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World Heritage: Fujian Tulou (Nanjing) and its environment, China © UHC
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E-mail: uhc_ciaav@163.com icomosciav.sg@gmail.com
Website: ciaiv.icomos.org

EDITORIAL

Hossam Mahdy

President of CIAV

hossammahdy1960@yahoo.co.uk



Dear colleagues and friends,

Warm greetings from CIAV Bureau and from myself.

It was wonderful to meet in person the colleagues who managed to go to Valencia for Heritage2022 and CIAV Annual Meeting. It was my first big gathering for years because of the COVID-19 restrictions. So, you can imagine my happiness and excitement. It was great seeing also all those who managed to attend CIAV Annual Meeting online, even if it was really not possible to see everyone due to the limitations of the number of people appearing on the screen. I must say that the hybrid format of the meeting was not ideal because of the discrepancy between what is happening in the meeting room and what is happening online. I would like to propose that our future Annual Meetings should be either in person or online. Or maybe two related meetings. One to take place in person. Then to be followed by a second meeting online for those who cannot attend in person, so that we ensure a high level of communications and interaction.

Our meeting this year is an important milestone for the inauguration of the collaboration between CIAV and ICIH (ICOMOS International Scientific Committee on Intangible Cultural Heritage). The aim of the collaboration is to develop a methodology and build expertise on the documentation of the tangible and intangible attributes of the built vernacular heritage. The methodology will be developed by conducting documentation camps and workshops with the aim of publishing a manual or a toolkit on the subject. This year in Valencia we held the first joint meeting between the two ISCs, which was led by Gisle Jakhell, CIAV former president. A Memorandum of Understanding (MoU) was announced in the meeting and signed afterwards.

Currently, Gisle is forming a working group to implement this initiative.

I was honoured by the organizers of Heritage2022 to be invited to give the keynote lecture. I captured the opportunity and invited everyone to consider the pressing challenges that are facing us today pertaining to the protection and conservation of the built vernacular heritage. I do invite you to consider revising and updating the ICOMOS Charter on the Built Vernacular Heritage, which was ratified in 1999 in Mexico. The text of my lecture as well as all the proceedings of Heritage 2022 are available online. I invite you to download and read them:

<http://ocs.editorial.upv.es/index.php/HERITAGE/HERITAGE2022/paper/viewFile/15942/7148>

An important initiative that CIAV is leading is the planning for an international conference in 2024 in Sub-Saharan Africa. Seven other ICOMOS ISCs and WGs have joined CIAV in working on this initiative with the aim of bringing African built heritage into the focal interest of CIAV and the whole of ICOMOS and to invite African colleagues to join us to enrich our work and to correct the current imbalance in the representation of Africa within CIAV and ICOMOS in general.

Yours,

Hossam Mahdy
CIAV President

EDITORIAL

Hossam Mahdy

Presidente CIAV

hossammahdy1960@yahoo.co.uk



Estimados colegas y amigos,

Saludos afectuosos del Buró CIAV y de mí mismo.

Fue maravilloso conocer en persona a los compañeros que lograron ir a Valencia para la Reunión Anual de Heritage2022 y CIAV. Fue mi primera gran reunión en años debido a las restricciones de COVID-19. Entonces, puedes imaginar mi felicidad y emoción. Fue genial ver también a todos los que lograron asistir a la Reunión Anual de la CIAV en línea, aunque realmente no fue posible verlos a todos debido a las limitaciones del número de personas que aparecían en la pantalla. Debo decir que el formato híbrido de la reunión no fue el ideal debido a la discrepancia entre lo que sucede en la sala de reuniones y lo que sucede en línea. Me gustaría proponer que nuestras futuras Reuniones Anuales sean en persona o en línea. O tal vez dos reuniones relacionadas. Uno para tener lugar en persona. Luego, seguirá una segunda reunión en línea para aquellos que no puedan asistir en persona, de modo que garanticemos un alto nivel de comunicación e interacción.

Nuestra reunión de este año es un hito importante para la inauguración de la colaboración entre CIAV e ICIH (Comité Científico Internacional del Patrimonio Cultural Inmaterial de ICOMOS). El objetivo de la colaboración es desarrollar una metodología y desarrollar experiencia en la documentación de los atributos tangibles e intangibles del patrimonio vernáculo construido. La metodología se desarrollará mediante la realización de campamentos y talleres de documentación con el objetivo de publicar un manual o una caja de herramientas sobre el tema. Este año en Valencia llevamos a cabo la primera reunión conjunta entre los dos ISC, que estuvo liderada por Gisle Jakhell, ex presidente de CIAV. Un Memorando de Entendimiento

(MoU) fue anunciado en la reunión y firmado posteriormente. Actualmente, Gisle está formando un grupo de trabajo para implementar esta iniciativa.

Los organizadores de Heritage2022 me honraron al ser invitado a dar la conferencia principal. Aproveché la oportunidad e invité a todos a considerar los desafíos apremiantes que enfrentamos hoy relacionados con la protección y conservación del patrimonio vernáculo construido. Los invito a considerar revisar y actualizar la Carta de ICOMOS sobre el Patrimonio Vernáculo Construido, que fue ratificada en 1999 en México. El texto de mi conferencia, así como todas las actas de Heritage 2022, están disponibles en línea. Los invito a descargarlos y leerlos:

<http://ocs.editorial.upv.es/index.php/HERITAGE/HERITAGE2022/paper/viewFile/15942/7148>

Una iniciativa importante que lidera la CIAV es la planificación de una conferencia internacional en 2024 en el África subsahariana. Otros siete ISC y WG de ICOMOS se han unido a CIAV para trabajar en esta iniciativa con el objetivo de llevar el patrimonio construido africano al interés central de CIAV y de todo ICOMOS e invitar a colegas africanos a unirse a nosotros para enriquecer nuestro trabajo y corregir el actual desequilibrio en la representación de África dentro de CIAV e ICOMOS en general.

Saludos cordiales
Hossam Mahdy
Presidente CIAV

EDITORIAL

**Fernando Vegas
Camilla Mileto**

Guest Editors
Universitat Politècnica de València



Dear colleagues and Friends,

As organizers of the Congress Heritage2022: International Conference on Vernacular Heritage, Culture, People and Sustainability, we have been invited to be guest editors of this CIAV Newsletter that brings together a good number of texts around this recently held event. The Heritage2022 Congress is part of the European Project "Versus+ / Heritage for People" and the "Risk-Terra Project. Earthen architecture in the Iberian Peninsula: study of natural, social and anthropic risks and strategies to improve resilience". The European Project "Versus+ / Heritage for People", financed by the Creative Europe Program of the European Commission, is directed by the Universitat Politècnica de València (UPV) and integrated by the Universidade Portucalense (UPT), the Università degli studi di Firenze (UNIFI), the Università degli studi di Cagliari (UNICA) and CRAterre-ENSAG. The "Risk-Terra" Project, financed by the Spanish Ministry of Science, Innovation and Universities and directed by the authors of this editorial, integrates a good number of earthen architecture researchers in Spain and Portugal.

After the past experience at the Heritage2020 Congress, held entirely online, it has been a pleasure to be able to meet a good number of participants in person at this new Heritage2022 Congress. As organizers, we are satisfied with the quality of the participation, both in the conferences, as well as the presentations, the visits and the Wedower 2022 workshop to study and documentation of the underground cellars of Utiel. The proceedings of the congress can be read online at the following address:

ocs.editorial.upv.es/index.php/HERITAGE/HERITAGE2022/paper/viewFile/15942/7148

The congress program included a several social activities, perhaps to compensate for the absence of these opportunities in recent years. The congress offered a trip to the open sea by boat, the closing dinner on the deck of the same boat, a visit to the traditional earthen and thatched architecture of the Valencia lagoon, a visit to the traditional architecture of Rincón de Ademuz and a visit to the underground architecture of the Utiel wineries, with respective tastings of local products. Within this framework, the annual meeting of CIAV and a first joint meeting of the CIAV and ICICH committees were held, where it was a pleasure to meet many of the colleagues in person after these years, in addition to seeing the rest of the colleagues online.

This issue presents articles on the Heritage2022 Congress, the Risk-Terra Project, the Versus+ Project, the visit to the traditional architecture of Rincón de Ademuz, the traditional architecture of the Valencia, the technical visit to the underground cellars de Utiel and the Wedower Workshop 2022. We hope you these texts will awake your interest and we take advantage of summoning you for the next edition of the Heritage Congress to be held in three years.

Yours,

**Fernando Vegas
Camilla Mileto**

Universitat Politècnica de València
Organizers of Congress Heritage2022
Guest Editors of CIAV Newsletter Issue 52

EDITORIAL

**Fernando Vegas
Camilla Mileto**

Editores invitados
Universitat Politècnica de València



Estimados colegas, amigas y amigos,

En calidad de organizadores del Congreso Heritage2022: International Conference on Vernacular Heritage, Culture, People and Sustainability, hemos sido invitados a coeditar este monográfico de la Newsletter del CIAV que reúne un buen número de textos en torno a este evento recientemente celebrado. El pasado Congreso Heritage2022 se enmarca en el Proyecto Europeo "Versus+ / Heritage for People" y el "Proyecto Risk-Terra. Arquitectura de tierra en la Península Ibérica: estudio de riesgos naturales, sociales y antrópicos y estrategias para mejorar la resiliencia". El Proyecto Europeo "Versus+ / Heritage for People", financiado por el Programa Creative Europe de la Comisión Europea está dirigido por la Universitat Politècnica de València (UPV) e integrado por la Universidade Portucalense (UPT), la Università degli studi di Firenze (UNIFI), la Università degli studi di Cagliari (UNICA) y CRAterre-ENSAG. El Proyecto "Risk-Terra", financiado por el Ministerio Español de Ciencia, Innovación y Universidades, y dirigido por los autores de esta editorial, integra a un buen número de investigadores de la arquitectura de tierra en España y Portugal.

Tras la experiencia pasada en el Congreso Heritage2020, celebrado enteramente online, ha sido un placer poder reunirse en persona a un buen número de participantes en este nuevo Congreso Heritage2022. Como organizadores, estamos satisfechos de la calidad de la participación, tanto en las conferencias, como las ponencias, las visitas y el taller Wedower 2022 de estudio y levantamiento de las bodegas subterráneas de Utiel. Las actas del congreso se pueden leer online en la siguiente dirección:

ocs.editorial.upv.es/index.php/HERITAGE/HERITAGE2022/paper/viewFile/15942/7148

El programa del congreso incluía un buen número de actividades sociales, quizás para compensar la ausencia de estas oportunidades durante los últimos años. El congreso ofreció una salida a mar abierto en barco, la cena de clausura sobre la cubierta de la misma embarcación, una visita a la arquitectura tradicional de tierra y cubierta vegetal de la Albufera de Valencia, una visita a la arquitectura tradicional del Rincón de Ademuz y una visita a la arquitectura subterránea de las bodegas de Utiel, con respectivas degustaciones de los productos locales. Dentro de este marco, se celebraron la reunión anual del CIAV y una primera reunión conjunta de los comités del CIAV e ICICH, donde fue un placer reencontrar presencialmente a muchos de los colegas tras estos años de paréntesis, además de visualizar al resto de colegas online.

En este número se presentan artículos sobre el Congreso Heritage2022, el Proyecto Risk-Terra, el Proyecto Versus+, la visita realizada a la arquitectura tradicional del Rincón de Ademuz, la arquitectura tradicional de la Albufera de Valencia, la visita técnica realizada a las bodegas subterráneas de Utiel y el Taller Wedower 2022. Esperamos que os interesen estos textos y aprovechamos para emplazaros para la próxima edición del Congreso Heritage a celebrar dentro de tres años.

Saludos cordiales

**Fernando Vegas
Camilla Mileto**

Universitat Politècnica de València
Organizadores del Congreso Heritage2022
Editores invitados del Vol. 53 de la CIAV Newsletter



SERIES REPORT

Heritage 2022: International Conference on Vernacular Heritage, Culture, People and Sustainability

Camilla Mileto, Fernando Vegas and Marina Elia
Universitat Politècnica de València

Vernacular architecture shows how humans have successfully adapted to the different parts of the planet and have used materials which nature has provided, adapting their life and architecture to settle in more favourable climates, while also using intelligence, creativity, and wisdom to do the same in the more inhospitable ones.

Now more than ever we need to think, design, and live in harmony with our environment, showing proactivity and urgently setting off on a path of adaptation to fight against climate change, addressing the processes of decarbonization and waste reduction. To do so, as experts on vernacular heritage, we must

study and analyse our tangible and intangible heritage, becoming involved in the education and raising awareness in society of the values and lessons which can be extracted from this it. At the same time, we must work actively to rescue, maintain, and reactivate the traditional crafts of each constructive culture, working with local communities to learn and support not only the processes of enhancement, but also the conservation, maintenance and recovery of architectural heritage. It is not only heritage, above all, it is also a valuable architecture linking past cultures with the future of our society.

The **HERITAGE 2022**, International Conference on Vernacular Heritage: Culture, People and Sustainability (<https://heritage2022.blogs.upv.es/>), is carried out within the framework of the project VERSUS+ / Heritage for People, co-funded by the European Commission's Creative Europe Programme and the project "RISK-Terra. Earthen architecture in the Iberian Peninsula: study of natural, social and anthropic risks and strategies to improve resilience" funded by the Spanish Ministry for Science, Innovation and Universities.

The project VERSUS+ / Heritage for People, led by the UPV with four additional partners – the Universities of Firenze and Cagliari, CRATERRE, and Universidade Portucalense – aims to further develop its work on education and the dissemination of the sustainability values of vernacular architecture, in line with the VERSUS – Vernacular Heritage Sustainable Architecture project, which was led by the Escola Superior Gallaecia, in collaboration with the same group of partners between 2012 and 2014.

The topics around which the oral presentations, papers and posters have been grouped are wide ranging and have been divided into **four main conference topics**.

- 1. Vernacular architecture: matter, culture and sustainability**
- 2. Heritage education**
- 3. Artisans and crafts of traditional construction**
- 4. Conservation, restoration and enhancement of vernacular architecture**

The **International Scientific Committee of the Heritage2022 conference** is made up of 102 internationally renowned researchers on the topics proposed from 24 different countries. All the contributions have been rigorously selected following a double-blind review process by the members of the Scientific Committee. 134 proposals were selected from over 200 submissions, published in two volumes of the book Vernacular Heritage: Culture, People and Sustainability, with 252 authors from 25 countries worldwide and already available in its digital format on the UPV repository (<http://ocs.editorial.upv.es/index.php/HERITAGE/HERITAGE2022/paper/viewFile/15942/7148>).

The selection and publication of the best papers and posters would not have been possible without the painstaking work of the authors, whom we thank for their contributions. We are also indebted to all the members of the Scientific Committee for their invaluable assistance.



Presenting a paper at the conference (Vegas & Mileto)



Projection of the documentary (Vegas&Mileto)

Following the Conference we also began a second phase for the publication of the best contributions, providing the opportunity to expand their content to be included in a monograph issue of Heritage indexed journal.

One of the challenges faced by society is that of digitalization, and as we all know, the number of online conferences and meetings has soared since 2020. The Heritage 2020 Conference was

held in a completely virtual format. For Heritage 2022 in-person and online formats have been combined using a custom-built platform which has allowed over half of the participants to take part from home. The presentation sessions also combined and alternated in-person and virtual presentations.

Furthermore, the Heritage 2022 conference would not have been possible without the trust and support of major national and international institutions in the field: ICOMOS-CIAV, ICOMOS-ICICH, ICOMOS-ISCEAH, IVE (Building Institute of Valencia) and IEB (Spanish Baubiologie Institute).

As well as having received the support of three ICOMOS international committees, the conference offered the opportunity for a joint meeting between the CIAV–International Scientific Committee for Vernacular Architecture and ICICH–International Committee on Intangible Cultural Heritage and the annual CIAV meeting. We would like to thank the organizers of these meetings (Gisle Jakhell, outgoing president of CIAV, and Munish Pandit, president of ICICH, for the joint meeting and Hossam Mahdy, president of CIAV) for having chosen the Heritage 2022 conference as the setting for these major meetings. These meetings were open to all conference participants.

