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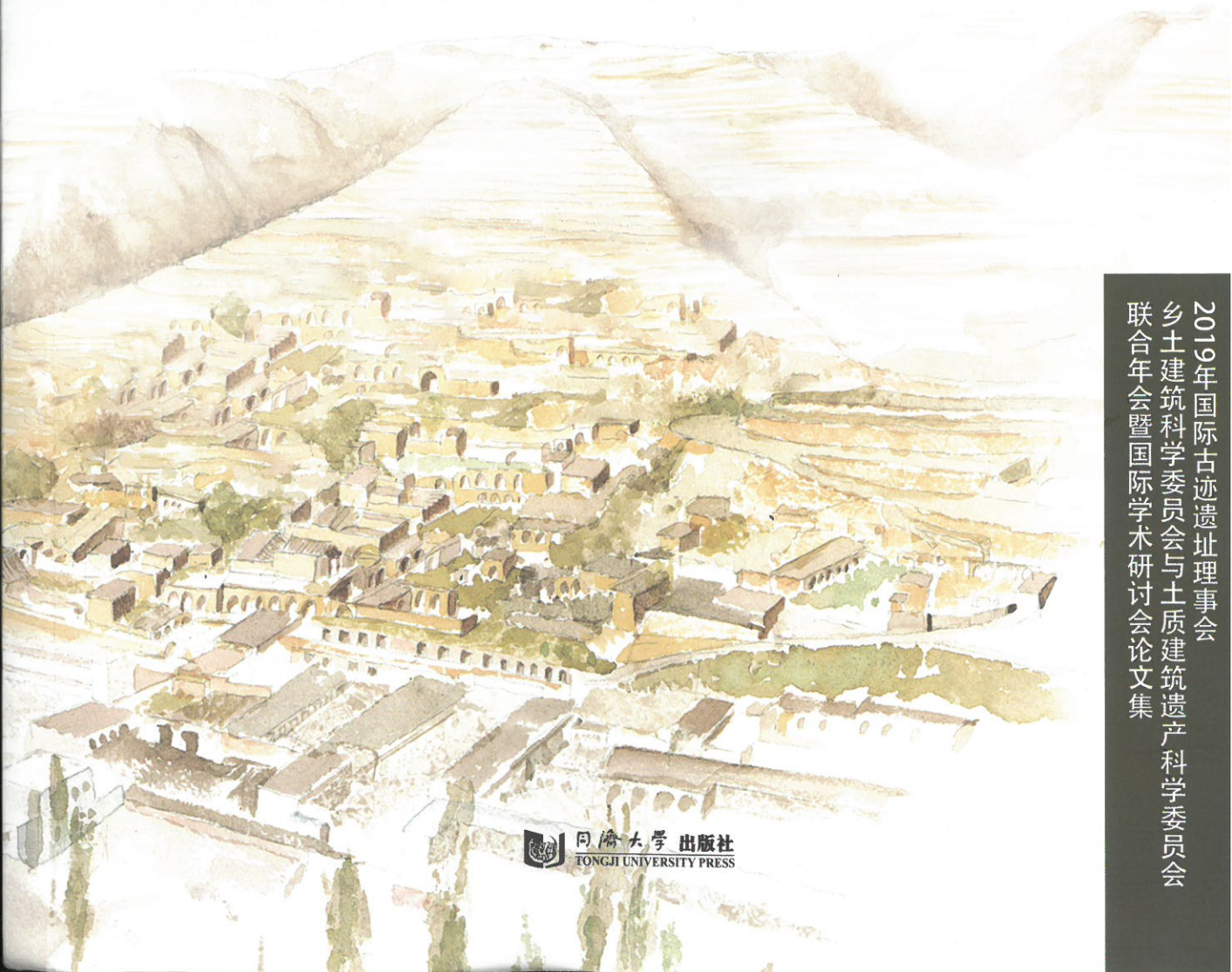
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# VERNACULAR AND EARTHEN ARCHITECTURE TOWARDS LOCAL DEVELOPMENT

## 乡土未来

面向地方发展的乡土和土质建筑保护

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# World Heritage: an approach to vernacular and earthen architecture

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**ABSTRACT:** World Heritage is an international concept established by the World Heritage Convention. However, what it means, how is evaluated, and conserved is still unclear even for heritage professionals and conservation experts. This article aims to clarify what does Outstanding Universal Value means and how its foundation stands to establish three key-pillars: criteria, integrity and authenticity, protection and management. Their compliance justifies why a nominated site becomes a World Heritage property. These three key-pillars are also analysed in the case of vernacular and earthen architecture World Heritage properties.

