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ICOMOS
International Council on Monuments and Sites
Conseil International des Monuments et des Sites

BULLETIN

September 2026

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Message from the President

A new Bureau has been appointed, and I know that my colleagues, Nicoletta Bianchini, Radu Cazamir, Mehrdad Hejazi, Tom Morrison, Meltem Vatan and Evan Speer, are enthusiastic about the work ahead for the next three years. I also thank the members of the past Bureau, Tim Michiels, Dr. Arun Menon and Rebecca Napolitano, for the great work during the past term.

As several members of the current Bureau are in their third consecutive term, we will face challenges in replacing the Bureau. But I am sure that our committee will remain strong and active. It is certainly in our hands! The Bureau will prepare a plan to implement during this term, including revising the bylaws (a new framework was prepared by ICOMOS and will be presented in the General Assembly in Malaysia) and a new webpage, while continuing our successful actions from the past term, such as the Bulletin and the Working Groups. We thank the WG on Examples for their important deliverable, a comprehensive report available on our webpage, also featured in this Bulletin.

Our Annual General Meeting in Lisbon will be very successful, with 55 participants registered to attend in person, alongside technical visits and a public seminar to disseminate ISCARSAH's work. The seminar programme is provided on the last page of this Bulletin.

In this Bulletin, you will find information "In Memoriam of Prof. Julio Vargas", one of our leading experts who extensively contributed to the conservation of earthen structures. Julio was a great friend of mine, and we gathered across the world, including at my house in Portugal and at multiple dinners in Lima. I believe that I met Julio for the first time in 2007, when we were together at the Pisco earthquake, the Church of San Pedro de Carabayllo and very successful meetings organized by the Getty Conservation Institute. Julio was a great friend and a great person. He had a wealth of knowledge, a practical attitude towards conservation and structural engineering, an ingenious mind, and lots of humility. He will be missed.

In addition, the Bulletin has a short report on recent damage to heritage structures during the Iran war, a full-scale test on a masonry vault with supporting walls and columns, safety assessment and strengthening studies of a landmark aqueduct in Lisbon, field observation of historic timber houses in Germany, and damage from the destructive Venezuela earthquake. With a death toll of 6500 people, 40000 people missing and 20 billion USD in damage, it is impressive how our societies lack resilience despite our increasing technical and scientific awareness.

I look forward to meeting you at our annual gathering, either in person or remotely.

If you attend online the date is Saturday, October 3, 14:00-17:00 WEST (Lisbon time): https://teams.microsoft.com/meet/32083298985862?p=SuHoh8STNIVB6qTI15

Paulo B. Lourenço

NEWS

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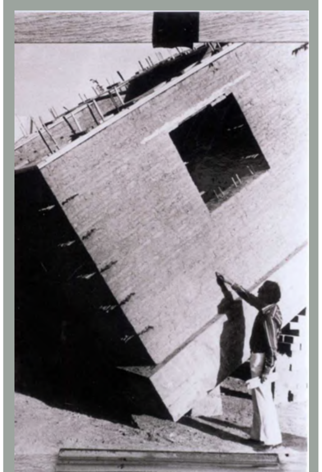
In Memoriam of Prof. Julio Vargas

Daniel Torrealva



Julio Vargas in 1975 testing a reinforced adobe dwelling on the tilt-up table

The May 31st, 1970 earthquake killed more than 50,000 people in Peru most of them due to the collapse of earthen masonry dwellings. This tragedy, prompted the need to investigate the seismic resistance of adobe buildings and was the beginning of his involvement in the topic of seismic engineering with particular attention to earthen vulnerable houses, that would last throughout its entire life.

Due to the difficulty of applying concentrated loads to a very weak material like the adobe masonry, his experimental work focused on a tilt up table where full scale adobe modules could be built and experiment the efficiency of several reinforcing techniques with natural materials. The recommendations from these tests were corroborated with seismic simulation tests after the implementation of the shaking table in the Structures Laboratory in 1984.

Julio Vargas served as Vice Minister at the Ministry of the Presidency and Vice Minister of Housing from 1985 to 1990 where he endorsed the application of the Peruvian adobe construction code in housing construction projects that need financial support from public funds.

At the international level, Julio Vargas was recognized as an early referent on the seismic reinforcement of the earthen buildings, working closely with the National Autonomous University of Mexico and the Non-Engineering Constructions Committee of the International Association of Seismic Engineering. In the field of earthen architectural heritage, he was an active member of the International Council of Monuments and Sites (ICOMOS), the Ibero-American Network of Earthen Architecture (PROTERRA), member of the International Scientific Committee of Earthen Architectural Heritage (ISCEAH) since its foundation and its President from 2015 to 2017.

Julio Vargas also devoted all his experience working closely with ICOMOS, the International Center for the Study of the Preservation and Restoration of Cultural Property (ICCROM), The Getty Conservation Institute and the International Scientific Committee of the Analysis and Restoration of Structures of Architectural Heritage (ISCARSAH).

Julio will be remembered as the first engineer with deep knowledge of seismic structural engineering who worked all his life on earth dwellings, the most used material worldwide for housing in developing countries and at the same time the most seismically vulnerable.