We would also like to express our gratitude for the institutional and financial support from the European Commission's Creative Europe Programme (through the Versus+ project); the Spanish Ministry for Science, Innovation and Universities and State Research Agency, and



CIAV-ICICH joint meeting



Closing session (Vegas&Mileto)

the European Regional Development Fund, European Union (through the Risk-Terra project); the Universitat Politècnica de València; the Higher Technical School of Architecture; and the Research Centre for Architecture, Heritage and Management for Sustainable Development (PEGASO) of the UPV.

The conference was held on the 15 and 16 September with oral presentations, papers, posters, documentaries and ICOMOS international committee meetings, and on 17 and 18 September with technical visits to Albufera, Rincón de Ademuz and Utiel. Two plenary sessions were held: the first by Hossam Mahdy, president of the ICOMOS International Committee – CIAV, and the second by María Pía Timón Tiemblo and Elena Agromayor Navarrete from the Cultural Heritage Institute of Spain of the Ministry for Culture and Sports.

During the conference it was also possible to enjoy five exhibitions found throughout the spaces of the School of Architecture:

- European Heritage Volunteers
- Earthen architecture in the Iberian Peninsula: study of natural, social and anthropic risks
- FOR SALE! EMPTY SPAIN. Empty and forgotten: values and strategies for the recovery of vernacular architecture in empty Spain
- Women in the vernacular architecture of Burkina Faso

These last two exhibitions received funding from the 2022 PAC_ACTS grant from the UPV Office of Cultural Action

- Finally, the exhibition “WEDoVer 2022 - Utiel Underground” displays the results of the workshop held from 22 August to 3 September 2022 under the auspices of ICOMOS-CIAV and organized by Yolanda Hernández and Pasquale De Dato, teachers from the UPV, mostly with the financial support of the School of Architecture and Utiel Town Council.



Preventing and Planning of natural, Social and Anthropogenic Risks in the Iberian Peninsula through Risk-Terra Project

Camilla Mileto, Fernando Vegas and Sergio Manzano-Fernández
Universitat Politècnica de València

As can be observed from recent studies, there is a wealth of earthen architectural and archaeological heritage, both monumental and vernacular, in the Iberian Peninsula. Proof of this is the wide range of constructive techniques using this material (rammed earth, adobe, half-timber, cob, marl, reeds, *launa*, etc.). These are the result of a specific response to immediate surroundings, reinforcing the status of earth as one of the most widely used and versatile materials in historical and traditional terms. Its use at present is becoming increasingly widespread endeavouring to choose

constructive responses that are environmentally, culturally, and economically sustainable.

However, earthen construction has been one of the techniques most negatively affected by the appearance of new materials. Its execution, its connotations of poverty and fragility have sped up the loss of local know-how and of the maintenance methods which guarantee its feasibility and incorporation into current society. In the field of archaeology, the lack of universal definitive conservation solutions further jeopardizes an already precarious

situation, encouraging multiple interventions which at times speed up the degradation processes. Attempts have been made to resolve this situation, which also affects the Iberian Peninsula, through numerous research projects providing information and solutions on the conservation of this heritage. These include "RES-Tapia" (2011-2013) and "SOS-Tierra" (2014-2018), which offered case study catalogues and an initial examination of the earthen conservation techniques and their responses. The knowledge acquired in these studies is vital in the creation of basic documentation on techniques and materials which lead to a series of architectural, heritage, and constructive families, using a complete collection of thematic maps and guaranteeing the suitable dissemination of results and increased awareness in society.

RISK-Terra project

Recognizing the extreme vulnerability of this type of heritage, in a situation where it is widely accepted that the extensively studied natural threats are further worsened by climate change, the starting point of the RISK-Terra project is the examination of these risk factors in a series of case studies selected to assess this architecture, reduce damage, and offer prevention and prediction tools.

In order to approach the issue of risk and threats in different fields, the project analyses social and anthropic involvement, vital to conservation tasks and the guaranteed transmission of the cultural contributions on offer from earthen architecture. Although this architecture is gaining increasing recognition from experts, the repeated difficulties encountered by the general public in recognizing its value further slow down and complicate the suitable conservation of these structures in different natural and urban settings. Promoting their study and integrated construction in contemporary society would be a positive step for valorization, with contributions which range from culture and techniques to environmental, social, and economic sustainability.

Following the initial phase of organization of the existing information and database updates, the RISK-Terra project examines the issues affecting the Iberian Peninsula, highlighting the different levels of exposure, sensitivity, and vulnerability observed in the different case studies. Given that the creation of a system based on this is essential to securing the proposed objectives, a common assessment methodology is put forward to contrast and compare case studies, while ascertaining the levels of urgency or priority for interventions in fragile non-



Earthen structures affected by natural, social, and anthropic degradation factors in the castle of La Vilavella, Spain. © The author

renewable heritage assets. Contributions are therefore made to planning, prevention strategies, and use of financial resources to face natural, social, and anthropic risks, reducing the occurrence of emergency situations (<https://riskterra.blogs.upv.es/en/>).

Understanding the most frequent agents and their severity enables precise rehabilitation, restoration or maintenance, addressing issues at their point of origin and increasing the resilience of traditional constructions. As a constructive material, earth demands a specific type of conservation, the knowledge of which is affected by the cultural replacement of contemporary architecture. This project proposes a shift towards compatible interventions through different strategies, analysed using case studies incorporated and obtained from earlier databases, fieldwork, and laboratory tests.

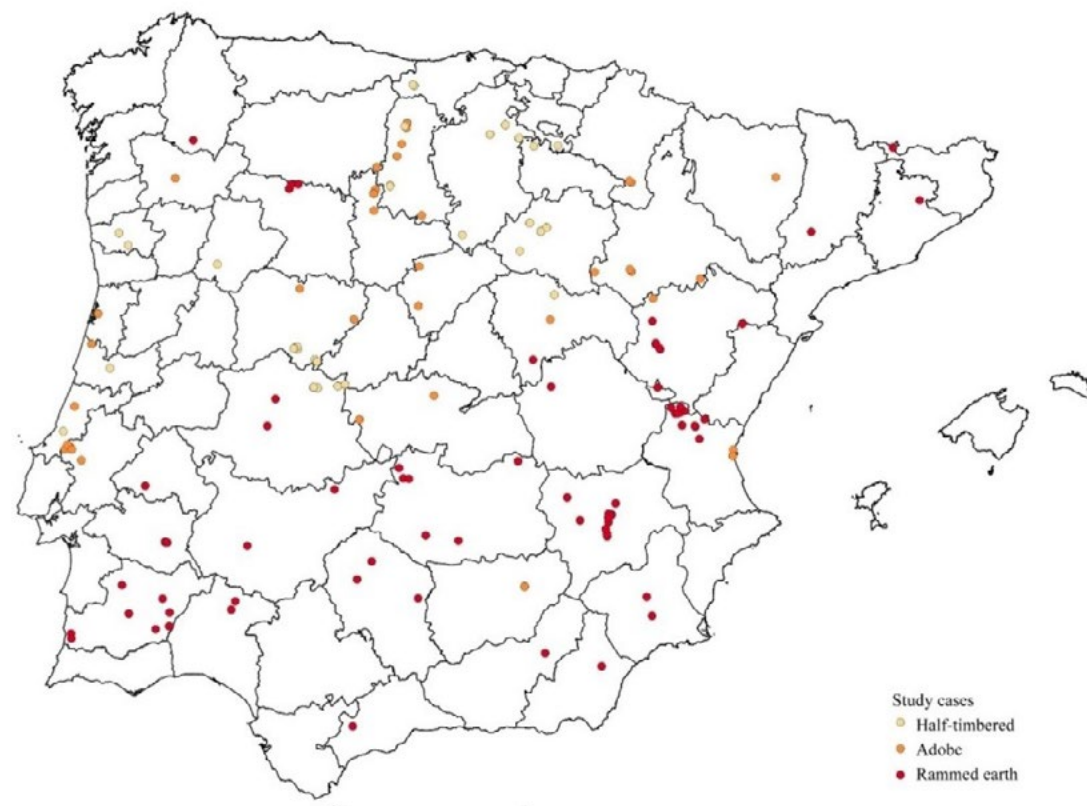
Indirectly, applying this information to risk maps by vulnerability and risk, considering geographical location and context, facilitates the dissemination of results and makes this system useful for consultation and decision-making resources in specialist areas, as well as for administrations and communities.

Prevention, planning, and prioritization of natural, social, and anthropic risks

Depending on the specific context, natural, social, and anthropic threats can be found in various degrees in the Iberian Peninsula, while methods for prevention, planning, and prioritization are essential tools which can be adapted to minimize their impact, guaranteeing the survival of earthen heritage for future generations. Identifying these threats, danger, vulnerability, and risk provides the essential initial information needed to organize resources and interventions. This in turn contributes to an improved human response, where present and future scenarios derived from current factors such as depopulation or climate change are evaluated sufficiently in advance.

The starting point for the project identifies these threats and their severity, specifically in the cases of earthen constructions in the Iberian Peninsula. In this respect, notable issues identified include the effect of seismic action, which has been widely studied; floods; and adverse weather phenomena such as rainfall, variable temperature and wind, and others stemming from climate change, such as the desertification processes already seen in much of the territory.

Map of architectural characteristics of case studies selected for risk analysis. © The author



Map of susceptibility to extreme weather events and areas affected by river or marine floods. © The author

Drawing up risk maps based on international, national, and regional sources including the Instituto Geográfico Nacional [National Geographic Institute] and the Ministerio del Medio Ambiente, Medio Rural y Marino [Ministry of the Environment and Rural and Marine Affairs] makes it possible to identify the areas most at risk.

The vulnerability index for these risks is established through an analysis carried out prior to the methodology and taking into consideration the architectural characteristics of the earthen construction. Depending on the state of conservation, this level of vulnerability can be worsened by degradations.

This architectural vulnerability analysis complements the results from the work on the systematic organization of case studies in the Iberian Peninsula and the risk maps, highlighting areas that are particularly affected and suitable for detailed study as they can provide a greater amount of information. Representative cases which can be accessed at monumental, vernacular, and archaeological level are selected and studied through a multidisciplinary onsite and research data collection, which examines factors relating to setting (type of terrain, urban structure); morphology (number of storeys, geometrical proportion, built surface, type of construction, internal bracing, percentage

of openings, type of roof, length of eaves, vertical constructive system of floors, vertical protection); and construction (foundations, plinth, wall constructive technique, renderings).

This analysis is completed with the increased vulnerability associated with the state of conservation. This offers a more precise picture of the exposure and sensitivity of these earthen structures, paying attention to agents such as water and vegetation and their effects, as well as to human agents. In the case of archaeology, these factors are adapted to the construction and pathology of the specific case studies, recording the different situations, as well as all the interventions and protection elements observed.

A quantitative assessment is carried out in order to address priorities and improve planning. This is a two-part process: initially, a degree of risk influence is assigned to individual factors and subsequently this is weighted with a risk index, using the Delphi method, which requires consultation with - and the expertise of - numerous specialists in the field. The use of a common methodology for all case studies facilitates comparative analysis, which helps generate GIS documentation in systems and cross-references risk data compiled from the sources mentioned above.

The cross-referencing of exposure and sensitivity provides evidence from the case studies most vulnerable to each threat. Based on the data collected the information is classified by factor: constructive typology and technique; seismic activity; river and marine flooding; adverse weather phenomena; and human origin. Some results include extreme risk situations, mean levels of susceptibility, and levels of resilience due to traditional adaptation to adverse conditions, reflected on different risk maps.

As stated previously, any prevention actions depend on the individual contexts and case studies as they are a response to different origins and a variety of features and degradations. Therefore, this research project further expands and analyses the case studies identified as most important according to the context. The aim of this was to gain a better understanding of specific conclusions wherever more information was available. Some of these cases are found in the east and south of the Iberian Peninsula, areas which are particularly affected by seismic activity and climate change.

A series of climate impact studies were carried out. Those carried out in the field assessed natural erosion in wall samples with different composition, orientation, and execution, while laboratory tests used a controlled environment

to test patterns in compressive strength, wet-dry cycle, abrasion, or saturation. Cause and effect are monitored thanks to both the controlled reproduction of the material and structural degradation, and periods of natural exposure to the elements.

In social and anthropic terms, the social factors of impact in different locations show the extent of the damage caused by factors which include abandonment, depopulation and social discredit, as well as classifying actions for transformation or pathologies and their role - decisive or otherwise - in their preservation. A major factor requiring further study through different indicators is the attempt to find solutions to complex problems with no easy answer, such as depopulation. The extensive data from databases from earlier projects have provided information on specific aspects relating to monumental and vernacular architecture, as well as the purely cultural and exhibition functions of archaeological sites with earthen structures in the Iberian Peninsula.

Resilient interventions

As well as constituting an advance in the management of this heritage, the results of the research carried out in the previous phase are a basic tool for drawing up guidelines to identify intervention strategies showing the best results,

guaranteeing increased resilience in extreme risk cases despite the traditional typological transformations. As it is impossible to offer common solutions to individual problems these reflections focus on the most suitable basic guidelines or preventive measures. These are expanded in the specific cases included in the project and can be an essential aid to heritage management institutions when addressing risks and threats. Multi-scale risk maps are tools for basic decision-making, but can also be used for other contexts of interest.

Best practices have been compiled to ensure compatible conservation and protection from different perspectives, but also to address one of the most important points in social terms: knowledge and dissemination. The constructive culture of these earthen constructions, closely linked to factors such as social discredit or connotations of poverty, is waning and the number of individuals or professionals skilled in their maintenance is falling as this knowledge is no longer transmitted from generation to generation.

This project in itself takes part in this dissemination using tools such as conferences, webpages showing the major objectives and results of the project, exhibitions, seminars, talks, and different publications. The aim of these actions is to train specialists, providing them with the information necessary to increase awareness of the various forms of earthen architecture.

However, given the natural aspect of earthen architecture this dissemination should not be limited to professionals. Outside the field it should also aim to reach most of the population with previous knowledge of maintenance tasks and the intrinsic virtues of this architecture. The creation of workshops and the transmission of knowledge to children is an extremely useful tool for this, raising awareness of earth as a material for construction from a very early age.

Conclusions

The goals of the RISK-Terra project include scientific advances and impact on the fields of prevention, organization and planning of earthen architecture and archaeology in the Iberian Peninsula, currently facing a wide range of challenges in conservation, both natural and human. The different analyses and reflections are a further step in the cataloguing of earthen constructions in the Iberian Peninsula. This

project is expected to reap benefits in social and economic terms, facilitating decision-making and forging ahead on the path of valorization of local heritage, with results which can be openly transmitted to present and future specialists as well as to society as a whole.

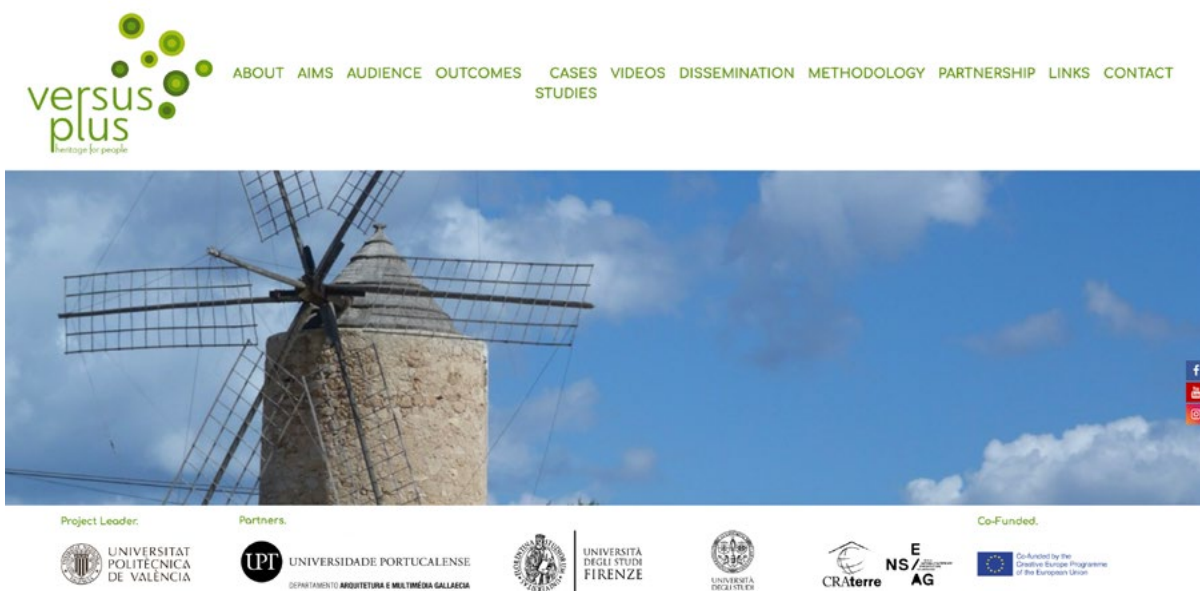
While the typological response and limited number of constructions at extreme risk demonstrate the resilience of this type of architecture and the adverse conditions it faces throughout its lifecycle, increased sensitivity due to degradation is indicative of the impact of risks in the highly exposed cases, especially in the parts of the Iberian Peninsula where these have worsened most in recent years.