The paper introduces the fact that vernacular architecture is underrepresented in the World Heritage list. As a result, a research was addressed regarding the analysis of different types of vernacular categories. This paper introduces the different parameters that were identified considering the thematic approach introduced by the vernacular and earthen architecture framework: the landscape setting; the urban layout; the architecture features; and the building culture. A deeper comparative analysis regarding the diversity existing in vernacular and earthen architecture is being undertaken to contribute for the rising of nominations in this thematic area, therefore contributing for a more balanced, representative and credible World Heritage List.

**KEY WORDS:** World Heritage; Vernacular; Earthen architecture; Outstanding Universal Value; criteria, authenticity, integrity

## 1. Introduction

UNESCO formally established the concept of World Heritage, in 1972, through the “*Convention for the Protection of World Cultural and Natural Heritage*”, which was already signed by 193 State Parties (UNESCO-WHC, 2017a). To support the practical application of this Convention, a set of regulations, known as the “*Operational Guidelines for the Implementation of the World Heritage Convention*” (UNESCO-WHC, 2017b), were established by the World Heritage Committee. The procedural document, which is provided in different languages is revised and updated regularly.

In 2019, at the 43rd session of the World Heritage Committee, in Baku, Republic of Azerbaijan, 29 new World Heritage properties were approved, from which 24 were cultural, 4 were natural and 1 was a mixed site. As of 11 July 2019, the World Heritage List consists of 1121 properties from 167 countries, of which 869 are cultural, 213 are natural, and 39 are mixed properties. At

present, the World Heritage Committee has 53 Properties on the List of World Heritage in Danger (UNESCO-WHC, 2019a).

## **2. Outstanding Universal Value (OUV)**

For a property to be considered World Heritage, it must contain exceptional significance and sufficient attributes to support its Outstanding Universal Value (OUV). If adequate OUV evidence is demonstrated during the nomination process, the property is eligible to be classified as a World Heritage Site, as its cultural and / or natural significance are so outstanding that it transcends the national boundaries of the State Party.

Therefore, the decision to list a site as World Heritage means that a property is of such great importance to current and future generations and has such universal status that the legislative protection and the management system of the site must ensure that the attributes and values by which the sites are listed as World Heritage, are preserved as much as possible. Therefore, the OUV Declaration of each World Heritage property should guide the preservation of the authenticity and integrity of the site, as well as its conservation, protection and effective long-term management.

A property is listed as World Heritage if the World Heritage Committee, upon the technical evaluation proposed by the Advisory Bodies, considers that the property Outstanding Universal Value is established. To ensure that the OUV is recognised, ICOMOS International addresses the assessment of Cultural sites and IUCN addresses the assessment of natural sites.

## **3. The three pillars that define the OUV**

The technical evaluation completed by the Advisory Bodies regards the assessment of the three pillars of World Heritage, which will grant the Outstanding Universal Value to the nominated property. First, the State Party has to present evidence that the property has sufficient justification to match one of the ten CRITERIA of universal value; secondly, the nomination has to provide enough proof regarding the justification of the PRINCIPLES of integrity and authenticity (in the case of a natural property nomination, just integrity needs to be substantiated, as Nature already has authenticity); and thirdly, the nomination file has to present evidence regarding PROTECTION of the property and that a MANAGEMENT system is in place (or at least being implemented).

### ***3.1 Criteria establishing the OUV***

The World Heritage Committee has set ten precise criteria for the classification of properties on the World Heritage List, following the establishment that the property has Outstanding Universal Value. The first six criteria classify cultural heritage. The following four criteria classify natural heritage. For a site to be approved as a World Heritage mixed property, it must have at least two approved criteria: one criterion must be between (i) and (vi), and one other criterion must be listed between (vii) and (x).