His colleagues and former students are deeply grieving the loss of Julio and committed to maintain its legacy by advancing in the field of reducing the seismic vulnerability of earthen structures and the preservation of the earthen architectural heritage.

Julio Vargas and collaborators after a shaking table test of an isolated and reinforced adobe dwelling

N E W S

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Conflict in Iran: Assessing Systemic Risks to Architectural Heritage

Mehrdad Hejazi
Department of Civil Engineering, University of Isfahan,
Iran ISCARSAH Expert Member

The ICOMOS AGA 2025 was held in Lumbini, Nepal between October 11 and October 19. Lumbini was inscribed on the List of World Heritage in 1997 as the birthplace of the Lord Buddha, being one of the four Following the outbreak of armed conflict in early 2026, Iran's exceptionally rich cultural landscape has faced extensive, multi-dimensional damage. Preliminary consolidated assessments by the Iranian National Commission for UNESCO and the University of Isfahan (UNESCO UNITWIN Network) reveal that as of late April 2026, more than 149 cultural sites across 18 provinces, 54 museums, and 7 registered historical contexts have been impacted. The spatial distribution of damage shows a critical concentration within high-density, historically layered metropolitan cores most notably in Tehran and Isfahan where high-value heritage assets sit in close proximity to active administrative and infrastructural nodes.

Data collected through field observations and technical documentation indicates that the damage is strongly governed by blast physics, distance attenuation, and architectural configuration. A consistent, highly concerning pattern has emerged: non-structural elements and highly refined decorative systems absorb the highest proportion of immediate damage, while primary load-bearing systems exhibit partial resilience but frequently conceal latent, progressive structural stress.

In iconic UNESCO World Heritage sites, this decoupling between structural survival and decorative vulnerability is stark. In Tehran's Golestan Palace (1865), a blast roughly 100 metres away triggered a devastating blowout of historical orsi stained-glass windows and caused the severe shattering and collapse of 18th-century mirror mosaics in the Mirror Hall and Marble Throne Hall (Figure 1). Meanwhile, in the Safavid urban core of Isfahan, multiple blast wave interactions created a complex damage field. In the Chehel Sutun Palace (1647), blast waves entered through upper window gaps, amplifying internal pressure oscillations that led to major fissuring of 17th-century frescoes and the detachment of painted plaster layers due to vibration resonance (Figure 2).

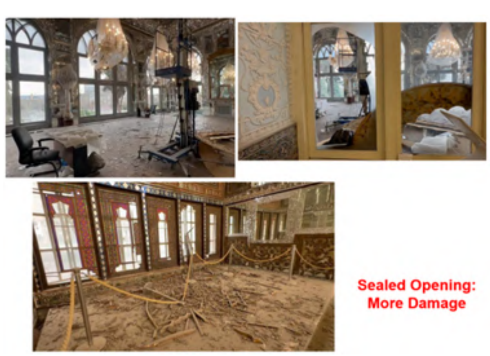

Figure1: Damage in the Golestan Palace (UNESCO) Tehran, 1865.

Figure 2: Damage in the Chehel Sutun Palace (UNESCO) Isfahan, 1647.

These case studies underscore a critical distance-configuration-damage triad: while architectural openness allows pressure dissipation, sealed architectural volumes drastically amplify destructive resonance. Ultimately, the 2026 conflict demonstrates that heritage loss in active environments cannot be evaluated through isolated incidents. It represents a systemic of disruption interconnected material, functional, and cultural networks. Moving forward, safeguarding these assets requires looking beyond visible structural damage to address latent material fatigue, immediate environmental exposure, and the urgent need for engineering-informed mitigation within integrated Disaster Risk Management Plans (DRMPs).

ERIES-REVAULTs: Building a full-scale vaulted masonry specimen for seismic testing

Chiara Calderini, Nicoletta Bianchini, Chiara Cirabisi, Chiara Ferrero,
Nuno Mendes, Paulo B. Lourenço

Predicting the seismic response of historic masonry buildings is a major challenge due to the complexity of their geometry, materials, construction details, and structural connections. Full-scale tests on systems composed of multiple interacting elements are particularly valuable for this purpose, but remain rare because of their cost and the need for large testing facilities.

In this context, the ERIES-REVAULTs - Response Evaluation of masonry VAULTs under pseudo-dynamic loadings project, supported by the Horizon Europe Engineering Research Infrastructures for European Synergies (ERIES) project, provided the opportunity to design, construct, and test a complex full-scale vaulted masonry system (Figure 1). The specimen, representative of an entire bay of the lateral nave of a generic three-nave historic masonry church, was constructed and tested at the Reaction Wall facility of the European Laboratory for Structural Assessment (ELSA) of the Joint Research Centre (JRC) in Ispra, Italy. It had plan dimensions of 4.24 x 4.24 m and a maximum height of 6.90 m.

Figure 1: Views of the full-scale specimen

The specimen consisted of a cross vault confined by transverse and longitudinal arches and supported by pillars and an external wall. Its construction reproduced traditional building techniques of historic masonry structures. Hand-made solid clay brick masonry was used for the vault and arches, while roughly cut limestone masonry was adopted for the walls and pillars. Both masonry typologies were built using natural hydraulic lime mortar.