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Maintenance of roofs, structural connections and protection elements using traditional materials and techniques in La Alberca, Salamanca, Spain. © The author



VerSus+ | Heritage for PEOPLE Project

Camilla Mileto, Fernando Vegas, Lidia García-Soriano
Universitat Politècnica de València

INTRODUCTION

Vernacular heritage is a tangible and intangible heritage of great importance to European and global culture. This architecture, born from the practical experience of local inhabitants, makes use of local materials to erect buildings taking into consideration the climate and geography, developing cultural, social and constructive traditions based on the conditions of the surrounding nature and habitat. Above all it plays an essential role in contemporary society as it is able to teach us important principles and lessons for a respectful sustainable architecture. These lessons from vernacular heritage for contemporary architecture have been extensively studied in the project "VerSus: Lessons from Vernacular Heritage in Sustainable Architecture (grant 2012-2792/001-001 CU7 COOP7)" funded by the European Union between 2012 and 2014. Although this project had considerable repercussions for the European and international communities, the knowledge and awareness it provided need to reach the very heart of society in order to build awareness in all the sectors of the society that constitute the basis for the conservation of the material and immaterial heritage as well as for a more sustainable

architecture for the future. For this reason, the project "VerSus+ | Heritage for PEOPLE" (607593-CREA-1-2019-1-ES-CULT-COOP1), which is presented here, focuses on the transmission of knowledge to all branches of society and the general public. It pays special attention to the society of the future (children and young people) as well as local, regional and national authorities in charge of heritage management including specialists and experts in the field of architecture (architects, engineers, cultural managers, historians, ethnographers, university students, etc.) together with craftsmen and companies in the construction and tourism sectors, cultural and social associations and educational institutions. This in-depth transmission of the lessons from vernacular heritage to future society is to be carried out in specific defined contexts, such as islands and archipelagos (geographically limited territories with accessible administrative, technical and social agents and collaborators), where vernacular heritage is under pressure, subjected to the transformations of contemporary life, in particular mass tourism. These pilot experiences, initially focused on cases on the Mediterranean area, should serve as a real testing ground for the implementation of actions for social participation, diffusion, education,

communication and promotion (workshops, festivals, showrooms, social networks, webpage, booklets, mobile apps, final results books, videos and interviews, etc.) in different contexts (schools, associations, local administrations, public spaces, etc.) and through different media (social networks, internet, digital channels, virtual reality, traditional media, etc.). These direct experiences in these locations will later have repercussions throughout the region and in turn throughout the country in question. In addition, promotion and support from associate partners will make it possible to apply these experiences in other similar European and international contexts. (<https://versus-people.webs.upv.es/>)

PROJECT FRAMEWORK AND AIMS

According to the ICOMOS Charter on the built vernacular heritage (1999): "Vernacular building is the traditional and natural way by which communities house themselves. It is a continuing process including necessary changes and continuous adaptation, as a response to social and environmental constraints. The built vernacular heritage is important; it is the fundamental expression of the culture of a community, of its relationship with its territory and, at the same time, the expression of the world's cultural diversity". Vernacular heritage is composed of traditional buildings, which represent a morphological response to the environmental and climate constraints. Additionally, the materials and architectural components used are climate responsive and tailored according to distinct locations, and adapted to seismic, geographic and climatic features, as well as to social behaviour and cultural traditions. Besides, it is a cost-effective architecture with low environmental impact.

All the know-how, namely the intangible heritage of knowledge and skills that vernacular heritage encloses, have to be made clear for fostering education and creative training as new forms of vernacular heritage protection based on the knowledge and awareness of the heritage in its dynamic dimension.

The project "VerSus+ | Heritage for PEOPLE" aims to enhance new perspectives and opportunities starting from best practices, and to promote the development of local skills toward the "living heritage community" mentioned by the Faro Convention, the Charter of Venice and UNESCO Conventions for the Safeguarding of the Intangible Cultural Heritage (2003) and in the Protection and Promotion of the Diversity

of Cultural Expressions (2005). The present project intends to outreach to society showing the sustainable qualities of the identified examples, through the establishment of an operative approach that can be adjusted to different contexts, and which can be assumed by local communities. The lessons derived from vernacular heritage can be applied in the conservation and rehabilitation and in the conceptual design of sustainable contemporary architecture that will become the heritage of tomorrow.

In this approach, **three dimensions of sustainability** have been defined in "VerSus - Lessons from Vernacular Heritage in Sustainable Architecture", as follows:

- **Socio-cultural:** the sense of belonging, of identity, of personal and community development. This scope tries to gather all social and cultural positive impacts observed in vernacular heritage. It concerns the protection of cultural landscapes, the transmission of construction cultures, the capacity to stimulate creativity, the recognition of cultural values - tangible and intangible heritage - and the reinforcement of social cohesion.

- **Environmental:** this scope addresses the human capacity of intervention, in order to decrease and even avoid negative impacts on the environment, which is very sensitive to changes. Human intervention is able to integrate nature and bioclimatic features, to control the production of pollution and waste, to preserve health and to mitigate the impact of natural hazards.

- **Socio-economic:** the capacity of reducing the efforts invested during the construction process, the enhancement of building performance, the maintenance of buildings and of all the impacts that contribute to an improvement of living conditions. Here, the concept of effort and work replaces the idea of cost, especially in contexts where no capital-intensive systems were implemented. Vernacular solutions encourage autonomy and local activity, optimise construction efforts, extend the lifetime of the building and save resources.

The transmission of these lessons to the society is a current challenge for the creation of a more widespread awareness of the importance of heritage conservation and its integration in the contemporary life as element of cultural identity and a source of quality of life which, using the

possibilities and options offered by traditional knowledge, supports innovation and creativity in our contemporary world.

In this context, the **3 GENERAL AIMS** of the VerSus+ Heritage for PEOPLE project are:

- **To promote, strengthen and expand international and transcultural relations** taking advantage of the network established in the course of the project “VerSus: Lessons from Vernacular Heritage in Sustainable Architecture” through dynamic, innovative and creative actions, as well as to promote international cooperation between experts and institutions of different nationalities working in the fields of sustainable and vernacular heritage, in order to encourage an EU-wide intercultural dialogue and a more generalized acknowledgement of their international studies, careers and activities

- **To apply knowledge from the fundamental lessons and principles of vernacular heritage** to improve the recognition of vernacular habitats through the awareness of their values and qualities, focusing on both the heritage aspect and on what they offer in terms of sustainability and know-how for the development of future society and a more sustainable architecture

- **To disseminate the principles, techniques, and solutions of vernacular heritage in European society**, so that they can be adapted to respond

to the real needs of European societies in terms of culture, identity, quality of life and environment. The methodology of the project is based on case studies through a multidisciplinary approach (architectural, historical, geographical, territorial, administrative and management, technical and constructive, artistic and creative, social, didactic, etc.), which makes it possible to outline strategies to transfer the principles and lessons from vernacular heritage to society through the design of specific activities for citizen participation, education, promotion and dissemination and their actual implementation in collaboration with the local administrations and social agents involved. The case studies are to be carried out in **geographically delimited settings**, such as small inhabited islands which offer important tangible and intangible vernacular heritage currently in a phase of adaptation and updating due to the demands of contemporary society, which present major risk situations as a result of the pressure of tourism. All these factors contribute to the transformation and gradual disappearance of local vernacular heritage, ways of life and constructive traditions. These small islands also offer the chance to work in a territory where local administrations, educational institutions, associations, etc. can be easily accessed in order to study the current situation and to design action strategies and implementation of the project activities. The selected islands are to be used as a pilot project,

and will be considered a centre where specific activities such as festival, showrooms, workshops, etc. can be held, although attempts will be made to involve inhabitants from the entire region in these activities, which will be open to the participation of an international public. The case selection will focus in the Mediterranean area, as it embraces an easily accessible territory with islands rich in vernacular heritage that constitute a great starting point for the project, that aims to achieve wider coverage in the future. Thus, the **case studies selected** are: **Formentera**, Spain (Surface: 83.24 km²; Population: 12,124 in 2016) and **Sant’Antioco**, Italy (Surface: 87 km²; Population: 11.811).

TRANSMISSION TO DIFERENT AUDIENCES

The main aim of this project is to transmit knowledge to different audiences, reaching a wide and diverse public and which may have an effect on future society and more sustainable local development. The VerSus+PEOPLE project is geared towards reaching a wide and varied audience in order to have a real impact on society and the general public. It pays special attention to the society of the future (children and young people) as well as local, regional and national authorities in charge of heritage management including specialists and experts in the field of architecture (architects, engineers, cultural managers, historians, ethnographers, university

students, etc.) together with craftsmen and companies in the construction and tourism sectors. It also considers migrants and refugees as an important target group, since getting them to have in-dept knowledge of the constructive tradition of their foster country is a good way to promote their integration.

PROJECT ACTIVITIES

The VerSus+ project is based on the execution of a wide range of activities aimed at different audiences according to education, interest and age. The research team are in charge of all the main activities of the project, such as data collection (designing and selecting the case studies, compiling existing information, site missions, drafting information and outlining action strategies), organization of seminars and scientific and didactic workshops, design of didactic activities, execution of participative activities (festivals), dissemination and promotion of the project (organization of an international conference, production of the materials for the booklets, the final book and video, etc.).

The activities can be grouped according to their objectives as follows:

- **Fieldwork:** data collection, studies and surveys, interviews, videos, etc.



Formentera traditional house (Spain)



Sant’Antioco traditional house (Italy)



First Festival in Calasetta (Sant'Antioco).

• **Social participation activities:** meetings with different agents involved in the administration, management, maintenance and enjoyment of vernacular cultural heritage (cultural and social associations, local and regional administrators and managers, professional colleges, craftsmen associations and companies).

• **Scientific activities:** meetings, seminars and an international conference "HERITAGE2022, International Conference on Vernacular Heritage: Culture, People and Sustainability", organized in the framework of the project was held on September 15th, 16th and 17th, 2022 at the Universitat Politècnica de València, Spain.

• **Educational and awareness activities:** technical-creative workshops run by craftsmen and local artists for primary and secondary school students and the general public; didactic workshops for children, young people and the general public on the principles and lessons from vernacular heritage and their application in the conservation and future architecture; showrooms for craftsmen and traditional constructive materials and techniques; showrooms for innovation companies and construction with traditional materials and techniques; talks and conferences delivered during the local festivals.

• **Festivals:** Two festivals are programmed, one at each case study location islands (Formentera-Spain and Sant'Antioco -Italy). Each festival will follow the same structure and last four days. The leading partner for each case study will be in charge of preparing the festival in collaboration with the rest of the partners and local agents:



administration, cultural and social associations; craftsmen and construction companies; local artists; educational institutions, professional guilds, social and cultural associations, etc. Work will be carried out alongside local communities on the needs which may have arisen during the fieldwork phases. Also, the local festivals include the participation of international artists. During this time the following activities will be executed simultaneously: showroom for craftsmen and companies; didactic workshops on the principles and lessons from vernacular heritage for the society of the future; technical-creative workshops with craftsmen and artists teaching how to handle traditional materials and techniques and how to experiment with them creatively; conferences for specialists and experts; talks for the general public.

• **Dissemination activities:** website; social networks; final results book (the work methodology, case studies analysed, designed strategies and results obtained will be published in a book, the content of which will be provided by all partners taking part in the project as well as guest authors. The book will be available in paperback and e-book formats), didactic booklet; mobile app (a mobile app with didactic and entertainment content will be designed in order to transmit the principles and lessons from vernacular heritage to the society and architecture of the future. This app, available as a free download, will be aimed at the general public, especially children and young people as a way to interest this target group in traditional heritage.), didactic exhibition (an interactive

didactic exhibition will be designed as a tool for the transmission of principles and lessons from vernacular heritage. The exhibition will include QR codes to connect to the webpage, YouTube channel and downloadable content on the website. This exhibition will be aimed at the general public and will be itinerant and featured at both festivals, in English, French, Italian, Spanish and Portuguese).

PARTNERSHIP AND AEGIS OF THE PROJECT

The partners of Versus+ | Heritage for PEOPLE Project are: Universitat Politècnica de València (UPV) (Project Leader), Universidade Portucalense (UPT), Università degli studi di Firenze (UNIFI), Università degli studi di Cagliari (UNICA), CRATERRE - l'Ecole Nationale Supérieure d'Architecture de Grenoble (CRATERRE_ENSAG). This team have a wide experience in the coordination and making of European projects and other national and international projects that guarantees good results.

Apart from the aforementioned expert partnership, the project also presents a steady and substantial general support, rooted in world-renowned institutions and entities, with whom the partners usually collaborate; but universities of other countries as well that, from their experience in studies on vernacular heritage, support this project and have a strong interest in collaborating with the partners during the development of the project. These Institutions and Entities contribute to the dissemination of the project, its scientific research and the diffusion of its outcomes. This General Support Entities are: ICOMOS-CIAV,

International Council of Monuments and Sites; ICOMOS-ISCEAH, International Council of Monuments and Sites – International Scientific Committee of Earthen Architectural Heritage; ICOMOS-ISCARSAH, International Scientific Committee on the Analysis and Restoration of Structures of Architectural Heritage; UNESCO Regional Bureau for Science and Culture in Europe, Venice; UNESCO CHAIR Earthen Architecture, Constructive Cultures and Sustainable Development; REHABIMED; INTBAU INTERNATIONAL; RED PROTERRA, Red Iberoamericana de Arquitectura y Construcción con Tierra (Iberoamerican Net of Earthen Architecture and Construction); WHITRAP - World Heritage Institute of Training and Research for the Asia and the Pacific Region; ASSOCIAZIONE INTERNAZIONALE CITTÀ DELLA TERRA CRUDA (International Association of Earthen Cities); SPANISH MINISTRY OF CULTURE – NATION PLAN FOR TRADITIONAL HERITAGE; GOVERNMENT OF BALEARES ISLANDS - Representant in the National Plan for Traditional Architecture of the government of Balears Islands; CONSEJO SUPERIOR DE LOS COLEGIOS DE ARQUITECTOS DE ESPAÑA (Superior Council of the Associations of Architects of Spain); IVE - Instituto Valenciano de la Edificación, is a foundation belonging to the Valencian Regional Government that deals with the study and promotion of sustainable building strategies in the area of the Valencian Region. Its support will be important, as many of the conclusions and results of the project may be applied afterwards to local sustainable policies of building.



Formentera's architectural typologies: Casament



Visit to the Traditional Architecture of Rincón de Ademuz

Fernando Vegas and Camilla Mileto
Universitat Politècnica de València

The isolated location of Rincón de Ademuz contributed to the preservation of its vernacular architecture in its original condition. However, this isolation was also the reason for the depopulation of all the villages in the last few decades. Although the desertification of the region contributed to the survival of this traditional architecture which was in urgent

need of attention, it had had an effect on its poor conservation. Lack of information, or even mental association of these primitive constructions with a time of subsistence economy and isolation from the rest of the world, resulted in a disdain for this vernacular architecture which was in real danger of disappearing.