According to the Operational Guidelines (UNESCO-WHC, 2017b), the criteria established for sites of cultural value should:



**Figure 1.** The World Heritage property of Chan Chan Archaeological Zone in Trujillo, Peru

(i) ***“Represent a masterpiece of human creative genius”***. Under this criterion is listed the Great Wall of China, a vast and ambitious undertaking, considered an absolute masterpiece, also for its construction. This is a criterion that is not frequently observed matching vernacular and earthen architecture, due to the dimensions and masterwork that are needed to comply with it. One of the few examples of a World Heritage earthen site that conforms to criterion (i) is Chan Chan Archeological Zone. The largest earthen city of pre-Columbian America is a masterpiece of town planning. *“Rigorous zoning, differentiated use of inhabited space, and hierarchical construction illustrate a political and social ideal which has rarely been expressed with such clarity”* (UNESCO-WHC, 2019b).

***“(ii) “Exhibit an important interchange of human values, over a span of time or within a cultural area of the world (...)”***. This is the case of the vernacular earthen city of Timbuktu, in Mali, with its mosques and holy places. *“Timbuktu played an essential role in the spread of Islam in Africa at an early period”*. The Historic Centre of the earthen vernacular city of Agadez in Niger, also complies with criterion (ii). *“From the 15th century, Agadez, “the gateway to the desert”, became an exceptional crossroads for the caravan trade. It bears witness to an early historic town, forming a major centre for trans-Saharan cultural interchanges. Its architecture embodies a synthesis of stylistic influences in an original urban ensemble, made entirely of mudbrick and which is specific to the Aïr region”* (UNESCO-WHC, 2019b).

***“(iii) “Bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared”***. This criterion is applied at the Ancient City of Ping Yao, in China. The Ancient City *“was a financial center in China from the 19th century to the early 20th century. The business shops and traditional dwellings in the city are historical witnesses to the economic prosperity of the Ancient City of Ping Yao in this period”* (UNESCO-WHC, 2019b).

***“(iv) “Be an outstanding example of a of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history”***. Under this criterion is the Ksar of Ait-Ben-Haddou, in Morocco, a traditional pre-Saharan habitat comprised by a group of earthen buildings still inhabited and surrounded by earthen walls. *“The Ksar of Ait-Ben-Haddou is an eminent example of a ksar in southern Morocco illustrating the main types of earthen constructions that may be observed dating from the 17th century in the valleys of Dra, Todgha, Dadès and Souss”*. The old town of Djenné, in Mali, inhabited since 250 B.C. is comprised of earthen traditional houses, which represent *“an outstanding example of an architectural group of buildings illustrating a significant historic period”* (UNESCO-

WHC, 2019b).

**"(v) "Be an outstanding example (...), which is representative of a culture (or cultures), or human interaction with the environment, especially when it has become vulnerable under the impact of irreversible change."** This is the case of Iran's earthen Historic City of Yazd, which witnesses the use of limited resources, particularly in architecture and agriculture, as a means of survival in the desert. Also worth mentioning are the Cultural Landscape of Hongue Han Rice Terraces, in China. A good example of a landscape with adobe building scattered through the rice terraces. The landscape reflects *"in an exceptional way a specific interaction with the environment mediated by integrated farming and water management systems, and underpinned by socio-economic-religious systems that express the dual relationship between people and gods and between individuals and community, a system that has persisted for at least a millennium"* (UNESCO-WHC, 2019b).

**"(vi) "Be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance."** This is a criterion that is not very common to find specifically associated with vernacular and earthen architecture. Under this criterion it can be found Koutammakou, the land of Batammariba, in Togo. The Koutammakou landscape is home to the Batammariba, whose remarkable Takienta earthen tower-houses become the symbol of Togo. Criterion (vi) is revealed through the Koutammakou, *"an eloquent testimony to the strength of spiritual association between people and the landscape, as manifested in the harmony between the Batammariba and their natural surroundings"* (UNESCO-WHC, 2019b).

Vernacular and earthen heritage can be found across the six criteria that established Outstanding Universal Value in cultural sites. Notwithstanding, the criteria that bear the most of vernacular and earthen heritage are criteria (ii), (iii), (iv), and (v).