The construction sequence followed the progressive building process of a vaulted bay (Figure 2). The pillars and external wall were first raised to the springing level, and a timber centering was then positioned to support the construction of the vault and arches. The cross vault and arches were built simultaneously, starting from the four corners and progressing towards the crown (Figure 3). Once they were completed, the upper portions of the walls were built, the tie rods at the vault springing level were tensioned, and the timber centering was removed.

The vault consisted of a single layer of bricks laid on edge and arranged in a radial pattern. Different degrees of interlocking were reproduced between the vault and the surrounding elements: continuous along the transverse arches and limited to the springing areas along the external wall and longitudinal arch. Backfill was finally added at the extrados of the vault corners (Figure 4).

Figure 2: Construction sequence of the specimen

Figure 3: Construction sequence of the vault and arches

a) b) c)

Figure 4: Construction details and views of the vault: (a) extrados view; (b) intrados view; (c) detail of the backfill, transverse arch, and separation between the vault and the longitudinal arch (left side of the figure)

Overall, the full-scale specimen built within the ERIES-REVAULTs project represents a valuable example of how a historic vaulted masonry system can be reproduced in the laboratory. Its seismic response was then assessed through pseudo-dynamic tests designed to activate an in-plane shear mechanism in the cross vault. Full test results and corresponding numerical analyses will be available soon. Further information can be found at https://www.linkedin.com/company/eriesrevaults.

N E W S

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Conservation and seismic vulnerability assessment of the lanterns of the Águas Livres Aqueduct, Lisbon

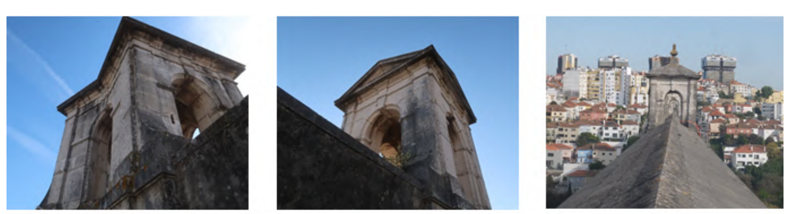
B. Quelhas da Silva, R. Silva and C. Rodrigues (NCREP - Heritage Consultancy);
P. Candeias, A.Carvalho and J.V. Lemos (LNEC)

The Alcântara Valley section of the Águas Livres Aqueduct stretches 941 m across Lisbon and, classified as a Portuguese National Monument, ranks among the country's most iconic heritage structures, today also home to the Water Museum. Along its canal gallery stand 16 limestone lanterns that act as ventilation and lighting structures rising from the walkways to slender pinnacled roofs. Following visible material degradation, EPAL - the public utility managing Lisbon's water supply and the monument itself - commissioned NCREP - Heritage Consultancy to assess their conservation state and seismic vulnerability and to define strengthening measures, in a study carried out jointly with LNEC.

Diagnosis combined a high-detail HBIM survey (laser scanning and GPS), on-site inspection, and in-situ dynamic identification testing. Inspection showed that most alterations affect appearance rather than stability, though degraded metal connectors and global deformations were flagged as potentially relevant under horizontal loading. As visual inspection alone cannot resolve a structure's dynamic behaviour, ambient-vibration tests on three lanterns, representative of the three typologies, supplied the modal parameters that anchored the numerical models.

(a) (b)

Figure 1: (a) Águas Livres Aqueduct. Neighbourhoods Serafina on the right; Campolide on the left, 1 . (b) Canal gallery, lanterns and lateral walkways



(a) (b) (c)

Figure 2: Lanterns typologies. (a) LT1; (b) LT2; (c) LT3

The seismic assessment adopted a multi-scale discrete-element (3DEC) strategy. A global rigid-block model of the aqueduct, calibrated against the in-situ measurements, acted as a filter, transferring ground motion from the pillar bases down to each lantern, where detailed lantern models, (themselves calibrated to the experimentally identified modes), were analysed.

The scenarios spanned both distant and near-field ruptures, including a magnitude-8.7 representation of the 1755 earthquake so central to Lisbon's seismic memory, allowing the lanterns' response to be examined across the full range of seismic actions relevant to the site and the most vulnerable elements to be identified.

Building on this assessment, an intervention project was developed covering both the conservation of the lanterns and their seismic strengthening, targeting the identified vulnerabilities while respecting the monument's heritage value. The HBIM model, in turn, is intended as a living repository - linking surveys, damage records, and analyses - to support EPAL's long-term management of the monument.