Characteristics of vernacular architecture

The vernacular architecture of Rincón de Ademuz is characterized by a structure of gypsum pillars supporting gypsum-poured jack arched floors and a roof normally composed of timber binding rafters, beam fill in reed or lath. The walls of the ground floor and occasionally some upper floors are stone masonry, using earth as the sole bedding mortar. The walls of the upper floors are usually built with gypsum-rendered stone slabs placed vertically on a timber supporting frame. These slab walls are sometimes bare and sometimes rendered in gypsum, showing the marks of the formwork used to build them. There are also rammed earth and gypsum-reinforced rammed earth walls, which careful observation has identified as even older than other walls.

The interior flooring, ledges, granaries, built-in wall cabinets, etc. are built with gypsum, usually with some sort of stone or slab infill, as in the case of the built-in wall cabinets. Gypsum flooring was mostly treated with linseed oil. All architecture revolved around the use of gypsum, which was abundant and required little fuel and time in the firing process to produce the bonding agent.

Much has been said about the almost magical properties of the gypsum pillars from this region, which could withstand the load of up to four storeys in height. In fact, we have been able to reproduce similar resistance conditions similar to those of commercial gypsum by mixing it with water in the proportions advised by older local residents. The only precaution to be taken is that pillars should not spring directly from the ground in order to prevent damp by capillarity, but should spring from two or three courses of earth-rendered stone.

The timber used is Scots pine and more recently, poplar. Black pine is also used occasionally for large beams and door thresholds in contact with the ground as it is rot-proof and resistant to insect attack. Traditional joinery, usually doors, gates, and windows with no glazing are made from pine.

Awareness actions carried out

Given the urgency of this situation, the traditional architecture workshops organized over the last twenty years aimed to carry out in-depth studies of the region, its architecture, urban planning and landscape, as well as its vernacular constructions and techniques, seeing this

knowledge as a first step towards promoting and recovering heritage. The activities have varied in content, audience and methodology over the years, but have always maintained the objective of acquiring and providing information on vernacular architecture in a region rarely studied, promoting it and increasing awareness among local population and outsiders.

The main topics addressed during these activities were:

- promoting the vernacular architecture of the region of Rincón de Ademuz through a series of workshops, continued over time, to raise awareness among both locals and outsiders.
- thinking and discussing a series of criteria for the restoration of specific traditional elements of the region between technicians, students and local population, and to therefore, favouring moments of exchange and learning about vernacular architecture.
- exploring the building culture of a place in a gradual and sustained way over time as a means to deepen the degree of detail and specialization and to reinforce the link of the population to its traditional architecture.

The international workshop series comprised 20 annual workshops. They included an introduction to the architecture and landscape of the region (excursions and visits); monographic study of the theme of the workshop (data collection, drawing, notes and



The visited house prior to restoration

group discussions); a final presentation of the participants' work to the authorities and the local population in an exhibition that remained on display for several months. The theme of the workshops varied with each edition:

- Construction details of vernacular architecture.
- Preindustrial architecture in the region and minor religious heritage which was in a state of abandonment.
- Characteristics, resistance and conservation of traditional construction materials in the region.
- The landscape and the transition from nature to anthropic space.
- The impact of new constructions on the rural context.
- Sustainability of vernacular architecture.

The international workshop series also comprised 5 practical seminars. These always involved local craftsmen and master builders who taught traditional building techniques to the participants. These seminars were held both in the Universitat Politècnica de València and in a house in the region.



The Heritage 2022 conference at the foot of the church



The Heritage 2022 Conference group visiting the old school

These seminars dealt with practical experiences examining traditional building techniques in the area with local materials. Practical seminars were carried out on constructions with sundried bricks, rammed earth, gypsum flooring, as well as gypsum rendering and construction using reeds.

Occasionally, practical construction seminars with earth were also held with the collaboration of a kindergarten in Valencia, allowing children aged 3 to 5 to learn to build small adobe constructions and render them with earth.

Finally, the international workshop series also included 20 teaching activities. These consisted of visits to several locations and traditional buildings in the region, combined with explanations from the instructors and local residents on vernacular architecture: descriptions of traditional processes for quarrying stone from the mountain, making gypsum, manufacturing brick and slates, weaving wicker, winemaking, etc.; practical demonstrations on the construction of gypsum floors and ceilings, building stone walls, rendering, etc.; and illustrating other traditional tasks such as logging timber for construction downriver, manufacturing traditional soap, extracting honey and wax from beehives, etc.

The contents of the visits varied according to the age and background of the public taking part, ranging from 3 to 80 years old, also including groups of university students and teachers from various countries, architecture associations from different places, groups of international experts in vernacular architecture, etc.

The format of the workshops proved to be useful in combating depopulation and abandonment in the region and could be taken as a reference for other places in Spain and Europe. Over a thousand people aged from 3 to 80 have taken part in these workshops. Kindergarten pupils, school pupils, university students, professionals, architects, quantity surveyors, engineers, developers, builders and other trades from the construction sector and people with no specific training, from twenty countries and four continents, all became involved along with local inhabitants.

The information gathered in the workshops resulted in the publication of two books, which have contributed to its dissemination beyond the tool itself (*Memoria Construida: Arquitectura tradicional del Rincón de Ademuz* and *Homo faber: Arquitectura preindustrial del Rincón de*

Ademuz). Furthermore, a conservation handbook called *Renovar conservando. Manual para la restauración de la arquitectura rural del Rincón de Ademuz* has been published.

Restoration of the traditional architecture of Rincón de Ademuz

The visit that was part of the Heritage2022 conference focused mostly on the village of Sesga, with stops made at several traditional buildings linked to local life and culture. These were the cemetery, two gypsum kilns, the public wash house, the tile workshop, the school-baker-barber's, and a private home, owned and restored by the authors of this text.

The **house restored** by the authors of this text, three-storeys high, was home to a family with five children, with a stable and an attic used for food storage. The dendrochronology carried out on numerous joists showed it was built in 1731. It was extended in the 1940s, a few years before the family left for the city in search of work. Its condition prior to restoration was dramatic, with major structural problems on walls and floors, as well as holes on the roof and different points in the floors which let rainwater and snow all the way in and down to the ground floor. Over the last 20 years this restoration has served as a laboratory to try out materials, alternative repair techniques, finishes and aesthetic solutions, always making sure to use local labour and materials, as well as traditional techniques or a reinterpretation.

The roof was removed and thermal insulation was added along with a damp-proof layer before reroofing with tiles, mud, and straw. Beams, joists, and jack arch floors showing signs of rot were repaired and occasionally replaced. The floors were reinforced with structural gypsum, reed, and esparto grass. Rendering with live gypsum was carried out, with cords affixed to the wall plates. The flooring at ground level was executed with a layer of natural cork and a lime concrete finish, while waxed gypsum was used on the flooring on the upper storeys. The façade with its original 18th century gypsum renderings was repaired, sealing the edges and filling in the gaps. The facilities required for modern housing have been discreetly incorporated.

This restoration followed the model set out by the pilot project for the restoration of vernacular dwellings in Rincón de Ademuz, which was drafted as a manifesto and declaration of intent and received the 1st Prize at the 2003 Europa



Repairing the lost gypsum-poured jack-arch vaulting

Nostra Heritage Awards, in the category of Research. The actions planned included the assessment of the impact of restoration on the development and promotion of traditional crafts and techniques compared to new building construction. The carbon footprint generated by this restoration was compared to that of a similar restoration using industrial materials and to a similar building of new construction.

The local **gypsum kilns** are stone masonry cylinders rendered in earth which are usually built on sloping ground for ease of access for both the front and top openings. The gypsum was initially used to form a small vault on the inside and the rest of the cylinder was filled to the top with gypsum. The kiln was subsequently lit using branches and scrub and was kept going for 24 horas to fire the gypsum, making use of nighttime to ensure better control of the combustion. After firing, the gypsum was left to cool and the calcined stone was extracted and deposited on the threshing floor, where it was ground with the help of a mule and a conical roller, before being stored in sacks and transported to wherever necessary.

The **wash house** is in fact a hydraulic system with different interconnected elements: a fountain, a drinking trough for sheep, a laundry, and a fulling mill to soften the wicker before weaving. The water from the fulling mill is then used to water the fields through a network of channels. The restoration of this complex consisted in the repair of structures and roofs, waterproofing to prevent leaks, the elimination of elements which were not in keeping with the whole, the elimination of concrete flooring and of lumps of cement mortar added in recent times, the repair of a stone table and chairs used for rest, and several other smaller details.

The **tile workshop** is a marvellous complex which includes the pool where clay and water were mixed, the floor where the shaped pieces were aired before being fired, the kiln with a space below for wood and another above for ceramic, as well as a hut still containing the measuring tools for mud, the moulds for the tiles and bricks, the tools for shaping damp clay, and the sticks used to stoke the fire, and burnt at the ends as if they had just been used recently for the last calcination. This kiln was mostly used to fire the curved tiles for the roof, the curved ceramic tiles for covering the cylindrical interiors of winepresses and more rarely, flat ceramic tiles for the flooring of these winepresses or bricks to build ovens. The conservation action focused especially on repairing the kiln structure, which was at serious risk of collapse, cleaning the complex and tools to showcase a complex which had previously been abandoned and full of rubbish.

The **school-bakery-barber's** is a building where the women from the village met on the ground floor to knead and bake bread in the oven and children went to school on the top floor. Also on the top floor, the men met to get a shave and confer in what was known as the barber's shop or city hall, with a room at the back occasionally used as a jail. This building, in an excellent state of conservation, preserves all its furniture and historic functions. The bread oven incorporates a wood store where logs were kept, a large table to knead the dough and a paved area beside the oven which still preserved all the tools to stoke the fire, move the embers, and take the bread in and out of the oven. The barber's shop still has the barber's chair with a headrest, the table on which his tools were placed, and a small built-in cupboard which stores items like the rockets for launching to the clouds to make rain, four alarm clocks to organize the timing for water distribution in the village channels, the town hall seals, the horns of the village crier, an old set of scales, a bar to extract gypsum from rock, etc. The school is a marvellous space which still preserves its desks with inkwells, maps of interwar Europe, an abacus, the teacher's desk, a cupboard with schoolbooks from the Second Spanish Republic (1931-1936), which were banned during Franco's dictatorship for their open and progressive mentality, a portrait of Franco himself, a stove, a Plan Marshall can of pasteurized cheese made into an oil dispenser, etc. A door at the back of the school led to the children's bathroom, a sort of apse with a sill, orifice and two tiles together draining off to the field.



The house once restored

Prior to restoration, the building leaked badly, affecting the joists, floors and walls of the barber's and school. In the case of the barber shop there was a rotting beam end and a completely damaged gypsum-poured jack arch floor. The main façade sloped towards the street. The side wall of the baker's oven, which at the back had been in contact with the earth, was full of damp. The lavatory had caved in. The stone paving at the entrance and the flooring around the oven had missing elements. The main beam of the oven had caused lesions in the meeting due to non-uniform distribution of shear stress. The ironwork of the entrance corridor and the timber from structure, furniture and joinery were in need of maintenance. Additionally, there was an endless list of minor details requiring attention, as well as requests from the local residents to install electric lighting and water supply in a building which had never had them.

At all times efforts have been made to respect the soul and character of the building during the restoration process, implementing invisible actions to both save it and ensure that it reaches future generations intact.

The roof was built and waterproofed before adding the original tiles, brushing off the moss. However, the eaves were not dismantled but repaired onsite to conserve their original appearance with the lumps of clay in place. Prior to replacing the roof tiles, several hidden tie beams were added to support the façade and prevent it from sloping towards the street. The beam with the rotten end was permanently shored up and the damaged gypsum-poured jack arch floor was repaired. Soil was dug up from the side of the wall suffering from damp, mixing it with a 10% proportion of lime. Then, the excavated section was covered again, which provided some level of waterproofing while still allowing breathability.

Archaeological conservation work was used for the lavatory, recomposing the original tiles on the ledge as if it were a puzzle. Missing elements from the stone paving and flooring were replaced; a distribution panel was inserted under the beam of the bread oven to avoid the effect of shear; the iron was brushed and tanins were applied to prevent the spread of rust; all the timber was treated with two coats of linseed oil, 1st with boiled oil and 2nd with raw oil, etc.

The addition of lighting required careful consideration of the position and form of the fittings. A corner position or one focusing on objects would have transformed the building into a veritable museum when, in fact, it is an almost living building (the bread oven was even used recently) and we wanted to ensure it remained so. Therefore, the light fittings were placed in natural central positions like those usually chosen when electric lighting was installed in many homes in the late 19th century. The water supply was added in the gaps in the paving before these were filled in and was inserted concealed under an existing shelf.

The building appears to be miraculously conserved in time, as if it had never been restored. This was the goal of the project, which was granted the 1st EU Prize for Cultural Heritage - Europa Nostra 2011, along with the project of other small vernacular buildings in the municipality, including the gypsum kilns, wash house, a winepress and cellar, etc. which underwent similar restoration processes.

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Valencia Lagoon Architecture

Camilla Mileto, Fernando Vegas, Valentina Cristini
Universitat Politècnica de València



View of the Valencia lagoon (V.Cristini)

disuse and neglect, despite the fact that the barraca is one of the most recognizable signs of identity of Valencian culture.

Although different layouts can be found in these barracas, there is a certain degree of homogeneity deriving from life around the lake: a large living area on the ground floor with an open plan kitchen and a storage space for crops upstairs. Despite the fact that this is a rural building with a basic distribution like that of other barracas, the case study features refined

ventilation and lighting control mechanisms (i.e. walls with good thermal inertia and cross-ventilation through double accesses with east and west orientation).

In this case the building, like many similar ones in the region, has a rectangular floor plan of approximately 70 m² and a thatched gable roof. The supporting walls are relatively low, in limewashed adobe (usually with a flower bed with geraniums at the foot of the wall to absorb possible water excess). The timber structure was traditionally made of pine with rafters, tie beams, and collar beams, while diagonal elements added rigidity, stabilizing the framework and protecting it from the wind. Finally, a timber panel and a layer of reeds are added to the roof of this timber structure.

As part of the Heritage2022 conference a visit was proposed to examine this traditional vernacular building, which is fully adapted to its lagoon surroundings, and is of particular anthropological and geographical interest, as stated in the conference information. Traditionally, in this flat location with no quarries or sufficient trees to guarantee “more robust” constructions, local materials were used – timber,



Traditional barraca or earthen thatched hut, typical of the Valencian marshes (V.Cristini)

El Palmar is a tiny village on the outskirts of Valencia, located in the middle of rice fields and near a lagoon bank. It was originally settled by fishermen who had come from the riverside villages and the neighbourhood of Russafa in València. It is also the site of the largest freshwater lake in Spain, Albufera, measuring over 2,800 hectares. Throughout the year up to 300 different species of birds take refuge here, especially waterfowl such as flamingos which spend the winter here. In fact, Albufera is recognized as one of the major wetlands in the country. The definitive village construction in this spot dates from the middle of the 18th century and its economy is based on fishing, agriculture, restaurants, and ecotourism.

Only 30 barracas or earthen thatched huts survived when the village of El Palmar was destroyed by an unfortunate fire in 1883. The frequent fires affecting the barracas and the poor hygiene conditions led to the establishment of laws banning their construction and conservation which resulted in their gradual disappearance so that barely ten barracas now survive in the village. The Club L'Alcati association has therefore undertaken a full conservation of a barraca. The private 18th-century house is an example of the traditional and almost untouched typology of an “urban” isolated barraca, absorbed by the urban fabric of the village. Prior to the start of this conservation project, which is still ongoing, the building was in a serious state of abandonment,



Repairing the timber structure of a traditional barraca (S.Tomás)

mud, rushes and reeds ... – providing resources for the protection of the poorer families in the area. Learning about a barraca in detail within the framework of an international conference is particularly interesting, as examples of this building typology can be found throughout the Mediterranean arc, with similar constructions identified in lake regions and deltas.

