all residents meet, organize themselves and share tasks to provide a decent ceiling for needy families in accordance with rural housing standards. Building materials are extracted from the local context. The "bricks" are made from sun-dried topsoil in wooden molds, the beams and columns come from palm trees and the work is completely free of charge (.Farhi,.Hadhaga2018).

1.8. The concept of conservation and its types:

Preservation is intended to prevent the deterioration and distortion of heritage buildings and work to prolong the life of heritage and its distinctive civilized character, including an understanding of its economic, social, administrative and technical aspects, preservation is the protection of heritage buildings from distortion and destruction that may occur deliberately or unintentionally, and it is also an attempt to save these areas from the loss of their identity and distinctive architectural character and not with the aim of hindering the movement of growth and development, but rather preserving the originality of the old city and the continuity of its historical environment (Fahed, 2010:17).

Conservation, according to some researchers, is divided into two parts: urban conservation, which means conscious management that determines strategies for the care and maintenance of the urban fabric of a heritage nature, or what is known as heritage environments, which is represented in heritage building formations, urban spaces, public squares, residential neighborhoods, and site coordination, and that to

ensure the effective continuity of the use of the inherited urban fabric; architectural preservation is the process of protecting, maintaining and repairing structures and architectural vocabulary with distinct historical, cultural or visual characteristics, in an effort to remove distortion as a result of the astonishing rapid change of the built environment in order to improve the quality of urban life and rebalance between nature and the city.

Therefore, preserving in general, whether urban or architectural, means preserving the original values in the urban heritage environment, whose survival contributes to preserving social and historical values of importance to the city and society and then the continuation of the processes on which it is based as a means of its sustainability (Oleil, Barqawi. 2019: 130-131).

2. Definition of Boukais Palace:

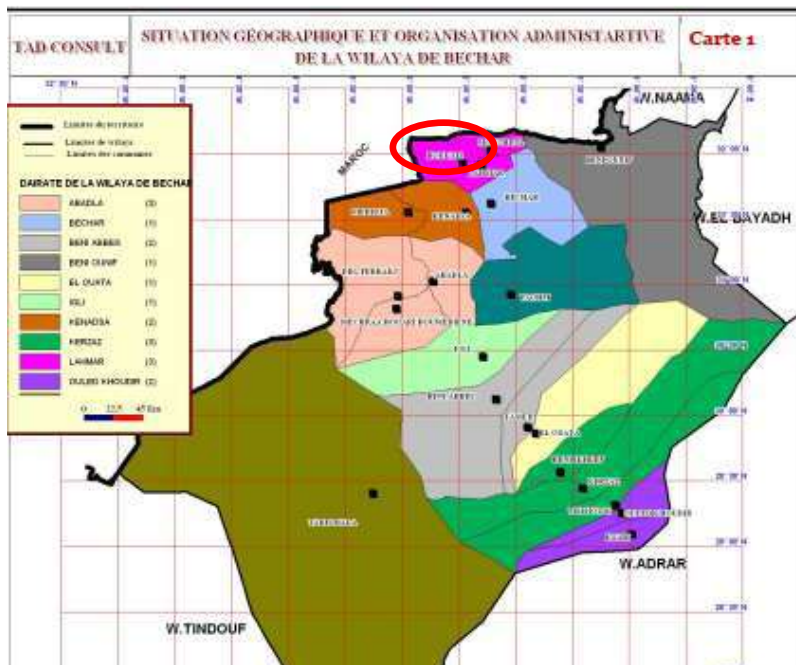
The palace of "Boukais" is one of the monuments in the state of Bechar is an archaeological masterpiece and an architectural edifice that expresses the environment and society in which it belongs and belongs to it, as it is one of the desert palaces consisting of religious and civil buildings cohesive with each other, the cohesion of its inhabitants, their interdependence, cooperation and synergy

2.1. Geographical location:

The ancient palace - one of the palaces of the north along with the palace of Moughel and Lahmar - is located north of the municipality of Boukais (Looks at the aerial photo 01) north of the wilaya of Bechar, 50 km away, and east of the circle of Lahmer by 20 km; it is bordered to the north and west by the Kingdom of Morocco, to the south by the municipality of Al-Qandasa and to the east by the municipalities of Lahmar and Moughel (Look at the map 01) (Direction de l'urbanisme de la construction et de l'habitat de la wilaya de bechar).