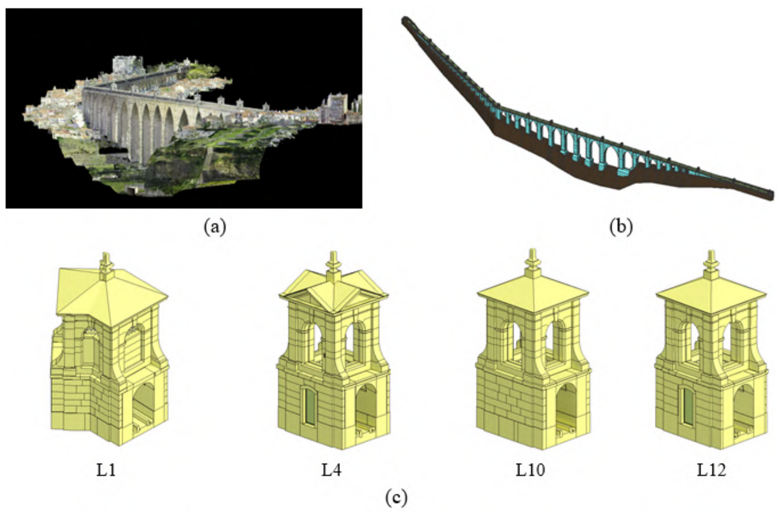


Figure 3: Geometrical characterization of the aqueduct. (a) Point cloud survey; (b) 3D HBIM global model. (c) 3D HBIM lantern sub models

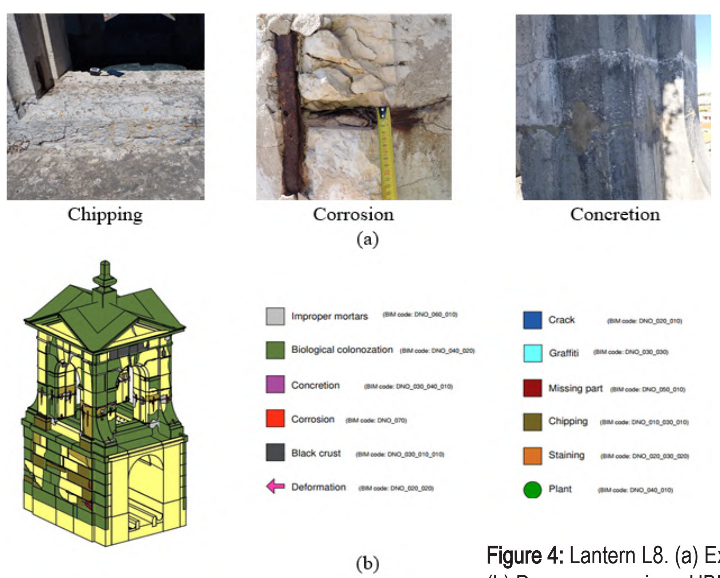
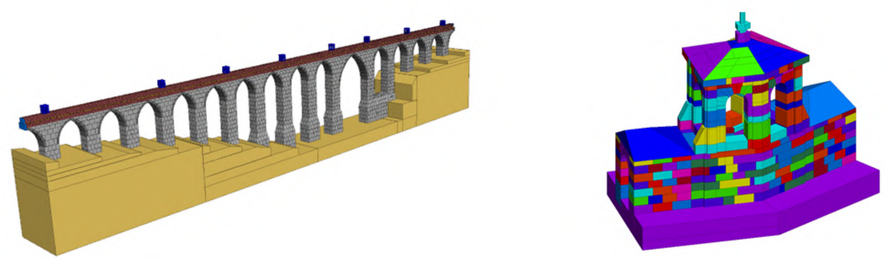


Figure 4: Lantern L8. (a) Examples of damages. (b) Damage mapping - HBIM sub model



(a) (b)

Figure 5: Numerical models in 3DEC. (a) Global model. (b) Detailed model of Lantern type LT1

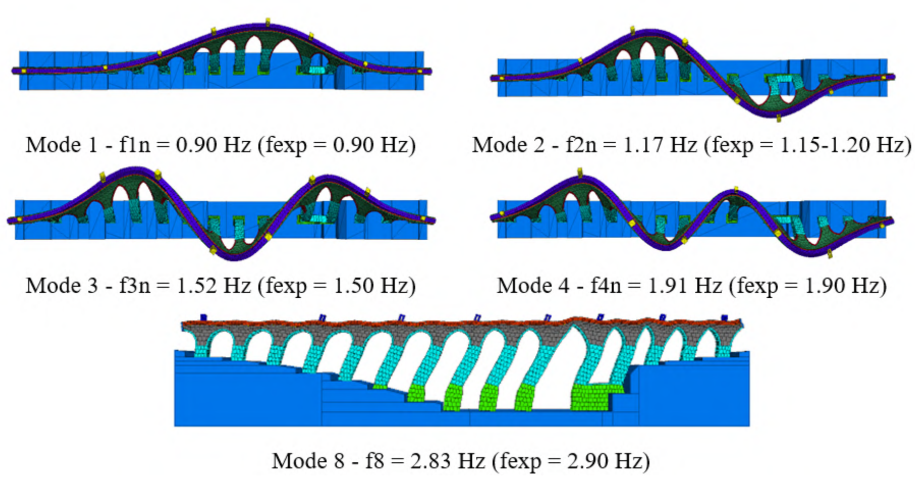
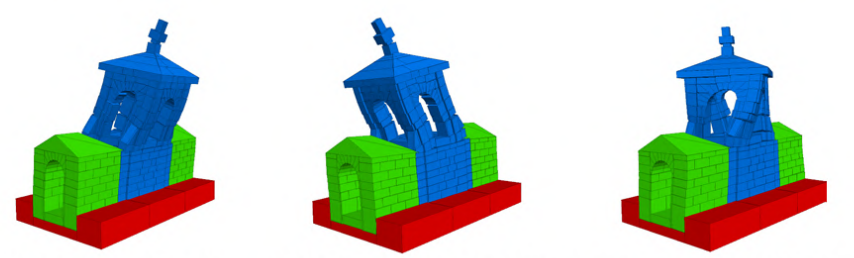