The barraca de los Aranda, as it is known, is probably the oldest by the lagoon. The outer walls of this barraca were built in adobe and cob, while the interior mud-rendered reed walls were limewashed. The original timber showed marks made by the log drivers who had guided it floating down the river Turia from the mountainous areas with supplied the city of Valencia. Evidence suggests that this was a barraca with a rounded end at the back, an arrangement which was designed to improve resistance to wind. This rounding was sawn off when the streets of El Palmar were formalized and it became a flat façade with an entrance. Prior to the conservation process the barraca was in a deplorable state of conservation. The thatch had partially slid down on both sides, leaving the ridge exposed and in turn, letting rainwater in. Part of the barraca had lost its tie beams, so that the uncontrolled thrust from the rafters caused the adobe side walls to splay out at a 75 degree incline, almost to the point of collapse. The rafters sinking on the sloping walls had flattened the roof, which looked like it was about to collapse. A severe attack of termites had emptied the constructive and structural section of most of the timber structure, even of the pegs fixing the soleplates to the walls. The barraca was in need of urgent action to avoid irreparable loss.



Building the reed layer of a traditional barraca (S.Tomás)

The conservation process began by dismantling the remains of the timber structure which had collapsed partly due to termite damage. Subsequently, the adobe walls which were at a 75 degree angle due to the thrust from the roof rafters were reinforced following the disappearance of the tie beams stabilizing the structure. This reinforcement consisted in adding a side underpinning in lime concrete and a new adobe wall on the outer side of both longitudinal walls, connecting the new and original walls so that they work jointly.

The timber structure was then assembled, adding the reed board, gypsum render, and other intermediate gypsum and cork layers in compliance with current fire regulations.

At this point, the thatch roof is yet to be completed. All the traditional processes were followed for this work – adobe production, cutting reeds, cutting thatch for the roof, making the roof board, etc. – and have been documented for the benefit both of the general public and specialists for their subsequent use in the conservation of other barracas.



The barraca under repair, once the reed layer is finished (S.Tomás)



A layer with boards added on the gypsum rendering applied on the reed layer, before the thatching (S.Tomás)



Vernacular Heritage of Utiel. A Walk Through Wine Culture

Yolanda Hernández Navarro and Pasquale de Dato
Universitat Politècnica de València

On 18 September 2022, as part of the International Conference "Heritage 2022: culture, people and sustainability" a technical visit was carried out to view the tangible and intangible heritage of the winemaking culture of Utiel (Valencia, Spain).

This was the closing activity for "WEDoVer 2022_Utiel underground", a workshop for the enhancement and documentation of vernacular heritage held in the city between 22 August and 3 September, the results of which were presented at the "Intangible and Built Vernacular Heritage. CIAV – ICICH Joint meeting" held on 15 September.

The coordinators of the activity, Pasquale de Dato and Yolanda Hernández Navarro, accompanied

by members of the cultural association La Serratilla, with an interest in local culture, guided a group of professionals and members of different ICOMOS international committees (CIAV, ICICH, IFLA, ISCEAH).

The tour consisted of a visit to different types of cellars: a fermentation cellar, a community cellar, and an ancestral house. This itinerary made it possible to view the imprints left by winemaking culture in the architecture and urban development of the city.

The route emphasized two different approaches. The first provides a theoretical explanation of the production of wine from the moment the grapes are unloaded to the point when the wine is sold, while the second reviews the technical

evolutions which brought about the different types of cellars, from domestic to proto-industrial production.

As regards the first approach, participants were able to identify architectural elements relating to the winemaking process from the façades of buildings. The first element is the *descargadero*, an opening with specific measurements used to unload the grapes which arrived on carts. Once inside the building, participants encountered the first hidden space, the *trullo* or fermentation vat. This deposit, dug in the ground and covered with removable boards at a set distance from each other, allowed grapes to be deposited and trod on, so that the broken fruit fell inside the vat, where it remained for a month, while the first (alcoholic) fermentation of must took place.

Walking through the city streets, the visitors identified another façade element pointing to the presence of cellars inside buildings, the *respiraderos*, small openings with railings which guaranteed ventilation and conservation within the cellar.

Once inside each cellar, the rest of the elements and parts showing the phases of winemaking could be identified. Another opening, the *canillero*, connects the *trullo* with a small deposit for pouring off, the *trulleto* or smaller fermentation vat, going along the distribution channels made of tile, brick, timber and gypsum. Through gravity this finally takes the wine to maceration and conservation vessels or *tinajas*, highly characteristic and representative of the locality. The visit allowed participants to rediscover the marks carved on the cellar walls, reminders of the accounting linked to the activity. Equally, the processes for the maintenance and cleaning of the *tinajas* specifically, and of the cellars overall, were illustrated. Each element and detail provides information, not just about the associated architectural spaces, but also about the trades linked to agricultural activity, which have now disappeared or are at serious risk of disappearance (potters, tinsmiths, coopers, wineskin makers, joiners, master builders, etc.).

As regards the second approach, visitors have been able to gain first-hand knowledge of the cellars from a historical and technical perspective, in order to understand how socioeconomic circumstances and technological progress have led to the modification and development of other types of cellar with greater storage capacity. The first to appear were underground ones like the fermentation cellars followed



"Rosario y Nicolás" cellar



"Los Bagues" cellar



"La Taberna" cellar



Fermentation cellar

semi-buried ones, like Bodega Redonda. Both typologies now deviate from the artisanal aspect, moving towards proto-industrial production, characteristic of the late 19th century and the 20th century.

The morning tour focusing on material and immaterial heritage was completed with an intangible experience. First, the gardens of the old ancestral house, “Casa Don Ángel”, which is still in use today as a family cellar, Vera de Estenas, with views over a landscape of vineyards, offered the perfect setting for tasting local dishes marinated with wines from the cellar. This experience in Vera de Estenas continued after the meal with an activity for harvest and

Local gastronomy sampling in the gardens of the Vera de Estenas cellar



grape treading, the first step in traditional wine production. This activity was a pleasant surprise for the participants, heightening their sense of touch when treading bunches of grapes barefoot.

This was followed by a tour around the cellar to understand how the production process has been mechanized and how they are going back to the fermentation and conservation of wine in old tinajas. A tasting session showed how these wines preserve smells intact, untainted by the oak from common barrels. This discovery was a surprise to everyone and allowed them to enjoy wine not just through taste, but also through smell.

Harvest



To end the visit, and aiming to showcase another artisanal process very closely linked to the place, in the afternoon we travelled to the almázar or press, current municipal museum of honey and wax. Inside it preserves a large number of elements related to the traditional beekeeping in the region, like a press for extracting wax, cork beehives, large pots for making sweets, etc. All this is evidence of part of an intangible culture based on human sustainable development in its natural environment. Once again, the experience ended delighting the sense of taste and trying the traditional alajú, a typical sweet from the Utiel-Requena region made with honey and other ingredients.



Virtual visit of the “Rosario y Nicolás” cellar



Grape treading

Visit to the almázar





WEDOVER 2022_ UTIEL UNDERGROUND Workshop for Enhancement and Documentation of Excavated Traditional cellars

Yolanda Hernández Navarro & Pasquale de Dato
Universitat Politècnica de València

1. Introduction

The name of the village of Utiel, in the province of Valencia, has long been associated with wine production, not only due to the “recent” Utiel-Requena Denomination of Origin which reflects the quality of these wines, but also due to a series of characteristic aspects relating to its identity, culture, landscape and, of course, architecture. As early as 1387 Utiel was recorded as having houses with underground cellars, initially taking advantage of medieval defensive tunnels and galleries (Martínez Martínez, 1985) while the specific excavation within the walled complex showed the existence of these in the mid-16th century (Ballesteros Viana, 1988).

In the second half of the 18th century the French wine crisis led to an increase in wine demand in Utiel. This brought about the mass construction of new cellars in the dwellings of the outskirts and an increase in the capacity of the cellars of the historic centre.

From the mid-19th to the early 20th century the addition of the railway line connecting Utiel with the port of Valencia and the opening of carretera de las Cabrillas, which connected it to Madrid and Valencia, resulted in a new and considerable increase in the demand for wine and major changes in society and wine production.

More modern and efficient overground cellars gradually replaced the excavated cellars which were abandoned or buried like tips. In addition, traditional trades linked to wine (coopers, barrel vendors, wine barrel vendors, builders, potters, woodcutters, wine producers...) and traditional forms of construction of housing and neighbourhoods were also lost.

In the last few years the interest in rediscovering roots and traditions linked to wine have triggered a series of historical-scientific activities and studies aiming to learn about, document, and protect this vernacular heritage and its intangible connotations in order to restore the broken link between the population and their heritage.

This is the context for the first edition of the WEDoVer international workshop, “Utiel Underground”, held in Utiel from 22 August to 11 September 2022.

2. Objectives, methodology and results of WEDoVer

Recent research by the architects Yolanda Hernández Navarro and Pasquale de Dato from Universitat Politècnica de València, authors of this article, highlights the relationship between the planning and excavation of underground cellars and the construction of homes on the surface in terms of optimization of efforts, resources, and the typical materials of rural and traditional architecture.

One of the activities included in this research was the International Workshop for the Documentation and Valorization of Vernacular Heritage (WEDoVer) which takes inspiration from the Ademuz Workshops held by Universidad Politècnica de Valencia and Vernadoc, organized by Helsinki University of Technology (now Aalto University).

2.1. Objectives

The aim of this workshop is to document and valorize a selection of traditional excavated cellars, both within and outside the city walls, moving away from romantic interpretations towards as scientific an approach as possible.

The different locations were selected for the comparison of two different interpretations of cellars: in some cases, making use of existing spaces and in others as a planned excavation for the development of economic activity and construction of housing.

In parallel with this, another aim geared towards the local population - as guardians of their heritage - is to raise awareness on the value of this hidden and abandoned heritage, in order to elicit its appreciation and conservation, saving it from destruction.

As regards the first objective, the professional and personal backgrounds of the authors, involved in the documentation and protection of architectural heritage in general and vernacular in particular, are behind the need for documentation in order to gather knowledge. Scientific and architectural evidence must go hand in hand with historical research, although this relationship must not be of dependence simply for corroboration, but be willing to confirm or refute when necessary.

The documentation and valorization process has resorted to both traditional methods and new technologies as there should be no conflict between them. The almost intimate correlation between an “unplugged” manual documentation process, face to face with the building and its spaces, results in a level of knowledge and sensory understanding of these spaces which would be hard to match using precision machines (Pejkovic, 2021). This belief is firmly held by the developers of WEDoVer. However, they also believe that at present in order for the valorization of heritage and dissemination of its values to reach the younger generations it is necessary to speak their language, a modern one. Therefore, the presentation of the manual work carried out in the workshop was complemented with the digital promotion of the interior of the cellars, which are often unavailable to the general public due to issues relating to ownership and physical inaccessibility.

The second objective, raising awareness among the local population, requires professionals and students from different international backgrounds to show interest in this everyday heritage of the average citizens, of their parents, grandparents and ancestors. This is because not only monumental but also vernacular heritage is closely tied to the value of cultural identity, history, antiquity, and sustainability values of the population. It is necessary to teach the local population, actively involving them in the research process, either directly and/or with the mediation of public administration and local associations (ICOMOS, 1999). It is also important to set an example: a largely practical workshop like WEDoVer provides the perfect opportunity

to elicit the curiosity, active participation, and tangible experience needed for the population to form a reattachment to heritage (de Dato, 2020).

2.2. Methodology

The basic methodology followed by WEDoVer simplifies the work without unnecessary complications within inherently complex settings such as the organic space of cellars excavated in the ground. In addition, it steers clear of ideological fundamentalism and methodological purism.

Therefore, if the theory is difficult to apply in a specific context then flexibility and persistence become necessary in order to guarantee progress. This is why in this methodology traditional techniques are combined with new (and not-so-new) technologies.

The work process for WEDoVer has three phases. Firstly, onsite work, is the direct observation and recording of the study subject through sketches and outlines in pencil with annotations and measurements helping determine the form, proportions of spaces, material, and constructive and functional features of individual cases.

Greater importance is attached to the faithful representation of construction and geometry than to measurements as these are spontaneous geometries resulting from the presence or absence of material which can be excavated.

Nevertheless, these highly organic forms have been recorded using Cartesian triangulation measurement systems. This manual work was completed with general and detailed photographs which have been lit suitably beforehand as the subject of study receives practically no natural daylight.



Students drawing and measuring the interior of the cellars (authors)



Students working in the survey (authors)

The second work phase, "in studio", refers back to the survey of the first phase through dihedral system representations with plans, elevations and sections to scale, and occasionally axonometric representations given their neutral and descriptive nature. In this phase the drawing process provided an objective and technical representation of reality, first developing the general geometry. Attention then focused on the faithful representation of the materials, constructive techniques, and degradation observed (texturing process).

Finally, a shadowing process was followed to facilitate the understanding of space and allow depths to be distinguished. In addition, this was all done freehand to produce a graphic expression more in keeping with the space as opposed to the rigidity which rulers and squares bring to drawings of vernacular architecture.

The third phase, which completes the manual documentation work, consisted in the creation of a geolocalized virtual tour for remote visits to the cellars. This approach manages to overcome the architectural barriers inherent to excavated architecture and the availability barriers of private assets. It must be remembered that most homes are occupied and cellars are accessed from inside.

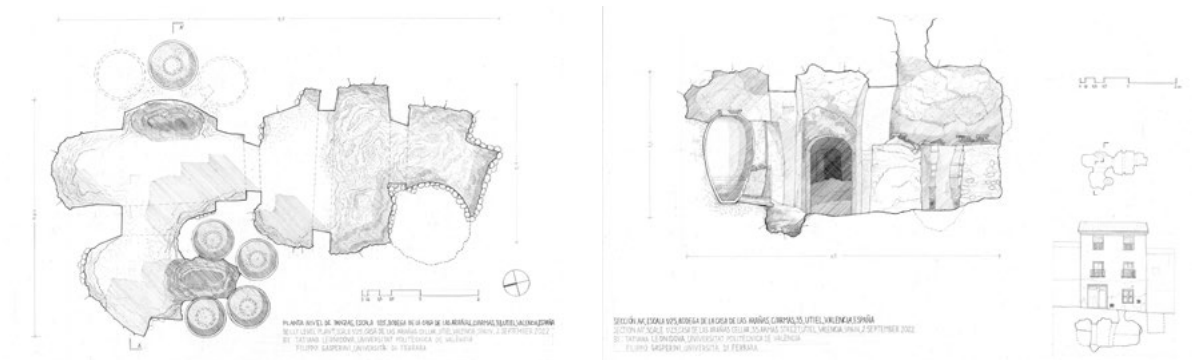
This virtual tour also helps to prepare and stimulate the traditional visitor and/or offer a sufficiently realistic visit to those unable to visit in person. The survey with a spherical camera and postproduction in a digital tour are made available to the public with a QR code for use with mobile devices or computers. This aspect is very important for the dissemination of knowledge of this heritage.

Results

In addition to the workshop techniques and processes the aspect of human value should also be noted. For two weeks a group of sixteen participants from different countries, mostly students, have experienced and shared unforgettable moments while discovering a hidden heritage of which they had little or no knowledge. Participants also interacted with the local population, associations, and institutions, establishing emotional ties as a basis for awareness and visibilization of this heritage.

The work of participants, individually and in groups, resulted in the documentation of the six least-studied private cellars, producing twenty-four pencil drawings to a sufficient scale for the representation of spaces and the inclusion of material, constructive, and degradation details. This observation and documentation have also made it possible to advance and confirm hypotheses in the study of the underground cellars in Utiel, clearly identifying different typologies and periods of construction.

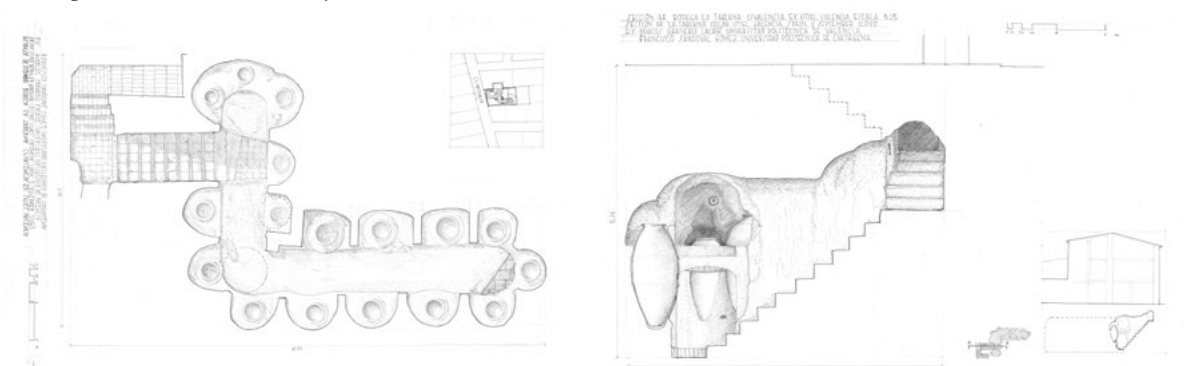
The exchange of information and results of the documentation process have promoted knowledge of this heritage, both technical and historical, to the benefit of the community. The documentation was followed by a public exhibition of the drawings produced in the workshop for the local population, with the WEDoVer team, teachers and students alike, presenting and explaining the work and results. The same presentation, focusing always on dissemination and valorization, was given as part of the Heritage 2022 International Conference at Universidad Politècnica de Valencia in September 2022.