### ***3.2 Principles of Integrity and Authenticity***

For the classification of a World Heritage site, it is essential that the property has imbedded the principles of Integrity and Authenticity. Their justification should be complementary to the assessment of the Outstanding Universal Value of the World Heritage property.

Regarding Integrity, this is the principle that refers to the state of the listed property as a whole, which is complete and indivisible. This principle is referred to in Articles 7 and 8 of the Venice Charter. In this sense, integrity should be considered in relation to the characteristics identified in the proposed property's OUV. Thus, a clear understanding of the definition and nature of the site attributes, of its characteristics, which are central to its OUV, and the boundaries of ownership are needed to consider the overall integrity of the property.

The principle of Authenticity, which is expressed in the *Nara Document of Authenticity*, will depend on the type of cultural heritage and its context. Classified sites satisfy the conditions of authenticity if they have a variety of tangible and intangible attributes, expressed by form, material, construction, use, function, traditions, management system, place spirit, etc. The notion of authenticity is expressed through distinct attributes in very different cultural contexts,

which may have different traditions of heritage conservation, notably in the Far East, Africa or Western Europe (Correia, 2018).

### ***3.3 Site protection and management***

When considering the protection and management of a World Heritage site, it is paramount that the State publishes appropriate legislative, regulatory, institutional and / or traditional protection for the classified site. This will ensure its safeguard in the long term. It is equally essential that the World Heritage site includes boundaries of the listed property, and of its buffer zone. Therefore, regulatory legislation should be published, in order to protect as much as possible, the attributes that define the property's criteria and principles of integrity and authenticity.

For vernacular and earthen heritage this is often difficult to attend, as several of these sites are still inhabited and frequently, they do not hold legislative protection and specific regulations about what to do and not to do in regards to intervention. Furthermore, vernacular and earthen architecture are often not covered by existing cultural heritage protection laws, which are a wide threat for an effective protection.

Many of the threats that currently affect listed World Heritage properties are due to the lack of protective legislation, the lack of its implementation, or the lack of mechanisms for monitoring the state of conservation of the property. Also of note is the importance of developing and implementing management systems that ensure the efficient and sustainable management of existing resources (Correia, 2018).

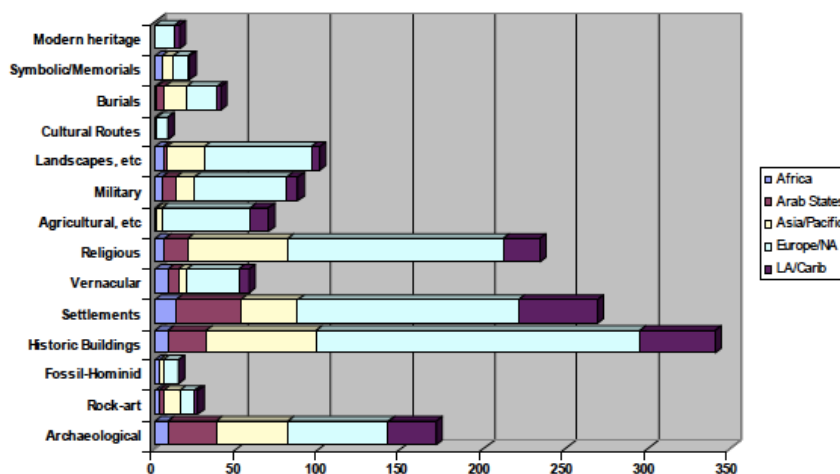
## **4. World Heritage vernacular architecture is an underrepresented category**

In 2004, ICOMOS published the document “The World Heritage List: Filling the Gaps - an Action Plan for the Future“ (ICOMOS, 2004), which addressed a revision of the properties that had been listed from 1978 to 2003, in order to contribute for a more balanced and credible World Heritage List. Vernacular architecture was one of the typologies that was mentioned as being underrepresented on the World Heritage List.