Figure 6: Numerical mode shapes of the global model of the aqueduct and comparison between the experimental and numerical natural frequencies



Mode 1 - f1n = 7.65 Hz (fexp = 7.65 Hz)

Mode 2 - f2n = 9.31 Hz (fexp = 9.65 Hz)

Mode 3 - f3n = 13.33 Hz (fexp = 14.13 Hz)

Figure 7: Calibrated numerical mode shapes of lantern L10 (Type LT3)

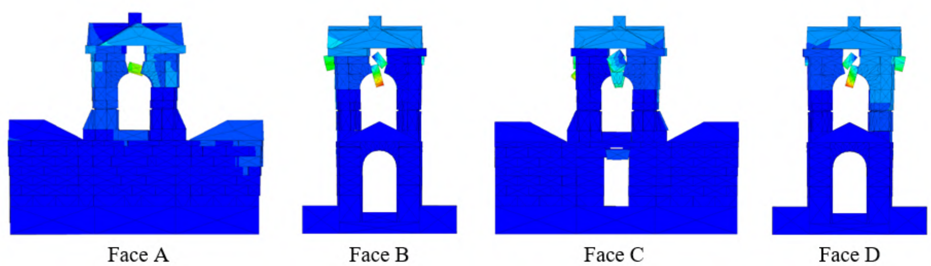


Figure 8: Final deformed state of lantern L8

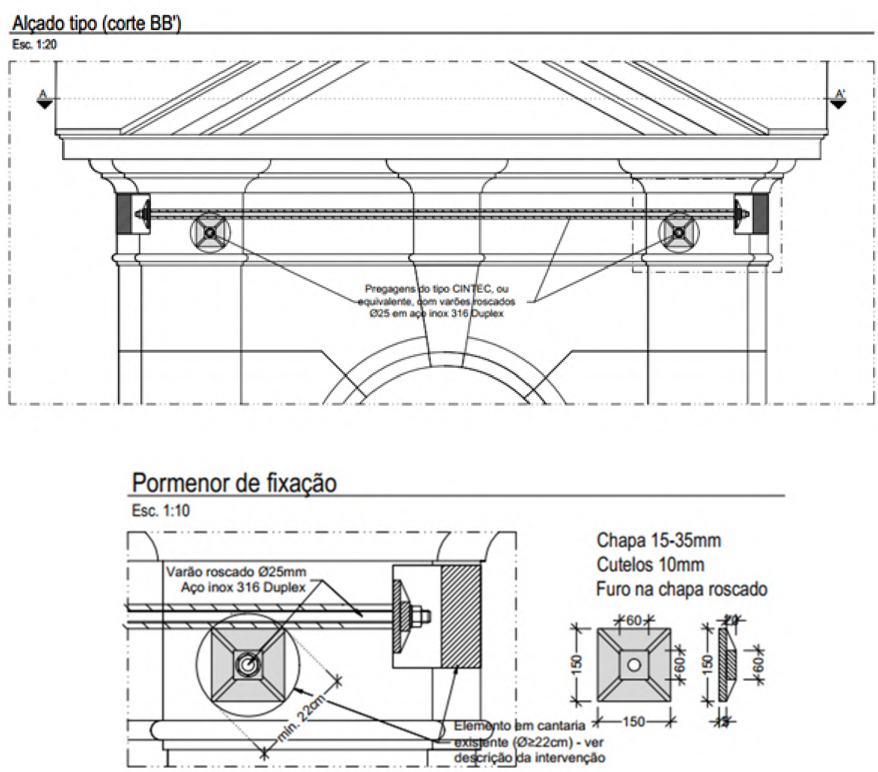


Figure 9: Structural intervention - ties applied on lanterns L7, L8 e L9

Layers of History in the Odenwald: Roman Heritage, Historic Timber Houses and Local Traditions

Demet Sürücü (PhD) - Turkish Timber Association Board Member
Bahçeşehir University Timber Building Construction and Research Center Coordinator

Field Observation Report Osterburken and Buchen

The Odenwald region in Baden-Württemberg represents a cultural landscape where different historical periods remain visible within the same territory. During the visit, Osterburken and Buchen revealed different aspects of regional heritage, including Roman remains, historic timber architecture, and local traditions.

Osterburken: Roman Heritage and Historic Timber Houses

Osterburken is a historic town whose origins are closely connected with the Roman period. Its significance is linked to the Upper Germanic-Rhaetian Limes, the Roman frontier system that once marked the northern boundary of the Empire. During the 2nd century AD, a Roman military fort (castellum) was established here as part of this frontier network.

In the 3rd century AD, Alamanni incursions, together with the broader political and military difficulties of the Roman Empire, contributed to the decline of the Roman frontier system in the region. After the withdrawal of Roman forces, Osterburken gradually lost its former military importance and developed into a medieval settlement.