Drawings of the "las Arañas" cellar done by Tatiana Leonidova and Filippo Gasperini



Drawings of "el Pollo" cellar done by Clara Sánchez Aviñó and Giordano Ocelli



Drawings of "la Taberna" cellar done by Francisco Sandoval Gómez and Marcos Granero Lacruz

The keen interest expressed by the population and the positive reaction from authorities, cellar owners, and participants in the workshop was the finishing touch to the organization of this workshop which it is hoped will be repeated.

For now, and for the benefit of the research and documentation of cellars which is already underway, the workshops will focus on underground Utiel. However, there is nothing to prevent the scale of this model being adapted, along with other past ones, to other cultural settings, both near and far from Utiel.

3.Conclusion

The underground cellars of Utiel are the earliest evidence of the preindustrial commercialization of wine. The winemaking culture of Utiel has been highly influential in environmental,

social, and economic terms. It has shaped the territory with extensive vineyards; it has guided the growth of the historic town centre; shaped the city both overground (chambers for drying grapes) and underground (cellars); promoted specialization and the creation of new trades; promoted the association of guilds into cooperatives; and produced a glossary of specific terms, many of which live on in the elements and parts into which a cellar is organized.

The documentation of the excavated cellars does not only show the morphology, materials, constructive techniques used and state of conservation. It also revives the traditional winemaking and conservation process. The underground cellars of Utiel can be said to be of great ethnological value, with many other values stemming from this: there are

tangible aspects which provide data on their age, authenticity, techniques, and materials used in their construction, as well as intangible ones such as the traditional winemaking process and all the trades – no longer existing – linked to this process.

However, the presence of excavated cellars also helps to understand the evolution in the constructive practices of buildings. A detailed study of overground buildings has shown the chronology of constructive phases based on constructive techniques and material used, ranging from rammed earth walls (using earth from the excavation of the cellar, until the mid-19th century) and masonry walls (limestone ploughed from the vineyards, from the mid-19th century).

Based on the study carried out guidelines can be set for the recovery of the excavated cellars of Utiel. There is no reason to limit this to the material consolidation and recovery of the spaces which had been filled in; this conservation should be extended to objects, instruments, and equipment that the community recognizes as characteristic of these locations, as well as working towards recovering related specific skills, competences, and knowledge.

From the outset, choosing the workshop methodology meant anticipating difficulties in its development. The tools used combined the more traditional options such as pencil, paper, tape measure, cord and plumb with other more current ones such as laser distance meters, laser level, digital camera, and spherical camera. However, hand measurements and drawings are techniques which are not taught much in architecture and to which students, especially newer ones, are not used.

However, risk of rejection and objective difficulties were overcome through the willpower of the participants who understood the benefits of the manual experience. Among other things, this allows them to understand scale in relation to individual bodies; to acquire and integrate tactile and intellectual information observing and understanding the operation of the building systems and surfaces, patiently representing constructive materials and techniques. These techniques, combined with the vertical or horizontal reference provided by a laser level or spatial digitalization have made it clear that tradition and modernity can be complementary in a common cause such as the documentation, protection, and valorization of heritage.

4.Acknowledgements

This workshop would not have been possible without the efforts of the local community. Utiel Town Council, who from the very beginning has believed in the project despite all the doubts associated with a first edition, has been vital in the investment of resources and logistics required by a workshop. In addition, the local cultural associations which have long been investing time and effort to grant visibility to their heritage have carried out impeccable work. Among these we would especially like to thank La Serratilla Cultural Association which voluntarily continues to promote these activities in defence of heritage and which has provided studies and made the social interactions in the workshop enjoyable. And finally, we would like to thank the residents of Utiel in general, who have literally opened their doors to admirably welcome some foreigners into their homes.

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Virtual visit to one of the studied cellars

Recommended Book/Publication

Introduction to Modern Western Vernacular Architecture.



Language: Chinese
Author: Pan Yue
Publisher: Tongji University Press
Book Number: ISBN 9787576500028
Contact: There is no E-version, if you want to purchase, please contact the press.

This book, which is rooted in vernacular context, opening with the architectural evolution of Enlightenment and Industrial Revolution of Europe (18th -19th century), seeks to retrospect the art and architecture events, figures, and their impact under the vernacular category and context, and discusses the related Western architecture theories and their semantic gradation, including re-analysis of historic discourse such as Romantic picturesque, Gothic craftsmanship and the Arts and Crafts Movement, etc. and summary and development to the vernacular elements in the early period of Modernism in a creative perspective.

Contents

This book contains two Parts.

Part I, including chapters 1 to 3, seeks to review the origin and evolution of the vernacular in the West as a modern concept.

Chapter 1 Introduction

In chapter 1, the author outlines the generation of the concept of modern western vernacular architecture and reviews the representative literature, research purports, and differentiation of discipline. The author is also concerned with the problem consciousness and perspectives of Western researchers and presents the research framework adopted in this book.

Chapter 2 Theoretical Background of Modern Western Vernacular Architecture

In chapter 2, starting from the perspective of exploring the reasons for the conversion of the early vernacular doctrine, the author makes a study on the relationship between the vernacular doctrine and the nation-state.

After this, the author discusses the value orientation of landscape aesthetics from the perspective of the vernacular and cultural landscape, integrates the representative figures and theories of Europe, and summarizes the core ideas and types of theories of early Western modern vernacular architecture. At the end of this chapter.

Chapter 3 Theoretical System of Modern Western Vernacular Architecture

This chapter taking from the relationship between vernacular and modernity analyzes the resistance and enlightenment of the Arts and Crafts Movement and Art Nouveau Movement to the vernacular, aiming at the impact of modernity of enlightenment and the industrial revolution on traditional vernacular architecture. And then through the deep cultivation of the existing core theories of vernacular architecture, the author put forwards several important points.

Part II consists of chapter 4, chapter 5, and conclusion. This part takes the discourse of modern heritage conservation as the main line to further develop the thinking method of the conservation and inheritance of vernacular architecture.

Chapter 4 Practical Significance of Modern Western Vernacular Architecture Theories

In this chapter, the author summarizes the relevant theories of built vernacular heritage in the context of international conservation, pinpoints the importance of discussion in combination with the related architectural conservation practices in the past, and then analyzes the connotation of Cultural Landscape in the discourse of heritage.

Chapter 5 Local Reflection and Practice of Western Vernacular Architecture Theory

Based on the differences between the research of Chinese vernacular architecture and the international contexts, the author briefly reviews the existed research on dwellings and introduces the relationship between the dialects in different areas and the study of vernacular architecture pedigree based on Cultural Geography. From the context distinction between Chinese vernacular architecture and Western vernacular architecture, this chapter discusses the similarities and differences between the traditional settlement of the peasant society originating from the Chinese Patriarchal Clan System and the Western rural settlement. Through the field investigation of the Enning Road of Guangzhou on the spot, the author analyzes the practice of the built heritage and preliminarily discusses the significance of the preservation and sustainability experiments of Chinese vernacular architecture heritage.

Conclusion

In the last chapter, the author summarizes the research conclusion and exploration efforts of this book from three aspects: Taking the evidence-based study as the foundation, this book explores the historical facts of the evolution of the vernacular and preliminarily sorts out the western vernacular architecture theories and literature of practice; Taking the problems and approaches of contemporary vernacular as the problem consciousness, this book interprets and broadens value cognition and conservation strategies; Take the international vision as the breakthrough point, this book tries to analyze the problems of preservation and sustainability of Chinese vernacular architecture heritage in the context of a comparison between China and foreign countries, and prospects to the value and preservation of the vernacular architecture in the future.



The Vernacular Houses and Semi-open Spaces of the Lebanese Mountains

Lara Maalouf



Lara Maalouf

ICOMOS Lebanon

lara.mlf@outlook.com

Lara Maalouf is a Conservation Architect and Museologist. Her work and research focus on the interconnections between built heritage, landscape and people, as well as on the participatory revitalisation of heritage places and know-how.

1.Introduction

A distinctive architecture has evolved in the Lebanese mountains rising between the Mediterranean Sea and the sunny plains inland. These deep valleys and high peaks are home to communities of particular socio-economic character who have produced a strong Lebanese expression of vernacular architecture.

The Lebanese vernacular residential architecture blends organically into the landscape. This integration is often achieved through an architectural element connecting interior and exterior areas: the semi-open spaces. Widely incorporated into the vernacular houses, these spaces respond to social, environmental and architectural needs, defining the typological identities of these houses. Varied in form, construction material, orientation, function, and connection with other open and closed spaces, the semi-open spaces were key in the inhabitants' daily lives, activities, and gatherings.

This article provides a brief overview of the vernacular residential architecture in the Lebanese mountains and analyses the functional, social and environmental roles of their semi-open spaces.

2.Overview of the Lebanese mountains' vernacular house

2.1 Context

The vernacular houses in the Lebanese mountains are the product of generations of peasants interacting with their geographical and environmental setting, employing ancestral knowledge of construction and land use, and using available materials to create dwellings that meet their social and economic needs.

2.2 Settlement pattern

In the Lebanese mountainous villages, vernacular houses are dispersed and arranged in detached settlement patterns benefitting from maximal daylight penetration and wind circulation. They blend harmoniously into the landscape, creating a rhythm of mass and void that does not mask the topographic relief of the steep slopes. This harmony was rarely disturbed by an imposing structure. On the contrary, the uniform scale and the pure rectilinear form of the houses testify to a social balance and a thorough understanding of the landscape. The use of natural stones complements this harmony of colours and textures.

The steep slopes of the mountains encouraged the practice of terraces and multi-storey terraced constructions. In many cases, construction was done in stages, where the upper floor is added once the need arose. The orientation was dictated by the topography and climatic conditions, but it was also directed towards the view. Hence, the village fabric followed a radial array on the slopes, opening towards the valley or the sea.

The volume of the ground floor is often massive and heavy, well grounded and backed into the hill, contrasting with the volume of the upper floor, detached on four sides, slender, fine, and frequently incorporating semi-open spaces that bring lightness and transparency to the landscape.

2.3 Form and function

The elementary form of the Lebanese mountain vernacular house is a closed, compact, monocellular volume, built with massive stone masonry walls and a flat earth-covered roof (Fig 1). This volume housed the living and working areas, the storage fixtures and the stable.

Pillars and arcades were added to enlarge the house's size and divide the interior space. When

numerous subdivisions were created, or when several volumes were placed next to each other, the connection between the different rooms was via semi-open spaces built on the access side (Fig 2,3).

Given the topography, the addition of an upper floor was a practical solution to separate the living and service areas, especially where the ground floor is vaulted. The two-storey structure



Fig.1 Typical closed one-storey house embedded in the Lebanese mountains landscape. © Joe Kallas



Fig.2 Arched gallery on top of a closed rectangular floor rising on a tree-lined terrace. © Joe Kallas



Fig.3 Symmetrical layout of a gallery house in ruins, seen from above. © Joe Kallas

greatly impacted the dweller's everyday life. The upper floor living area benefited from better security and privacy conditions and the possibility of opening on all four sides.

Different spatial articulations are found in the vernacular houses of the Lebanese mountains, resulting from various scenarios of arranging closed rectangular and semi-open spaces according to the site features and the inhabitants' needs. As this residential architectural language evolved, the semi-open distribution space gained a lot of importance and became the central space of the Lebanese habitat. Flanked by rooms on two or three sides - the valley side was always kept open - it paved the way to the central hall house, iconic to the country and known as the Lebanese or Beirut House.

2.4 Construction techniques

As previously stated, the Lebanese masons demonstrated a strong mastery of stone construction, owing to the abundance of high-quality limestones in the Lebanese mountains. The vernacular houses usually have double-layered dry stone masonry bearing walls, 60 to 100 cm thick. Occasional examples of single-layered walls and lime-based mortar can be found.

The roofs were flat, either vaulted or composed of an earth-covered wooden structure, 30 to 50 cm thick. Large logs were embedded in the walls supporting layers of twigs or reeds matting, on which is pressed a layer of moist earth mixed with thorny brushes and protected by a lime mixture. These roofs needed maintenance and rolling constantly, particularly after dry months. Unless interior supports - such as stone pillars or wooden posts resting on stone bases - were installed, the size of the space was governed by the length of the wood logs.

Given the perishable nature of wood and the scarcity of good-quality long logs, Lebanese builders sought solutions using stone. Arches replaced the beam-and-pillar systems, and vaults replaced the wood structure systems, creating more pleasing interiors. When erected on vaulted basements, the upper floors benefited from greater flexibility in the partitioning of living spaces. They were typically covered with flat earth and wood structures.

Today, most flat earth roofs are either covered or replaced with concrete slabs or hip roofs made

of timber trusses and red terracotta tiles.

Although openings were typically rectangular, decorative arches were commonly used. Most windows faced the valley, and small openings just below the ceiling allowed for continuous ventilation. Before the widespread use of glass in the mid-nineteenth century, windows and small openings were closed with wooden shutters during the winter.

3.The Semi-open spaces

Lebanese vernacular houses are classified in the literature as closed rectangular houses, gallery houses, liwan houses and central hall houses. The determining element of these typologies is the semi-open space - knowing that the central hall was not closed before the mid-nineteenth century. The evolution and variety of house forms thus result from the Lebanese dwellers' desire and need to create a covered space outside.

3.1 Morphology

The various forms of semi-open and open spaces listed below were simultaneously adopted in the Lebanese vernacular houses. The choice was influenced by economic and safety factors, construction techniques, site conditions, and, of course, the inhabitants' tastes.

Semi-open spaces

-Deciduous trees or wood frames supporting deciduous vines placed on a paved surface in front of the entrance door or on the roof(Fig 4).

-Temporary wood and fabric shelters installed in the summertime, near the entrance or on the roof.

-Vaults kept open at ground floor level(Fig 5).

-Arched porches defined by the extension of barrel vaults to the outside.



Fig.4 Vaulted room at ground level opens to a pergola-covered space amid tree-lined agricultural terraces. © Lara Maalouf

-Galleries or Riwaq, covered spaces opening to the exterior via a series of supports: arcades or rows of wooden posts or stone pillars(Fig 6).

-Liwan, covered spaces opening to the exterior on their short side via a large arch and flanked by rooms on two other perpendicular sides(Fig 7).

Open spaces

Inner courtyards are uncommon in vernacular houses of the Lebanese mountains. These houses are usually accessible immediately from the open terrain(Fig 8).

The steep profile of valleys and hills makes outdoor courtyards and enclosures impractical and vain. Even if an enclosure is envisioned, it is typically open to the side of the valley, thus transformed into an open terrace. These terraces, which are sometimes extended and supported by retaining walls, harmoniously blend into the landscape humanized by agricultural terraces.

3.2 Function

For the majority of the day and year, Lebanese peasants spent their time outside. It is where water was available and where they cooked, worked and did the laundry. The outdoor space also acted as the reception area. During summer, they would also use their flat roofs as places to rest and to prepare food provisions and dry fruits, grains, and vegetables(Fig 9).

The houses were expanded and semi-open spaces were purposefully incorporated into the layout to accommodate numerous needs rather than just one function.

The semi-open spaces extended the living area, served as circulation and distribution spaces and as transitional areas between indoors and outdoors. They host household and agricultural activities and were used as social gathering spaces and common living spaces for the family. During the hot days and nights, peasants would even sleep outside, in the covered semi-open spaces.