In this assessment, it was highlighted the need to include in the World Heritage List, properties of outstanding universal value from rural settlements and vernacular architecture. It was also emphasized that the 1972 World Heritage Convention included mostly physical evidence, and there was a need to acknowledge intangible aspects (ICOMOS, 2004, p.6). Intangible knowledge is part of the authenticity of vernacular and earthen architecture. It can be foreseen for instance, in Western Africa, where traditional construction is inter-linked with local know-how. An active traditional local knowledge is needed to continuously improve the inhabited dwellings maintenance and the rural landscape where they are located.

The Filling the Gaps document defines vernacular architecture as the “*use of traditionally established building types, application of traditional construction systems and crafts*” (ICOMOS, 2004, p. 55). Considering this conceptual definition, the typological framework that was contemplated in the overall study was based in a multi-category approach. The most represented categories were by order of World Heritage List representation: Historic Buildings (architectural properties), Settlements (historic towns), Religious properties, and Archaeological

heritage. These constitute 69% of the cultural properties on the List (see Table 1). Following were Landscapes (with almost 100 sites), Military heritage, agricultural properties, and finally vernacular architecture (with a little higher than 50 properties) (ICOMOS, 2004, p.19).



**Table 1.** World Heritage List classification, by category (ICOMOS, 2004, p.19)

In the case of vernacular architecture, the study established the following categories (ICOMOS, 2004, p.19):

- . Monuments: traditionally established building types using traditional construction systems and crafts;
- . Groups of buildings: groups of traditionally established building types; and
- . Sites: cultural landscapes with vernacular settlements.

The study also revealed that Africa, Asia-Pacific, Latin America and the Caribbean had a low representation of vernacular properties, when it was expected for this category to be stronger on these international regions.

## 5. WHEAP Inventory of Earthen Architecture

The World Heritage Earthen Architecture Programme (WHEAP) was developed from 2007 to 2017, following its approval at the 31<sup>st</sup> Session of the World Heritage Committee. Under the framework of the programme, a World Heritage Inventory of Earthen Architecture (CRATERRE-ENSAG, 2012) was developed and published in English and French. This inventory considered that 10% of the World Heritage properties integrated earthen structures. It also highlighted that in 2011, 24% of the sites inscribed on the World Heritage List in Danger were earthen sites (UNESCO-WHC, 2019b).

The 2012 inventory established that most of the earthen World Heritage properties were historic centres, followed by archaeological sites, historic towns or urban centres, and historical architectural buildings. These are very similar results also observed on the ‘Filling the Gaps’ study addressed by ICOMOS, in 2004.

Regarding earthen constructive typologies and ways of building, the 2012 inventory recognized that adobe was the most used technique worldwide, with 50% of adobe being identified in

earthen World Heritage properties, followed by 24% of daubed earth, 20% of rammed earth, 6% of cob, and 39% of other regional techniques (CRATERre-ENSAG, 2012). This assessment considers that several of the earthen techniques could be applied simultaneously or in a combined way (for instance *entramado* in Spain, is both a structure technique, with wood filled-in with adobe).

This earthen World Heritage inventory was based in classifying earthen architecture through three main building typologies: monolithic walls (rammed earth, cob, etc.), masonry walls (adobe, CEBs, etc.), and as a secondary element (earth as infill of wattle and daub, earth filling in of floors and ceilings, flat roofs, mortars, paintings, etc.). As a result, the inventory included World Heritage sites that are mainly built in earth (as was the case of the citadel of Bam in Iran; or Bahla Fort, in Oman), but it also included properties with almost no observed earth material (this was the case of the Historic Centre of Porto, in Portugal; or the Historic Centre of Cuenca, in Spain; in both cases, mortars are mostly done in lime and sand).

## 6. World Heritage vernacular and earthen architecture study

Several publications have addressed the concept of vernacular heritage and earthen architecture, such as Correia, Carlos, & Rocha (2014); Correia (2015); Mileto, Vegas, & García-Soriano (2017); among others. However, research specifically focusing in both vernacular and earthen architecture in World Heritage has not been yet addressed.

Considering this operational definition and in order to better understand the reason why vernacular architecture is underrepresented in the UNESCO's World Heritage List, a particular study regarding vernacular and earthen World Heritage was addressed and a detailed classification of the properties was established. The research was addressed based on UNESCO's criteria for site selection, as well as its integrity and authenticity. Data was provided by UNESCO platform, addressing the Outstanding Universal Value of the property.