The town gained renewed importance in the Middle Ages when Emperor Charles IV granted Osterburken the right to hold a market on 9 January 1356. This privilege supported economic development and strengthened the town's role as a local centre of trade and craftsmanship. The significance of this date is further highlighted by the fact that the Golden Bull, one of the most important constitutional documents of the Holy Roman Empire, was issued on the same day.

Today, Osterburken preserves archaeological remains from the Roman period alongside elements of its later historical development. Its location along the UNESCO World Heritage Site of the Upper Germanic-Rhaetian Limes, together with the Roman fort and archaeological museum, contributes to the town's cultural importance.

A notable feature of Osterburken's historic character is its traditional half-timbered architecture, known as Fachwerkhäuser. These buildings became widespread in many German regions from the late Middle Ages onwards. They were constructed with timber frameworks, often using durable wood such as oak, while the spaces between the beams were traditionally filled with materials including brick, stone, or clay.

The visible timber structures create distinctive façades that reflect both technical knowledge and regional building traditions. Fachwerk houses provide valuable insight into the social and economic history of historic towns, as such buildings traditionally served as residential spaces and, in many cases, as places connected with craft production and local commerce.

The construction techniques of these buildings, including traditional carpentry methods and timber joints, represent the skills of earlier generations. From a contemporary perspective, these structures can also be interpreted as examples of resource-efficient construction due to their use of local materials, durability, 10and of adaptability. These characteristics make Fachwerk buildings relevant within current discussions on sustainable architecture and heritage conservation.

During the visit, several historic timber houses appeared vacant or in need of restoration. Possible factors include demographic changes in smaller towns, the high cost of conservation work, and the requirements associated with listed heritage buildings. In Baden-Württemberg, the preservation of protected buildings is regulated under the Heritage Protection Act (Denkmalschutzgesetz – DSchG). Interventions affecting important elements such as façades, roofs, windows, doors, or structural timber systems generally require approval and should respect the historical character of the building.

Figure 1: Traditional Timber Houses

Buchen and the Buchener Blecker

The visit also included Buchen, another historic town in the Odenwald region. While Osterburken is strongly associated with Roman and architectural heritage, Buchen provides an example of local cultural traditions.

One of the town's most distinctive symbols is the Buchener Blecker, a traditional stone figure connected with medieval history and the local Faschenacht (carnival) tradition. The figure reflects historical beliefs about protection and the relationship between communities and their built environment.

Figure 2: A Traditional Buchen House

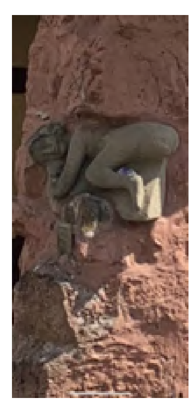


Figure 3: Buchen Blecker

Today, preserved in the Buchen District Museum, the Blecker remains an important symbol of local identity and cultural memory. It demonstrates that heritage is not limited to buildings and monuments but also includes traditions, objects, and practices that continue to shape regional identity.

The Odenwald region demonstrates how different forms of heritage can coexist within a shared landscape. Osterburken's Roman remains and historic timber buildings represent important examples of material heritage, while Buchen's Buchener Blecker reflects the living traditions of the region.

Together, these elements show that cultural heritage is preserved not only through historic structures but also through craftsmanship, local knowledge, and community practices that connect the past with the present.

Figure 4: Traditional buildings in Buchen

Figure 5: Traditional buildings in Osterburken

Documenting Historic Structures in the June 2026 Venezuela Earthquake Sequence

Rebecca Napolitano - Penn State University, Xavier Romão -University of Porto

As ICOMOS members contributing to the United States National Science Foundation StEER (Structural Extreme Events Reconnaissance) response to the June 24, 2026 Venezuela earthquake sequence, we led the historic and religious structures section of the network's Preliminary Virtual Reconnaissance Report (PVRR) (Balderrama et al., 2026).

Our first task was establishing the scale of exposure. The sequence involved two major earthquakes 39 seconds apart, a magnitude 7.2 followed by a magnitude 7.5, both centered near Yumare in northern Venezuela. To figure out how much of the country's heritage stock was potentially impacted, we mapped out every municipality that experienced at least moderate shaking (MMI V or above, on the standard 12-point Modified Mercalli Intensity scale used to describe the severity of ground shaking impacts at a given location) from either earthquake, then combined the two footprints into one zone. We then cross-referenced that zone against Venezuela's national heritage inventory, the I Censo del Patrimonio Cultural Venezolano (Laverde et al., 2025). That process identified 4,416 documented heritage buildings and sites sitting inside the affected shaking zone. Records were geocoded from descriptive address and landmark text rather than surveyed coordinates, so positional precision varies across the dataset.