Aerial photo 01: Site of the ancient palace in the municipality of Boukais <https://mapcarta.com/W423702465/Map>



Map 01: Location of the municipality of Boukais within the district of Lahmar in the north of the wilaya of Bechar. Ministère de l'aménagement du territoire et de l'environnement, wilaya de bechar, Etude du plan d'aménagement du territoire ; phase : « Rapport final : programme de mise en oeuvre et système de suivi-evaluation, atlas cartographique, EURL-T.A.D-CONSULT-Territoire. Aménagement. Développement, Bureau d'ingénierie et d'études technique, koubz, alger.

2.2. Historical overview:

According to oral accounts, the origin of the name Boukais goes back to the Berber word "Bok ice" and may mean according to some "your father, Fares" and there are those who refer it to the word (Pugh Moq) it means the source of water (Interview Rais Abdulmalek, 01/ 12/ 2022). This may be confirmed by Abu Salem Al-Ayyash in "The Journey of Al-Ayyash", where he mentioned: "...Tomorrow we came to Boukais and found their valley with little water in it, and our covenant with it had a lot of water, the people of the country told us that there was a cave at the top of the valley in the mountain with a pool of round floating water that they did not know where it came from or where it was going, so they began to dig for him to take it out and add it to the water of their Sakia, and when they took it out and brought it to the Sakia, the water of the valley that flows in the Sakia was cut off, And they found out that the water in the laurel is the origin of the valley water, so their trouble was gone in vain; However, they benefited from this the safety of their Sakia from the injustice of the floods by its distance from the valley stream, and we passed Boukais and did not grow near the Zelmo Valley..." (Al-Ayashi, Al-Fadeli, Al- Qurashi 2006: p 551).

The palace was founded according to its inhabitants to fifteen centuries (15), and it has known in different periods events and conflicts such as their conflict with the palace "Taourirt" located at the top of the mountain* and what really distinguishes the unique irrigation and water distribution system based on a calculation using a wood installed on the roof of one of the paths leading to the public square to install in the floor is a group of stones according to the extension and decrease of the shadow from sunrise to noon so that watering prevails all (Interview Rais Abdulmalek , on 13/04/ 2017); Boukais was also known for its abundance of cemeteries, oases and water, and was a source of fodder and supplies for many neighboring areas; The palace inhabited about four hundred people, including twenty-one families or the title of (throne), then increased to twenty-three after Islam, and among the families Ait Hamou Ali, Awlad Rais, Awlad Belhassen, Awlad Abdel Malik, Awlad Hamman, he also added that the palace was traded by families seven times because of epidemics and others. (Interview Rais Abdulmalek , 01/12/2022); The palace witnessed strong resistance in the colonial period, as several battles took place, including the famous battle of "Hassi Temenkas", the battle of "Al-Safsaf" and the battle of "Al-Zaiq" (report on

the municipality of Boukais), as the inhabitants of the palace played an important role as a source of supply for the mujahideen and the support of its people for them.

Here, it can be noted that the history of these palaces remains confined to oral narratives narrated by a resident of the municipality and has a percentage of validity is inevitable, especially if we drop it on some of the names of the families that still inhabit the municipality and have the keys to their homes in the palace to this day, which prompts us to research and investigate in this aspect to write and record history.