The study being carried out on vernacular and earthen architecture will contribute to establish correlations and differences between the properties, which will allow understanding the parameters that originated its outstanding universal value. This research methodology allows deepening the study of the different parameters that featured vernacular and earthen architecture.



**Table 2.** Example of the Vernacular World Heritage analysis (credits: Ci-ESG, Escola Superior Gallaecia, 2019)

The study that was addressed classified vernacular heritage in two main categories focusing into the character of the heritage value and its nature. The main focus of the first category was accurately related with vernacular architecture has being the principal typology contributing for the OUV of the property; whereas the second category concentrated on vernacular architecture as a secondary value. This last category also differed from the previous one, as other attributes were valued, such as the traditional use of the land, the landscape, the routes, the community social system and the artistic works between other assessment parameters, among others.

| 1st Category<br><i>Main focus: Vernacular Architecture</i> |   | 2nd Category<br><i>Vernacular Architecture as one of the values</i> |   |
|--|---|---|---|
|  |   | 0   Other attributes (cultural or natural) ≠ Architectural          | <ul style="list-style-type: none"> <li>Traditional land use</li> <li>Landscape</li> <li>Routes</li> <li>Social system</li> <li>Artistic works...</li> </ul>                             |
| 1   Landscape Setting                                      | <ul style="list-style-type: none"> <li>Traditional form of the landscape</li> <li>Land use patterns</li> <li>Outstanding landscape ...</li> </ul>                                       | 1   Landscape Setting   | <ul style="list-style-type: none"> <li>Traditional form of the landscape</li> <li>Land use patterns</li> <li>Outstanding landscape ...</li> </ul>                                       |
| 2   Urban Layout   | <ul style="list-style-type: none"> <li>Town – planning</li> <li>Model of human settlement</li> <li>Traditional (human settlement/ urban structure)...</li> </ul>                        | 2   Urban Layout  | <ul style="list-style-type: none"> <li>Town – planning</li> <li>Model of human settlement</li> <li>Traditional (human settlement/ urban structure)...</li> </ul>                        |
| 3   Architectural features                                 | <ul style="list-style-type: none"> <li>Unique typologies</li> <li>Adaptation to a specific context</li> <li>Elements of local traditions</li> <li>Unique building design ...</li> </ul> | 3   Architectural features  | <ul style="list-style-type: none"> <li>Unique typologies</li> <li>Adaptation to a specific context</li> <li>Elements of local traditions</li> <li>Unique building design ...</li> </ul> |
| 4   Building Culture                                       | <ul style="list-style-type: none"> <li>Constructive System</li> <li>Material</li> <li>Know - how</li> </ul>   | 4   Building Culture  | <ul style="list-style-type: none"> <li>Constructive System</li> <li>Material</li> <li>Know - how</li> </ul>   |

**Table 3.** World Heritage List classification by categories and parameters (credits: Ci-ESG, Escola Superior Gallaecia, 2019)

The study analysis of the vernacular sites considered the following parameters:

- . Landscape setting: a traditional form of the landscape, land use patterns, outstanding landscape, etc.
- . Urban layout: town planning, model of human settlement, traditional human settlement, urban structure, etc.
- . Architectural features: unique typologies, adaptation to a specific context, elements of local traditions, unique building design, etc.
- . Building culture: constructive systems, material, know how, local knowledge.

Despite the difference in the nature of the heritage value, vernacular sites classification as World Heritage properties were analysed for both categories, according to their value as landscape setting, urban layout, architectural features or building culture.

According with the established research methodology, despite most of the earthen World Heritage properties having their specific importance in their own vernacular architecture, there are sites which count with vernacular architecture as one of the values that define the relevance of the site, sharing its importance with other tangible or intangible elements of the ensembles like the landscape, urban layout, social system. Most of the vernacular and earthen architecture cases are specifically listed as cultural sites, while there are a few mixed sites that combine cultural and natural World Heritage categories. This latest is the case of Cliff of Bandiagara (Land of the Dogons), in Mali, which has an Outstanding Universal Value related to the landscape of cliffs and its earthen vernacular architecture, specifically regarding its geological, archaeological and ethnological interest (criterion iii and viii).