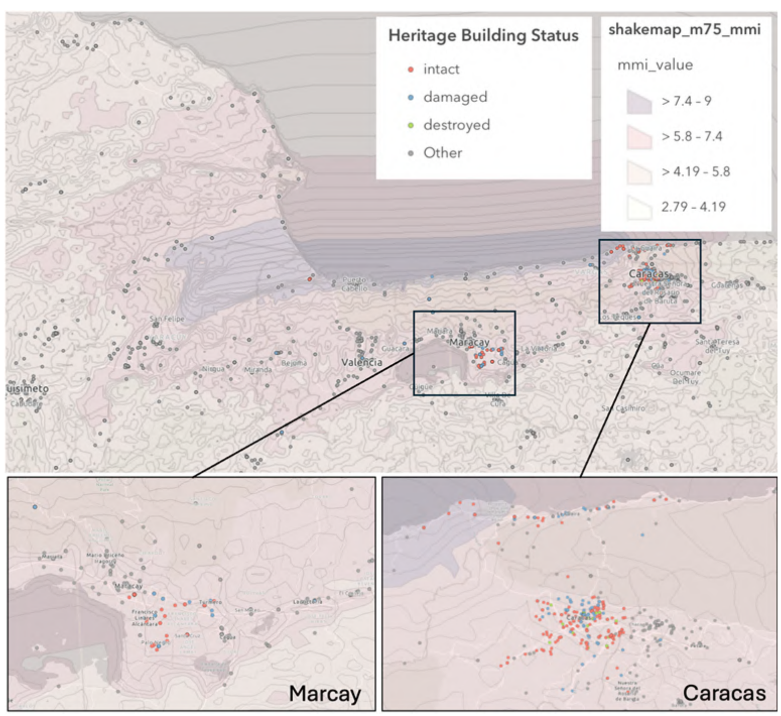


Figure 1: Cultural heritage buildings (n = 4,416) from Venezuela's I Censo del Patrimonio Cultural Venezolano (2004-2010), shown against modeled shaking intensity from the M7.5 mainshock and overlaid with damage status. (Image source: https://rkn2.github.io/venezuela-eq-heritage-map/)

Damage status was resolved using a fixed priority order across three sources of varying reliability: the StEER Annotated Media Repository, a crowd-sourced damage feed curated by structural engineers (Gutierrez Soto et al., 2026), and an AI-based satellite change-detection model (Roueche, 2026). Of the 4,416 buildings surveyed, 30 currently have human-sourced, field-confirmed damage observations; across the full set, 726 were classified intact, 149 damaged, and 37 destroyed, with the large majority still lacking damage information.

The clearest pattern to emerge involved La Guaira s colonial and republican-era masonry, largely rebuilt following the 1812 earthquake using empirical load-bearing wall systems and flexible timber roof framing. These assemblies had performed well through two centuries of regional seismicity, but showed consistent vulnerability under the multi-directional accelerations and cumulative fatigue of this doublet sequence: diagonal shear cracking through thick masonry walls, tension failures separating orthogonal wall junctions, and the loss of towers, spires, and parapets as falling hazards. Cases we documented in detail include the Iglesia Católica San José de araulí, Iglesia Nuestra Señora de La Candelaria, Iglesia San Diego de los Altos, the Basílica Catedral de Valencia, and the asymmetric twin-tower damage at Iglesia de la Inmaculada Concepción de Montalbán.

Inspections reported by the Archdiocese of Caracas reinforce this pattern and provide a better view of the scale of impacts to the religious heritage in Caracas. Of more than 100 churches under its jurisdiction, at least 27 have sustained damage of varying severity; a more detailed breakdown reported by the inspection team identifies five temples with severe structural failures, 16 with moderate damage under continued review, and six assessed as safe (El Nacional, 2026). None of the affected buildings is currently expected to be demolished. Among the most seriously affected are the Iglesia Católica de San José de araulí, where an entire side of the nave collapsed, the Iglesia de Nuestra Señora del Perpetuo Socorro in Pag ita and its adjoining parish school, as well as the Iglesia de Nuestra Señora de la Merced and the Catedral of Caracas (Catedral Metropolitana de Santa Ana), which also sustained significant damage (Zenit, 2026).

Figure 2: San Sebastián de Maiquetía (Image source: Google Maps (before), Venezuela via Facebook (after)

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The assessment is particularly important for conservation because 16 of the affected Caracas churches are historic monuments, requiring coordination between the Archdiocese and Venezuela s Instituto del Patrimonio Cultural to ensure that rehabilitation and structural repair follow appropriate heritage-preservation procedures.

Our recommendation for continued study centers on the absence of fragility data for Venezuelan and wider Caribbean colonial masonry typologies. Without established height-to-thickness or connection-quality thresholds, there is presently no defensible basis for screening which surviving landmarks require mechanism-based assessment. A stock-level field survey remains the priority.

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Learning from Project Examples of ISCARSAH Members

Kai Weise

Iscarsah members are working all over the world and have a wealth of practical knowledge and experience. A platform was established for Iscarsah members to share their experiences working on specific case studies. The main issues that were raised were compiled and categorised. Finally, the Iscarsah Guidelines 2.0 (2024) were reviewed to test whether they provided guidance for these issues.

During four sessions, between February and May 2024, nine presentations were made, providing case studies from Iran, Morocco, Nepal, Nigeria, Portugal, Russia, Slovenia, Türkiye and United States. Khalid El Harrouni and Satwant Rihal presented on the Tinmel Mosque and the Kasbah/Citadel of Agadir Oufella, that were impacted by the 2023 Al Haouz Earthquake in Morocco. Donald Friedman presented on the restoration of the Public Bath Number 7 in New York. Ivan Strelbitskii presented on the restoration of the 15 c. Faraskatta Church in the Northern Caucasus. Paulo B. Lourenço presented on the Chancel for Cathedral of Porto, Portugal. Mehrdad Hejazi presented on the restoration of the Historical Complex of Mofakham in Bojnurd, Iran. Meltem Vatan presented on the structural documentation and visual damage assessment of the Villa Tarabya in Istanbul. Sola Akintunde presented on developing a value system for restoration work in the West African context. Finally, Kai Weise presented on the post-earthquake reconstruction of Kasthamandap in Kathmandu.