2.3. Boukais ksar architectural engineering planning:

The palace extends over an area of 8.03 hectares, taking an irregular shape, which can be said to be a semi-rectangle that widens on one side and narrows in the other (see Plan 01), an architectural composition consisting of residential units that are cohesive with each other, interspersed with paths, including the path of Awlad Hassan, Awlad Abdel Malik trail, Awlad Rais trail, Awlad Meziane trail, Awlad Mahmoud trail, Awlad Fakih trail, according to the names of the families living in the palace, and this is what distinguishes the latter, all of them lead to public squares, such as the square located near the mosque south of the palace (see picture 01) open to three paths, including Nayet Meziane trail, Moulay Ali trail and a closed blocked trail called Nayet Razawa trail, which is a square shape facing the top of the valley and the palm oasis area 547.85 m², another square called Hosh Boualala (see picture 02), located at the heart of the palace, is open to three trails: Nayet Abdul Malik trail, Nayet Lahcen trail, and Nayet Haman trail, which has an outlet connecting it to the club yard (see picture 03) which occupies the bottom of the palace and connects it to the palm grove a shadow-measuring watering water distribution system has been installed inside this yard that runs along the western wall and is open to an internal section linking it to the aforementioned trail and a section leading to the palm oasis (Direction de l'urbanisme de la construction et de l'habitat de la wilaya de bechar), Which yields the types of dates belong to the families living in the palace, who are watered from the water passing through the Sakia with an equal irrigation system and who are still engaged in their agricultural activity to this day.

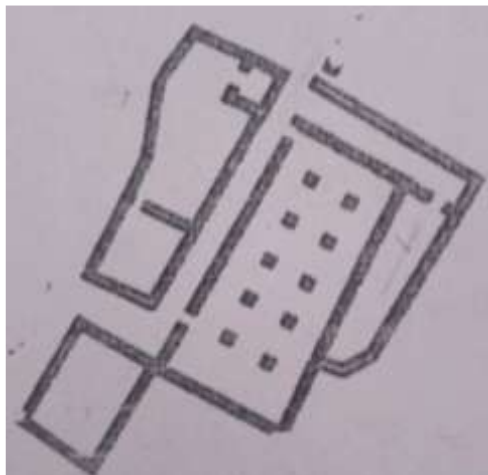


Plan 01: plan of ksar boukais.(Direction de l'urbanisme de la construction et de l'habitat de la wilaya de bechar, projet réhabilitation ksar de boukais, Direction du culture, bechar.

The residences in the Boukais ksar generally take the design based on the ground floor and the first floor of which is spacious and some of which is small in size according to the number of individuals and their social class, a ground floor formed from an entrance followed by a shed to open to a central courtyard equipped with a square opening called Ain Al-Dar (see picture 05) and a barn to put animals such as mules and donkeys (see picture 06) and a first floor with rooms to climb across narrow stairs (see picture 07) then from it to the roof of the house; As for construction techniques and materials, stones are first described as a basis and then followed by rows of bricks and clay is worn for walls and columns (see pictures 08,09) Palm trunks are used for roofing (see photo 10) and the construction of stairs; hence it resembles the architectural composition of the traditional dwelling of most desert ksours.

The palace also consists of religious facilities represented in the adjacent mosque and Quranic school (see plan 02), and the mosque consists of a rectangular prayer hall with a double mihrab hollow with a border arch interspersed with walls on the right and the Qibla wall cabinets for placing the Qur'an and a niche for lighting (see picture 11) free of the

minaret with a back door leading to the Qur'anic school, where the five prayers, Friday prayers and memorization of the Qur'an were held.



Plan 02 :plan of mosque and Quranic school.(Direction de l'urbanisme de la construction et de l'habitatde la wilaya de bechar, projet réhabilitation ksar de boukais, Direction du culture, bechar.

As for the military architecture in the palace, it depends on the outer walls of the houses with three main entrances (see pictures 12, 13, 14) to it, and according to one resident, there is a watchtower in Boualala Square, located in the heart of the palace, but it has disappeared over time (Testimony given by Mr. Rais Abdulmalek at the Old Palace on 01/12/2022), the lack of defensive fences and watchtowers can also be attributed to the fact that Boukais was a transit zone.