**Figure 2.** Cliff of Bandiagara Mixed property, in Mali (credits: Mariana Correia, 2008).

## **7. Analysis of the study parameters**

### ***7.1 Landscape setting***

In sites where landscape setting possesses Outstanding Universal Value, cultural landscapes are intrinsically related with vernacular settlements, as the population that lives in the vernacular sites depend on the landscapes to survive. ICOMOS even suggests in regard to vernacular settlements that “*consideration should be given to the possibility of extending nominations to adjacent landscapes if these preserve qualities and features associated with the settlements*” (ICOMOS, 2004, p.42).

The importance of the landscape setting in vernacular and earthen architecture World Heritage is related with the interaction of man and nature in a specific environment, an outstanding natural landscape of unique and exceptional beauty that acts like a natural monument with architecture integrated harmoniously. In this case, it could be a settlement that illustrates a traditional earthen, stone, wooden or straw habitat; a settlement located to provide both physical and spiritual nourishment from their surrounding landscape, strength of spiritual association between people and landscape, which is manifested in the harmony between settlement and their natural surroundings. A cultural landscape is remarkable due to associations between architecture, people and landscape.



**Figure 3a and 3b.** Cultural Landscape of Honghe Hani Rice Terraces in China (credits: Mariana Correia, 2017)

The cultural landscape of Honghe Hani Terraces in China is an appropriate example. The property stands up because of its authenticity, in relation to the traditional form of the landscape and also the continuity of landscape function. Unfortunately, one of the threats that has been encompassed at the property is the fact that adobe traditional building is being rapidly substituted by concrete blocks painted in sand colour. As the main focus of the State Party monitoring is the traditional management of the rice terraces, in this case the traditional way of building is being lost, except for the 3 protected vernacular settlements existing at Honghe Hani Terraces.

## ***7.2 Urban layout***

There are several features and attributes that contribute to the importance of the urban layout in the OUV of a World Heritage property. The following variables are the most prominent: Ancient fabric as an outstanding example of an architectural group of buildings illustrating a significant historic period; group of earthen buildings which represent a traditional habitat being a striking example of the architecture and urban layout of a specific context; specific street pattern that is still in place today as an original urban example.

Vernacular buildings could demonstrate a distinctive settlement pattern related to a specific location, planning and building traditions that represent an exceptional testimony of a period or religion and also represent a particular ensemble. Traditional unique type of architectural ensemble from a specific period that retains most of its traditional forms up to the present day. This could be an accomplished example of traditional urban architecture both in the grid layout of streets and squares and also an example of urban planning based on multi-storeyed construction.

This is the case of the Old Walled City of Shibam, in Yemen. In this paradigmatic example, urban planning is based on the principle of vertical construction, but also considering the adaptation to the desert climate and environment. The earthen tower structures gave to Shibam the name of ‘Manhattan of the desert’. It is an example of traditional Hadrami urban architecture, because of the grid layout of its streets and squares, and also the visual impact of its vertical form rising out of the flood plain due to the height of its adobe tower houses. Because of this and other relevant selection criteria, Shibam constitutes an Outstanding Universal Value that illustrates the key period of Hadrami history. Due to the unrest of war in Yemen, Shibam walled city was listed in the in Danger World Heritage List.

## ***7.3 Architectural features***

The relevance of vernacular architecture is strongly related with the particular features that characterise earthen architecture. Traditional buildings that are a testimony of an unique architectural style of a specific context, location or period, or of architecture that embodies a synthesis of stylistic influences, traditional decoration motifs with symbolic meaning for a specific and unique community. Traditional buildings are featured by a special particularity, by outstanding examples of an architectural typology or by an ensemble of a specific period that

could reflect a singular culture. These buildings can be an outstanding example of an extraordinary masterpiece and their ensemble can establish a traditional urban settlement with exceptional OUV.



**Figure 4.** Great Mosque of Djenné, in the old town of Djenné, in Mali (credits: Mariana Correia, 2008).

One of the examples regarding outstanding architectural features is the Old town of Djenné and in particular its mosque. This exceptional building is located in Mali, and represents the importance of the identity, strengthened by local architecture of a specific community.