3.3 Climate mitigation role

The dwellers chose where to settle outside and where to erect a protective structure - hence a semi-open space - based on the orientation, topography, wind patterns, views, privacy requirements and socio-cultural factors.

These carefully placed spaces acted as microclimate regulators, reducing exposure



Fig.5 Semi-open arched space at ground level of a two-storey vernacular house in a Lebanese mountain village. © Lara Maalouf

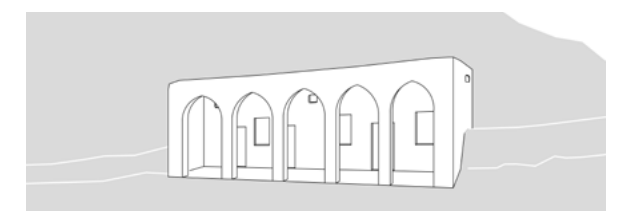


Fig.6 Galleries or Riwaq model © Lara Maalouf

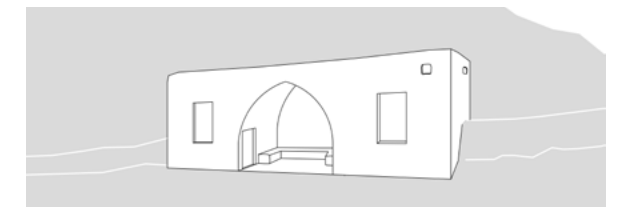


Fig.7 Liwan model © Lara Maalouf



Fig.8 Two-storey vernacular house embedded in the steep rocky slopes. © Joe Kallas



Fig.9 Scene from rural life. Circular wicker trays used to dry figs or eggplants on the houses' terraces. © Joseph Delore (1873-1944). Université Saint-Joseph collection, Beirut.

to ambient climatic conditions by providing protection from sun, rain and trapping breezes.

Deciduous trees and vines played a role in mediating climate conditions all year long, by allowing sunlight to penetrate during the cold months and providing adequate shade and cooling during the hot months.

Similarly, the porches and galleries were designed as shading elements during summer. In winter times, they shelter the house's circulation area from the rain while not obstructing solar penetration into the rear rooms given their narrow width. They improve cross-ventilation and provide adequate airflow to interior spaces.

As for the liwans and open central halls, they are well isolated as they are protected on their long sides by adjacent rooms and only open to external factors on their narrow side. They provide a comfortable living and working space throughout the year.

3.4 Aesthetic value

The harmony of extroverted and introverted elements, the connections between open, semi-open and closed spaces and the depth rendered to the beautiful views enrich the aesthetic and pleasant cachet of Lebanese vernacular houses.

Semi-open spaces add transparency to the solid, closed volumes. They articulate the relationship between the house and nature, emphasizing the topographic relief's heights and the fine views and sceneries. When a house is built in stages, the semi-open spaces bring uniformity to the whole.

Galleries, porches and liwans adorn the Lebanese vernacular houses and are frequently embellished. Arches are commonly used, mostly

pointed with a slight horseshoe extension. Circular or segmental arches are also common. Doors, windows, ventilation openings, and niches are usually arranged irregularly on the rear walls of galleries and porches. The dynamic interplay of these various shapes with the arches' shadows creates a vivid ambience that changes throughout the day.

3.5 Social significance

Vernacular houses are always tied to specific places, as a result of the authentic interaction between the people and their local environment, in terms of climate, topography and resources.

The Lebanese mountain communities have created these houses rich in extroverted semi-open spaces as an appreciation for Lebanon's mild climate and natural beauty and their sense of security, but above all, their sociability and their desire to connect with the outside and others openly yet without full exposure. Lebanese vernacular mountain houses express the particularity of the Lebanese community, open, sociable, and always looking outward.

4. Current challenges

4.1 Threats

Perhaps it is this extroverted nature of the Lebanese community – and the periods of harsh political, security, and economic conditions – that drove the Lebanese families to leave their mountain houses for cities or other countries. Many Lebanese vernacular houses have been abandoned and left to ruin.

In parallel with rural depopulation, Lebanese families who continue to live in the mountain stone houses have undoubtedly adapted their living spaces to the modern lifestyle. Most of the interventions and additions put in place do not demonstrate a thorough appreciation of the vernacular significance and characteristics of these houses. Contemporary construction methods and materials were introduced in an unplanned manner, damaging the vernacular fabric and the landscape. The vernacular heritage is undervalued by the local community and overlooked in favour of older and more imposing monuments. While locals value their built heritage, they often fail to recognize its significance due to its familiarity.

Aside from these threats to the vernacular habitat at large, what primarily threatens semi-open spaces is the trend to close these spaces

with transparent glass, and in rarer cases, massive walls. Even open terraces now have hip roofs or concrete slabs.

The Lebanese vernacular house paved the way for the central hall house, which greatly influenced buildings of the modern era in Lebanon. Balconies and terraces retained a central role in the Lebanese twentieth-century residential architecture. These semi-open spaces connected the inner rooms to the outside and offered a place of interaction with the exterior, the streets, the neighbours and the passers-by. Yet, most of them are now closed and transformed into interior living spaces.

Behind this trend is a desire to maximize interior space in a masked apprehension of its real estate value, as well as a shift in the family and societal dynamics of Lebanese communities. Lebanese people want more privacy in their homes today. The traits of openness and sociability that enabled the adoption of semi-open spaces are fading.

4.2 The way forward

The rural vernacular heritage reflects the identity of its region, not only through built forms and aesthetic models, but also through the immaterial dimensions that bear witness to the generations who passed through these places, their ways of life, visions, skills, know-how, and how they interacted with one another and with the environment. It is for this reason that residential vernacular architecture becomes representative of its locality.

To stop the loss, disfiguration and fragmentation of this heritage, we must identify and restore the social and anthropological aspects of the habitat.

The material preservation of vernacular houses is of course essential. What is urgent in Lebanon however is communication with the inhabitants and instilling in the villagers an appreciation for the values at stake, as well as an attachment and an appropriation of the complexity and plurality of significant assets within their landscape.

The stonemasonry profession is disappearing. Semi-open spaces that encompass the original inhabitant's social traits and wisdom are disfigured. To preserve this heritage, we must integrate it into the modern life of the community in such a way that local practices and lifestyles are maintained.

Vernacular habitat embodies not only geographic

and climatic solutions but social and cultural dimensions that contribute to the creation of this heritage. When these are lost, the material dimension will not be far behind.

The only way to save the large volume of vernacular habitat in the Lebanese mountains is to reconcile the community with the material and immaterial dimensions of their houses and places, as they are the custodians.

5. Conclusion

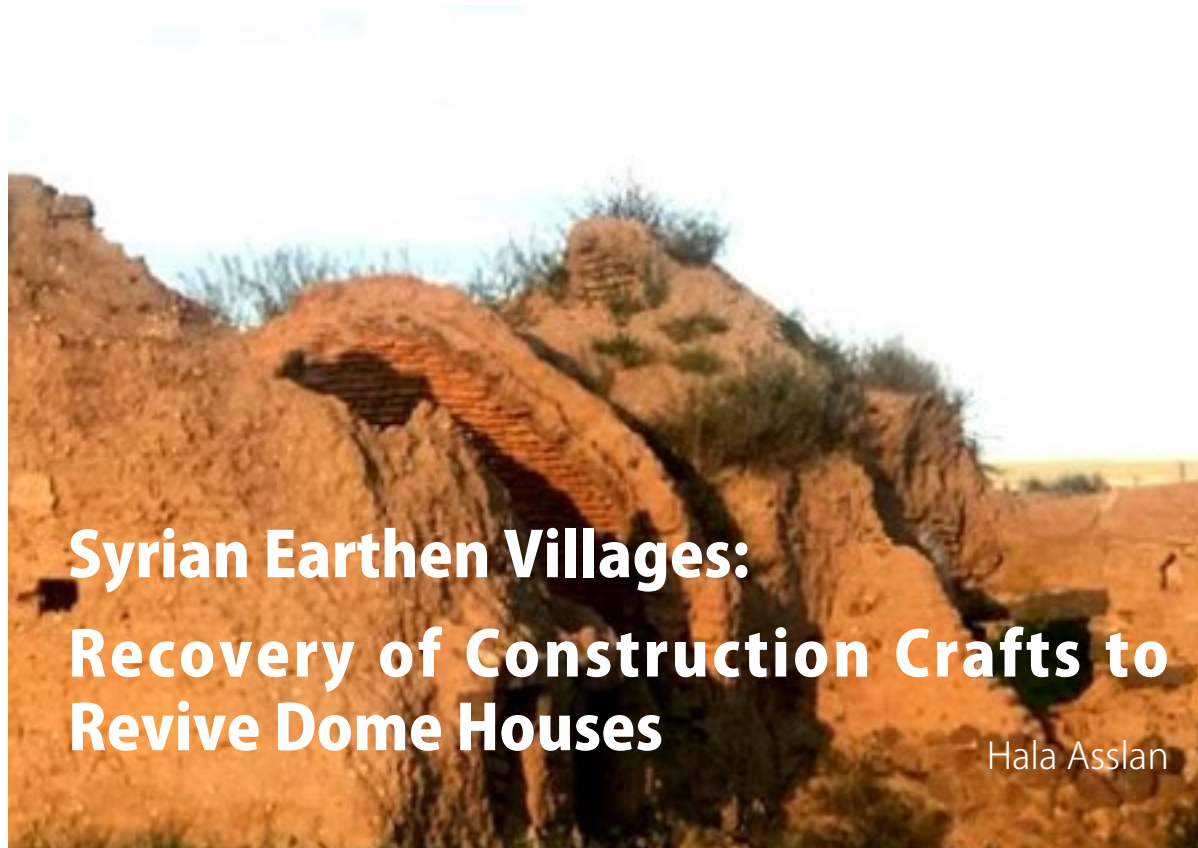
The best representation of the vernacular house of the Lebanese mountains is a closed rectangular volume, detached and isolated, pierced or flanked by open volumes that invite the exteriors inside. These semi-open spaces attest to the builders' ingenuity in finding solutions to deal with the environmental and topographic challenges, as well as their mastery of stone construction. They are also a visible manifestation of the degree of freedom and security that Lebanese peasants experienced at the time of construction, their social lifestyle and their extrovert personality.

Despite its great significance, the rural vernacular residential heritage is under threat of abandonment or inappropriate rehabilitation. Its thorough preservation is only achieved by paying particular attention to the semi-open spaces that characterize these houses, their social and environmental dimensions, as well as their intangible value.

Given the abundance of such vernacular houses in the Lebanese mountains, methods must be sought and tailored for the local communities to reconcile the contemporary lifestyle with these places in a way that respects and maintains the plurality of values represented by the vernacular houses and their surroundings.

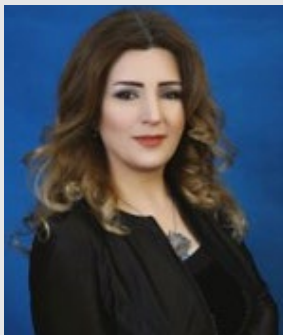
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Syrian Earthen Villages: Recovery of Construction Crafts to Revive Dome Houses

Hala Asslan



Hala Asslan

PHD architect, Cultural
Heritage Rehabilitation
Specialist,

Expert member of ICOMOS-
CIAV and CIVIH

ICOMOS GA2023 Ambassador

halaasslan2004@yahoo.fr

+963-999148300

<http://www.icomosga2023.org> (Fig 1,2).

In Syria, The use of mud in construction, which has been widespread for thousands of years is facing the threat of extinction. This poses a risk to a part of the memory and identity of a society that is deeply rooted in history. In the second decade of the third millennium, the Syrian mud architecture is facing the danger of extinction after it was the dominant architectural model. This is due to three main types of threats :

The first one lies in the social changes that took place before the outbreak of the Syrian war in 2011. Moreover, it is a result of the negative impact of globalization and modernity that struck all societies. This created fundamental identity crises that manifested in the lack of appreciation of the people living in this style of construction, as they feel ashamed because they live in such houses. This is mainly due to the association between mud houses and poverty. It is also their desire to adopt concrete modernity, which is viewed as a symbol of success and social prosperity, some Negative prejudices concerning mud houses could be mentioned, among all classes of society, such as:



Fig.1, 2 The image of the Sydney Opera House is used under licence from the Sydney Opera House Trust. ©The author

"mud houses are not suitable for rainy climates, as they do not withstand water",

"mud houses need constant maintenance, especially in winter",

"These are the houses of the poor!" ... etc

The second type of threat is the direct consequences of the war on the local community, mainly immigration that took place due to lack of safety.

The third type has to do with the continuation of the war. A large number of men left the country to find work elsewhere. They often work as construction workers in neighboring countries. There they are introduced to different concepts of housing,... This will change their relationship with their traditional homes, leaving them dissatisfied with their old way of life. This

threatens the tangible and intangible heritage of local architecture. The traditional building rituals are usually passed down through the generations: from grandparents to sons and grandsons and so on. But due to war and displacement, Syrian young adults who have come of age are left without any personal knowledge or experience with traditional architecture. This creates a major crack in the chain of transmission of traditional knowledge. To face these challenges, we need to conduct accurate documentation of the architecture and construction vocabulary of this style. This should follow three stages; the doomed houses before, during, and after the war. Then we need to contemplate the following how to reuse the mud architecture in its environment, and to evaluate its positive and negative aspects. Therefore, we decided to provide a full explanation of the building style and types of dome houses to pinpoint the architectural vocabulary of this common building style. Such as: (the courtyard, wells, plant ponds, al-qun, the stable, pigeon towers, the ghee container: "al-wawi", kitchen, Kawer, the house from the inside: decoration...)

In the past, domed houses were the typical residential building in northern Syria, until the end of the 19th century and the beginning of the 20th century. It represented the rural world on the outskirts of the city of Aleppo, but before the Syrian war, its residents had left it and turned into warehouses. In 2022, most of them turned into ghost villages.

These mud villages, whose architectural style extends for thousands of years, and are part of the Syrian identity, were not once a museum. They are a way of life, a lived life and not a festival or a temporary show, Due to their characteristics

Especially its construction mechanism is simple and any person can, with a little practice, build it himself with some help. The highest advantage is that the main building material is free or almost free, reusable even after hundreds of years, and has unlimited possibilities in terms of shaping. The house is considered harmonious with its surroundings, and stands steadfast in the face of nature's factors such as rain, snow, heat and cold, despite its "soft" appearance.

Dome houses future

Clay building techniques have developed extremely in many parts of the world, at the time they were dying in our country. The many research concerned with the subject have come up with a wide range of solutions to traditional mud problems. Architects and engineers in all their specializations had a role in developing this type of building to be able to meet contemporary needs and requirements.

For example, the Morocco Pavilion at Expo 2020 Dubai in the "Sustainability" section was built

using traditional rammed mud techniques in Morocco, a facade of 4000 m² and a height of 33 m (Fig 3). It will be converted into a residential building at the end of the Expo..... Which can be considered a strong message to us and to the whole world about the need to benefit from the natural environmental resources.

Conclusions

After more than a decade of the Syrian war, with the wheel of reconstruction turning slowly and in specific locations only for many considerations, which we are not going to discuss here, attention must be paid to the necessity of avoiding the mistakes of the past and avoiding the wrong policies that led to the growth of cities at the expense of the countryside and working on balanced development (City and Country, Modernism and Traditional Historical Architecture). We must work to develop this architectural model to suit the requirements of the times and lifestyle in the twenty-first century.

Working on offering concessional loans

(short, mid, and long term loans) for locals to facilitate their settling back in their traditional environment. Beside, empowering women due to their vital role at all levels, with regard that they are the pillars of the rural society.

Training the young generation of the local community on the building methods and traditional lifestyles, in addition to improving their educational level.

Attracting architecture and archaeology students who are interested in earthen building through workshops and training courses to learn building techniques with earth, earth bricks, rammed earth, claying with earth and limestone (calcium carbonate clay), and others (Fig 4).

In Syria, we can consider the destruction caused by the war as an opportunity, an opportunity to re-read ourselves and our urban produces (Fig 5,6). In order to achieve Sustainable Development goals established by the UNDP through its 2030 plan, especially Goal No. 11 for sustainable cities and local communities.