Hence, it can be concluded that the planning of the palace was subject to a set of factors, as previously said, the religious factor, it is noticeable through the lack of correspondence of the doors, the location of the mosque and the Quranic school, as well as the length and height of the entrances and the shed, all of which express respect, modesty and adherence to religion, and the geographical factor in the use of simple local building materials of clay, wood and sand, derived from the environment in which they are located, as well as twists and zigzags in the paths and corridors to avoid the factor of wind and seasonal sand whirlwinds known in desert areas, especially in March and April, without forgetting workmanship at work, all this and that left us an architectural masterpiece that sincerely expresses simplicity and creativity at the same time, which is common in the palace society

adhering to its customs, traditions and values, and what distinguishes the palace "Boukais" is that it contains three public squares, including a dedicated to sheikhs and elders of the tribe and another dedicated to young people for entertainment and play, free of external defensive walls and towers, watering system (Razzoug,Remini,hamoudi,2014:pp 109-119), water that has a distinctive feature provides warm in winter and cold in summer.

3. The reality of Boukais ksar:

The state of preservation of the Boukais ksar has deteriorated in recent years due to environmental and human factors, especially since most of the houses were abandoned, although the property remains for some of the residents who built themselves modern houses on the pretext of a better living, it was reported that the palace was completely depopulated on the year 2012.

Due to environmental factors such as moisture from groundwater, sudden flood rains and strong monsoon

Houses demolished (see picture 15); doors and ceilings were damaged (see picture 16, 17), its wood decreased, its parts separated, and some of it disappeared due to insect attack. Such as the earth insect that feeds on this organic matter and nests animals such as rodents and birds. As we also know that groundwater is one of the most important factors in the damage of palace building materials, it rises with the capillary property through the ground to move through the walls and reach the ceilings and wooden doors and with the high temperature, especially since the desert environment is known for degrees that may reach forty degrees Celsius during the day, the latter evaporates, leaving behind salts, fragility, cracks, shrinkage and eventually collapse, especially with the intensification, strength and speed of the wind, since many paths have become exposed and thus the removal of the wind resistance factor that the winding and roofed paths used to contribute to (see picture 18).

The human factor also has the greatest hand in the deterioration of the condition of the palace as a result of the lack of awareness of the importance of heritage, based on the abandonment of minors for multiple reasons and not taking care of the abandoned house or mosque, it is in itself a crime against heritage, in addition to that, they demolish, vandalize, throw waste and other irresponsible acts (see picture 19) without deterrence or advice from

the authorities concerned with the municipality or awareness and sensitization that is supposed to be present in such situations.

Another form of assault is the demolition and alteration of the dwelling without taking into account the nature of the dwelling (see picture 20) here we mention an important point, which is the gaps in the law related to preventing the owner of the classified dwelling from intervening and rebuilding or restoration, because there is no formula for applying the right of expropriation for the public benefit.

It is really unfortunate to see the mosque destroyed, of which there is no witness left to its walls, devoid of architectural elements such as ceilings and columns, and it remains this way to this day (see picture 11) despite the project submitted by the General Directorate of Construction and Reconstruction, the houses are currently used for raising cattle and storing fodder and scrap (see pictures 21, 22 , 23) some of them were intervened on without taking into account the archaeological and historical value of the landmark.

The palace did not undergo a complete restoration project as the implemented project on year 2000, it was not done in the form that was supposed as previously said, so the mosque was left unrestored and the preparation included paths and squares only with renovation in many elements and the application of a technique that made matters worse a no, which is the placement of a network of metal wires between the original wall and the new dressing, which resulted in invisible internal corrosion, which is clearly observed in the extraction of this network in several aspects of the walls (see picture 24).

From a legal point of view, the Boukais Palace is a private property and endowments registered in the additional inventory list according to the state decision N: 647 On 25/06/2023 (Department of Protecting Monuments and Archaeological Sites, 2023: p 2) which made it difficult to preserve it, according to the interests of the Directorate of Culture.