#### ***7.4 Building culture***

Vernacular heritage building culture is reflected in many tangible and intangible aspects like the constructive systems that were employed to build the structure, the applied materials, as well as the know-how. In this last case, it means the practical and technical intangible knowledge held by a community, and their ability to develop a traditional construction process, embedded in local knowledge and traditions that are still active until nowadays.

The richness and diversity of the unique building culture, the perpetuation in time of a building culture related to the continuity of the use regarding local traditional building systems, the traditional techniques and materials, among several other reasons are crucial for the establishment of OUV. The conservation of the ancestrally inherited know-how that belongs to a specific community and contributes to its identity is also part of this rich heritage.

The know-how is reflected in the original construction process, as well as in the conservation, restoration and maintenance techniques that inhabitants have inherited from their ancestors, and still apply nowadays. This know-how process evolves constantly. It results on very efficient constructive systems and techniques that are perfectly adapted to the climatic conditions and the local resources. Due to the vulnerability of earthen architecture, maintenance works are needed regularly. In general, local communities organise maintenance works for special events, respecting traditional know-how, strengthening the authenticity of the site, using vernacular techniques through traditional constructive systems. This engagement of the inhabitants in the continuity of the traditional culture results on the perpetuation of intangible values associated to the building culture and the traditional events.



**Figure 5.** Ksar of Ait Ben Haddou, in Morocco (credits: Mariana Correia, 2006).

Ksar of Ait Ben Haddou, in Morocco, illustrates a building culture which is adapted to the climatic conditions and the cultural context, but at high risk of degradation. The lack of conservation, as a result of lack of use and of maintenance from some of its inhabitants contributes to the increase of the vulnerability of earthen buildings.

## **8. Reflections**

Vernacular and earthen World Heritage is defined by its Outstanding Universal Value as a testimony of the past and present of a community that has retained its identity, authenticity and integrity. The exceptional attributes and the efficiency of its features constitute the accumulation of an evolved knowledge that works perfectly adapted to climatic conditions, local resources and cultural expressions. Vernacular architecture means a specific interaction with the environment with numerous associations between people and landscape, where traditional society has adapted its life to a particular context. All of these reasons reinforce, the importance of vernacular and earthen architecture properties, as part of the World Heritage List, acting like a testimony of exceptional cultures or civilizations.

Following the study analyses, it is evident that the vulnerability of vernacular and earthen World Heritage properties are due to urban pressure, globalization, climate change and extreme weather threats. In order to avoid a possible degradation and increase loss of this heritage, it is extremely important to maintain the link between local people and their traditional architecture, allowing and encouraging them to carry out the conservation, maintenance and restoration works with traditional techniques that were developed by communities since antiquity. This maintenance works of the vernacular built heritage allows the preservation of the authenticity of the site, across its spectrum, including tangible and intangible aspects that define the character of the heritage.

Due to lack of use of some of these World Heritage properties and to their abandonment by some of its inhabitants, the conservation of vernacular properties is in danger and at risk. The use of the heritage by the community should be encouraged, in order to achieve the full preservation of the property. In addition, it is crucial to inspire and support activities regarding with heritage and its educational value, in order to preserve its features, harmony and identity, and at the same time, fomenting its protection of external influences, which could cause the loss of its unique value. This is just possible, if communities and their vernacular and earthen

heritage settings are placed at the centre of sustainable development respecting their traditional way of life.

Taking in account the little number of vernacular and earthen architecture in the World Heritage List, in comparison with other categories, there is a need to really reflect on their importance. A deeper comparative analysis regarding the diversity existing in vernacular and earthen architecture continues to be addressed. It aims to contribute for the rising of nominations in this thematic area, therefore contributing for a more balanced, representative and credible World Heritage List. To increase vernacular and earthen architecture research, legislative protection and site preservation will contribute for human culture diversity and the conservation of exceptional ways of living that are deemed to disappear if no pro-active approach is undertaken to protect these exceptional sites.

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# VERNACULAR AND EARTHEN ARCHITECTURE TOWARDS LOCAL DEVELOPMENT

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