Fig.4 Workshops and training courses. ©The author



Fig.5 Dome houses. ©The author



Fig.3 Expo Dubai 2020 pavillon maroc (Media, 2022). "Legacies for the future, from inspiring origins to lasting progress". ©The author



Fig.6 Dome houses. ©The author

Honorary Member

Christoph Machat, from Germany



Name Christoph Machat
Sex Male
Nationality German
Date of Birth January 18, 1946
Occupation Heritage Conservation Specialist, Retired
Major Urban and Rural Heritage Conservation and Documentation
Address Viersener Str. 4, 50733 Köln, Germany
Email cmachat@netcologne.de
Langues German, English, Romanian, French

Education Background

Master in History and Theory of Art (Academy of Fine Arts Bucharest, RO), PhD University of Köln, Germany
 Doctor honoris causa from two universities, order of cultural merit (commander) president of Romania, honorary medal “Andras Möller” ICOMOS Hungary, main price Europa Nostra, main price “Georg Dehio” Federal Government of Germany
 Honorary life membership: CIAV, Academy ICOMOS International, Association of German Conservationists, Citizen of Sighisoara (Romania), Romanian National Commission of Historic Monuments, Foundation Ars Transsylvania, honorary president Cultural Council of Transsylvanian Saxons

Experience

1972-2011 conservation work inside Governmental offices for historic monuments – Romania, since 1974 in the Bavarian, since 1980 Governmental office of the Rhineland, head department inventories.
 Numerous public or invited lectures inside CIAV conferences, at universities in Romania, Guatemala, Dominican Republic, South Africa, Germany, Moscow; since 1998 associate professor at University Babes-Bolyay Cluj/Romania

UNESCO WH reference reports on Holasovice, Czech Republic, wooden churches of Poland and of Maramures/Romania, partisan hospital Slovenia, village with fortified churches in Transsylvania/Romania; UNESCO monitoring missions to: Kosovo, Istanbul historic centre
 More than 200 publications, editor of several book series on art history and conservation, since 2010 main editor of the ICOMOS “Heritage at Risk World Reports on Monuments and Sites in Danger”

Projects

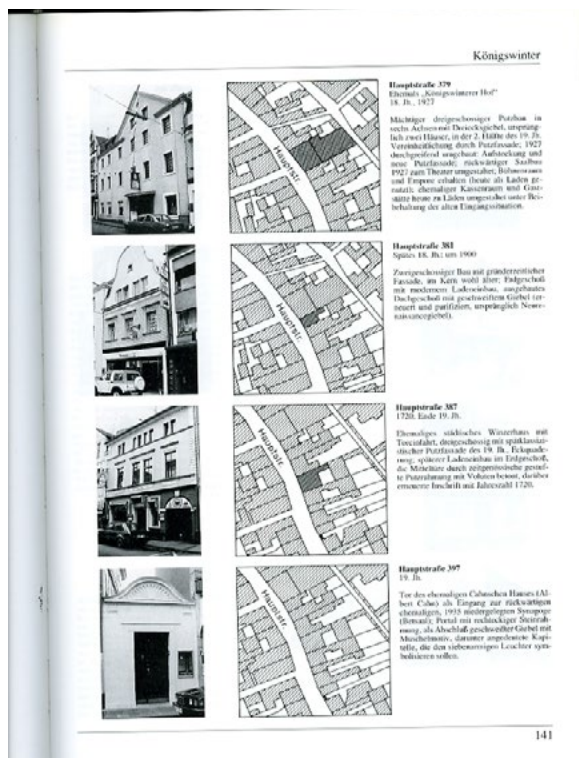
The “Charter on the Built Vernacular Heritage”
 Promoter and co-author of the doctrinal text adopted by ICOMOS in 1999, the result of continuous work of CIAV, focused on conservation in situ. Avoiding any definition it clearly explains how strong vernacular heritage is always related to the involved community. Any assessment has to take into consideration the settlement (the “smallest unit”), to reflect the traditions of the community and the strong connection with the surrounding landscape area: geology, topography, climate and vegetation, building materials and, type of occupation in relation to the traditional land-use system as part of the heritage value.
 For the practical implementation of this conservation philosophy it was planned to work out detailed regional guidelines for the different ‘vernacular areas’ of the world – which still is a demand for the future work of the committee.



denkmaltopographie koenigswinter



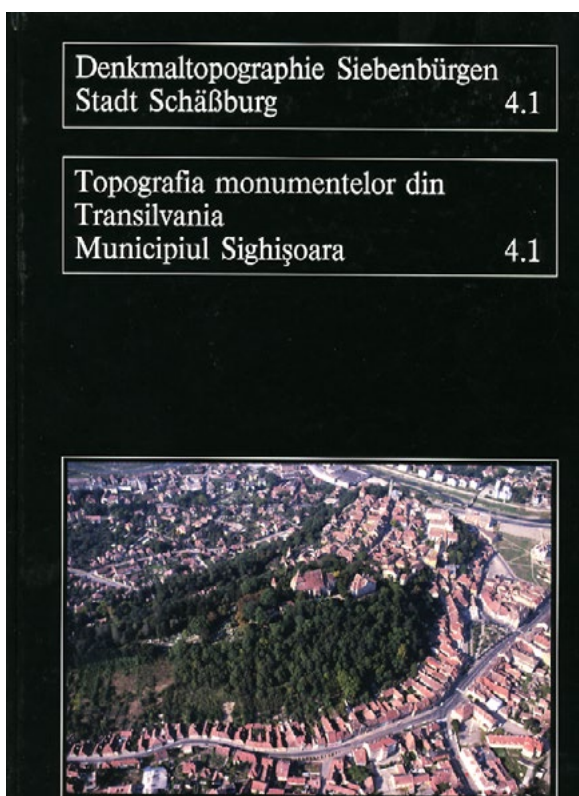
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The “Topography of Historic Monuments”

In Germany vernacular heritage had first been included in inventories of monuments in the early 20th century, but its efficient protection was guaranteed only in the early 1970s with a new legislation: In the dressed lists of protected monuments, the ‘vernacular’ covers more than a third. Since 1980 these lists started to be published, showing the actual variety of types of monuments and their historical and topographical relationship. It was and still is a very successful initiative addressed not only to the communities/owners, but to architects, planners, conservationists and to governments/decision makers... The first volume for the Rhineland 9.5. Stadt Zülptich” was published in 1988, the volume 23.5. Stadt Königswinter” in 2002 (cover on p. 53, one catalog example on p. 54 above).



topo schaessburg

The Documentation of the Saxon Heritage in Transylvania/Romania

Due to social factors and processes (e.g. the massive emigration of the Saxons from Romania 1990/91) a large part of the Saxons’ built heritage is particularly endangered, the degradation being caused by the lack of usage, regular maintenance and repair works (ex. abandoned farmhouse in Kleinschenk, p. 53). An exhaustive recording and scientific inventory of all the 247 settlements, based on my project and financed by the German Government has been implemented 1991-1998 with Romanian specialists.

The results are under publication as “Topography of Monuments in Transylvania”, the documentation was used for the nomination of the “villages with fortified churches” (on p. 55 aerial view of Biertan, photo credit Georg Gerster) and the city of Sighisoara (cover of the volume „Topography” edited in 2002, aerial view photo Georg Gerster, all the other photo credits C. Machat) for the UNESCO World Heritage List.



birthälm

New Member

Hala Asslan, from Syria



Name Hala Asslan
Sex Female
Nationality Syrian
Date of Birth March 29, 1979
Address Syria, Aleppo, B.P. 1979
Email halaasslan2004@yahoo.fr, halaasslan@bimarabia.com, halaasslan@gmail.com
Langues Arabic, French, English

Education Background

2005-2011: Ph.D in Architecture from Ecole Pratique des Hautes Etudes (EPHE) Paris with honor.
2004-2005: Master in Comparative History and Archaeology of Medieval Societies (Christian and Muslim World) from Université Lumière Lyon II –CIHIAM.
1997-2003: Bachelor's Degrees in Architectural Engineering form Tishreen University.

Experience

I was honered to be chosen as Ambassador of ICOMOSGA2023 which will be hold in Sydnye- Australia next September.
Since 2010 consultant for the International Council of Monuments & Historic Sites ICOMOS & many other international organizations.
Expert member of ICOMOS CIAV International Committee on Vernacular Architecture.
Expert member of ICOMOS CIWIH International Committee on Historic Towns and Villages.

Executive Director of al-Turath Office for Syrian Cultural Heritage.
Already I published more than 50 chapters, journals and papers in scientific congresses.

Academic Honors :
In 2019 I was awarded & honored as one of the Ten Outstanding Young People TOYP in the World as pioneer in the academic leadership & accomplishment category in Tallinn- Estonia.
I was awarded by the Arab Archaeologists Union for Scientific Excellence for Archaeological Youth in 22nd International Conference, Cairo.
Also, Winner of TOYP (Ten Outstanding Young Persons) on the national level JCI Syria Competition, on the category of Academic Leadership and Accomplishment; Damascus.
Consultant architect on conservation of built heritage, in 2018, for the Pilot Project of restoration & rehabilitation of "Souk al-Saqatiyya" in the Old City of Aleppo, World Heritage Listed 1986. The project won "The Grand Award" for the International ICCROM-Sharjah Awards for the Heritage Sites and Buildings Category, in the Arab Region 2020.
I'm working to empower rural women to preserve rural styles, traditional architecture & crafts historically associated with the landscape of the region.
My passion for the Syrian cultural heritage & my sympathy for the devastation during the crisis was motivated to contribute to its protection & safe-guarding through rehabilitation projects, participation in several scientific conferences & workshops at local & regional conferences in Syria, Iraq, Egypt, Bahrain, Lebanon, Poland & Estonia, Spain and Tunis...

Workshops & Trainings

May 2022: "QUALITY SPECIALIST COURSE", from ISO Center Of Experts, Damascus, Syria, Certificate No: ISOEXPERTS 22-593.
Jan 2022: CAPACITY BUILDING ON WORLD HERITAGE MANAGEMENTWITH SPECIAL FOCUS ON CHINA, in partnership between the World Heritage Leadership Programme (ICCROM), the International Union for Conservation of Nature (IUCN), Chinese Academy of Cultural Heritage, Norwegian Ministry of Climate and Environment; [online].
Dec 2021: PANORAMA NATURE-CULTURE WRITE-SHOP, in partnership between the International Union for Conservation of Nature (IUCN), the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) and the International Council on Monuments and Sites (ICOMOS); [online].



Speaker at TEDxAzmehStreet © TED



Egyptian Heritage Rescue Foundation; UN-ESCWA



Syrian Engineers Syndicate, Lattakia Branch; DGAM



SOUK AL-SAQQATIYA REHABILITATION PILOT PROJECT ALEPPO OLD CITY

July 2019: Training on integrated building documentation and damage assessment, based on examples from Syria (Aleppo), in collaboration between Arab Architects Organization and Museum of Islamic Art-Berlin (Syrian Heritage Archive:Aleppo Project), Beirut, Lebanon.

Oct 2017: "Disaster Risk Management and First Aid for Cultural Heritage", Egyptian Heritage Rescue Foundation.

Jan 2017: Expert group meeting on Sustainable Urban Reconstruction UN-ESCWA, Beirut, Lebanon.

Mar 2017: Institutional Arbitration in Promotion of Investments for Reconstruction "Arbitration Engineering Contracts", Syrian Engineers Syndicate, Lattakia Branch, Syria.

Sept 2016: Safeguarding and Digitization Documents and Archives in Syria, held in the framework of the Emergency Safeguarding of the Syrian Cultural Heritage project, the UNESCO Regional Bureau for Education in the Arab States and The German Archaeological Institute, Beirut, Lebanon.

2016: Scientific participation in the training course for the restoration, consolidation, rehabilitation and reconstruction of archaeological buildings held by the Homs branch of the Syndicate of Engineers, entitled: «international experiences in the reconstruction of historic cities: Warsaw, Dresden, Beirut».

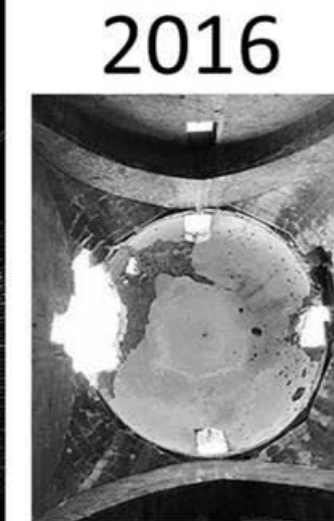
2015: Restoration, Reinforcement and Rehabilitation of Historic Buildings Syrian Engineers Syndicate, Hims Branch, Syria.

2015: The management of archaeological sites UNESCO "Emergency Safeguarding of the Syrian Cultural" - DGAM, Tartus, Syria.

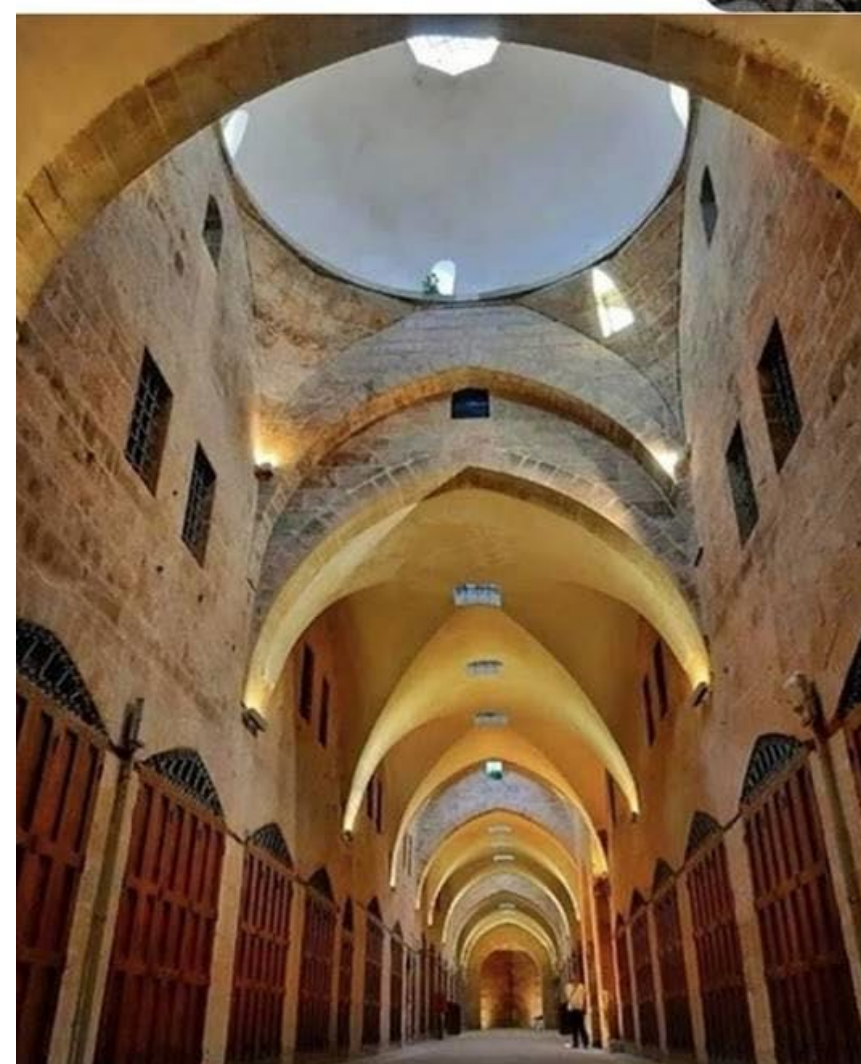
2015: Scientific participation in the conference «Palmyra, deserve our attention» held by the Syrian Ministry of Higher Education - Baath University in cooperation with the Syndicate of Engineers - Homs.

2014: Scientific participation in Ain Beida Heritage Festival, Cultural Center in Ain Beida - Syrian Ministry of Culture.

2013: Scientific participation in the workshop «Syrian architecture and its development», Faculty of Architecture - Tishreen University, Syrian Ministry of Higher Education.



Souk al-Saqqatiyya



2019



SOUK AL-SAQQATIYA REHABILITATION PILOT PROJECT ALEPPO OLD CITY