4. Mechanisms for the preservation of Boukais ksar:

There are many experiences in the field of preserving the architectural heritage in general and desert palaces in particular, but the latter did not receive generalization on most of the palaces in Algeria, so we will try to propose mechanisms for preserving the Boukais Palace, which did not benefit from any preparation and restoration project except from an initiative carried out by the Directorate of Reconstruction and Construction in the region as we

mentioned above due to the absence of archaeological culture in the region at that time, but with awareness of the importance of these palaces, it is necessary to develop a rational policy to protect the latter from extinction, and among the proposed mechanisms the following:

- ✓ The classification of the landmark within the inventory of the national heritage is one of the preservation mechanisms so that its classification in the inventory of the national heritage requires instead of the additional inventory that was during this year as a proposal.
- ✓ The files must conform to the nomination conditions for classification and protection required by the testamentary authority.
- ✓ Reviewing the property law to apply the so-called expropriation for the public benefit and finding clear legal outlets for the consent of both parties, as the issue is very difficult on the ground and it is one of the most prominent obstacles.
- ✓ Strengthening cooperation between the various institutions concerned with the management of the archaeological monument.
- ✓ Establishing a database of archaeological sites, including desert palaces in the city of Bechar.
- ✓ Achievements of precise engineering schemes for Bukais Palace and other adjacent palaces such as Lahmar Palace, Moughal and others.
- ✓ Proposing a project for the restoration of the palace, its rehabilitation and integration into daily life based on the field visit, then holding a meeting between the concerned professors, administrators and associations interested in the palace and then starting its implementation on the ground by determining everything related to the project instead of talking, sterile discussion and procrastination.
- ✓ Addressing weaknesses in foundations and roofs that are on the verge of collapse with the reconstruction of roofs for houses and mosques whose roofs have disappeared.
- ✓ Clean the palace parts from waste and poisonous insects.

- ✓ Re-employing the mosque and the Quranic school, as well as houses that are not used by their owners, such as proposing hotels for accommodation and receiving tourists, cafes, restaurants, museums, as well as shops selling well-known traditional antiques in the area or workshops to teach crafts and many suitable proposals that would bring this archaeological edifice back to life instead of letting it disappear like this, this is after obtaining a license from the testamentary authority as stipulated in Article 21, 25, and 27 of the Law on the Protection of Cultural Heritage 98/04.

5. Conclusion:

We have always talked about the architectural characteristics of desert palaces and praised them, their historical, artistic and archaeological role without taking into account their reality, the deterioration and extinction they suffer. Despite the proposal of many solutions that get the latter out of its isolation and suffering, but it remains the same, if we search for the reasons, we will find many of them that are easy to solve, while there are stumbles that require concerted efforts between institutions and civil society with understanding and compromise, there are many obstacles that prevent the application of the policy of preserving such an architectural heritage, especially if it comes to ownership, community privacy and restoration costs. Preparation, such as periodic cleaning, remains a matter for the population and associations responsible for the protection of heritage in the region.

The issue of preserving the desert palaces in general and the Bukayis Palace in particular remains very important as it was, which includes legal, administrative and technical protection, as the Bukais Palace is an architectural masterpiece that preserves the cultural diversity that our country abounds in because of its specificity in the materials and techniques of its construction based on clay, stones, wood, sand and the method

Its planning, which was imposed by environmental factors, social norms, religious values, and all this specificity, requires us to study it and initiate a project to preserve and protect it, especially since the state of its preservation worsens with the passage of time by virtue of its absence from the residents who abandoned it to modern housing in the

municipality. And they left it to the valleys of time that destroyed many of its parts its roofs fell and most of its walls were destroyed, and it became a shelter for animals, rodents, insects, poisonous reptiles and others.

What can be said at the end of this study is that the conservation mechanisms are numerous and numerous, as there have been many conservation experiences in many countries and even in Algeria in many of its cities such as the M'zab Valley, Timimoun and others. From here these can be applied experiments on the Bokais Palace based on its classification in the National Heritage List to receive the attention that the Kenadsa Palace and Taghit received, so to speak, and then educate the community about the need to contribute to the revival of the palace, especially the mosque and the Quranic school, by initiating the establishment of an association that supervises the palace by reviving the custom of "twiza", which is an intangible heritage that represents a form of collective work based on cooperation and synergy between the residents of the palace to restore and revive the mosque and the school and thus contribute to the preservation of tangible heritage on the one hand and the intangible heritage represented in the custom of twiza on the other hand , it must revive the image of the palace society known for its distinctive customs and traditions according to administrative and legal procedures.

. Recommendations:

Based on the above, a set of important recommendations can be made that contribute to the preservation of this archaeological landmark in particular and the rest of the palaces in the region in general, which we summarize as follows:

1. Activating university research projects programmed to seriously protect the architectural heritage in the region and affiliated with research laboratories at the university, with a reminder of the importance of cooperation with the concerned institutions and the population to reach the desired results.
2. Reconsideration of the Heritage Protection Law 98/04 with all seriousness, especially with regard to expropriation for the public benefit and finding a mechanism to apply it on the ground, and this is in consultation with specialists with

the classification of deficiencies in the national heritage instead of the additional inventory.

3. Reviving the habit of "Al-Tuwaiza" by joining the population to restore the mosque and the Quranic school and benefit from it with the permission of the concerned authorities with the supervision of associations and specialists from engineers and restorers and what is not from the University of Bechar, since they are aware of the nature of these palaces and the closest to the region.
4. A periodic cleaning campaign for the palace and its surroundings organized by the municipality, the Directorate of Culture, state associations and university students, and this is in the winter and summer seasons to avoid unpleasant odors and pollution, as well as the danger of snakes and scorpions stray dogs and other dangers that result from abandoning homes without pledging to visit and clean.
5. Applying the preservation policy stage by stage and benefiting from the experiences of the leading countries in that.
6. The municipality can carry out the restoration by holding a meeting with the supervisors of these houses and proposing a project for a maximum period of one or two years, consulting specialists, especially since most of the materials are locally available for the labour force by involving engineering and antiquities students specializing in maintenance and restoration.
7. Supervising and training conservation staff and attachés in the Directorate of Culture by underlining training programs in the field.

Note:

a.It is said that the king of the palace "Taurette" was unjust seizes the crops and property of the palace "Boukais", has married the daughter of their king to be the latter is the one who avenged her father and her people so that she put the key in the bread dough to be copied by the blacksmith of her palace, It has been said that he

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hammered a nail in the hoof of one of the horses in order to take it to invade the palace later and when the opportunity arose they invaded the palace and regained their sovereignty and eliminated the slavery and tyranny and injustice that they lived and all this thanks to the cunning of women so it was common In the region the proverb that says: (Good is a woman and evil is a woman). Testimony given by Mr. "Rais Abdulmalek", the antique Palace, 09/02/2017.



Picture 01 : Mosque Square



Picture 02 : Bouallala Square



Picture 03 : El-Nawadi Square



Picture 04 : Ain Al-Dar



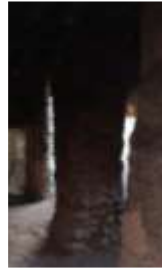
Picture 05 : Hidden or buried



Picture 06 : The barn



Picture 07 : Stairs



Picture 08,09 : Construction technology of walls and columns



Picture 10 : Roofing technique



Picture 11 : Prayer hall of the ancient mosque



Picture 12 : South entrance



Picture 13 : East Entrance



Picture 14 : North entrance



Picture 15 : Demolition of dwellings



Picture 16 : Roof fall

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Picture 17 : Wood damage to doors



Picture 18 : Roof damage



Picture 19 : Damage to roads and dwellings



Picture 20 : Intervention on one of the residences



Picture 21 : Dumping of waste



Picture 22 : Storage of fodder and dumping of waste and scrap



Picture 25 : The use of the grid in restoration



Picture 23,24 : Raising animals and cattle in the ksar boukais



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