Table 1: Themes and issues raised

A. Values based interventions	1. Value: What to keep and what to change?	2. Various periods: how to deal with the different layers	3. Wholeness: when required by religious or local sentiments – how to fully restore?	4. Change in function: How much of the structure can be changed?
B. Materials	1. Use of modern materials and technology: strength and quality?	2. New protective elements: when to introduce new roof? New details?	3. Compatibility of materials: between natural and modern materials	n/a
C. Context	1. Context ground: stability of ground, ground water, and when to rebuilt foundations?	2. Context climate: How to deal with climate change, humidity, flooding, heavy rain, etc.	3. Natural hazards: adaptation to address vulnerabilities	n/a
D. Legal provisions and practice	1. Building code for historic structures: do they consider traditional technology?	2. Long term performance: how to relate this to legislation?	3. Traditional knowledge: how to include this in legislation and procedures?	n/a
E. Knowledge and skills	1. Traditional or original materials: knowledge of materials?	2. Traditional or original materials: how to ensure sourcing?	3. Traditional skills: availability and use of traditional skills?	4. Design details impacting structure: shape, openings, tall walls, etc.
F. Appropriate interventions:	1. Material deterioration and loss of stability: appropriate maintenance?	2. No gravitational load changes: What to do when no change in loads and forces?	3. No visual changes: what kind of interventions are acceptable?	4. Retain maximum of the original, replace only the essential

The issues that were raised through the examples that were presented were categorised under six main themes, each with a set of questions. Under the category “values based interventions”, there were questions concerning the degree of acceptable change, dealing with layers from different period, whether total restoration was acceptable, and the degree of acceptable adaptation of the structure to a new function. Under the category “materials” there were questions raised concerning the use of modern materials and technology, introduction of appropriate protective elements and the compatibility of newly introduced materials with the original materials. Under the category of “context”, questions were raised concerning interventions to the foundations, dealing with climate change, and the degree of acceptable adaptation to address natural hazards. Under the category of “legal provisions and practice” questions were raised concerning buildings codes for historic structures, addressing long-term performance and consideration of traditional knowledge in legislation and procedures. Under the category of “knowledge and skills” questions were raised concerning knowledge and sourcing of traditional (or original) materials, availability of traditional skills and the impact of construction details. Finally, under the category of “appropriate interventions” questions were raised in respect to maintenance, impact of updating to newest regulations, acceptance of non-visible changes, and the need to retain as much of the original as possible. Such questions needed to be answered during the implementation of the case studies.

The Iscarsah Guidelines 2.0 (2024) were consulted to find answers to the raised questions. The outcome of this analysis showed that there were some categories of questions that were not addressed at all. The entire discussion on how traditional structural systems are understood and traditional materials, technology, detailing and craftsmanship has not been addressed. There are various questions that requiring further discussions such as the assessment of compatibility and appropriateness of interventions and materials, stabilisation of soil and foundations, as well as considerations of hazards beyond earthquakes. Guidance might be provided either in the next amended version of the Iscarsah Guidelines, or then links provided to external guidance documents.

a, b c

Figure 1: View, the collapsed structure, reconstruction using bamboo scaffolds (Photo courtesy: Kai Weise)

CONSERVATION OF MONUMENTS AND HISTORICAL BUILDINGS
Iscarsah Seminar

02 Oct 2026 | MUDE Design Museum, Lisbon, Portugal

PROGRAMME

09:00 Reception of participants

09:15 Opening (Paulo B. Lourenço, Tiago M. Ferreira, Orlando Sousa)

09:30 Heritage structures: The role of ICOMOS, Chairman: Steve Kelley

- Iscarsah Guidelines on Heritage Structures (Paulo B. Lourenço)
- Cataloguing Masonry Around the World (Filippo Casarin)
- Iscarsah Examples (Kai Weise)
- Climate Change and Climate Adaptation (Tiago M. Ferreira)
- Building Codes and Iscarsah Principles (Mustafa Humo)
- Discussion

10:45 Coffee Break

11:15 Recent Works in Portuguese Heritage, Chairman: Orlando Sousa

- National Museum of Archeology (Carlos Guimarães/ António Adão da Fonseca)
- National Theatre São Carlos (João Mendes Ribeiro/ Celeste Almeida)

13:15 Lunch

14:15 An International Perspective, Chairman: Daniel V. Oliveira

- Keynote: Notre-Dame de Paris: Lessons to improve fire safety in historic buildings (Jose Torero)
- Heritage Engineering and Westminster Abbey (Claudio Corallo)
- Man-Made Disaster and Climate Change Recovery of Built Heritage: From Massive Rapid Visual Screening to Micro-Scale Interventions, Case Studies from the Middle East and Africa (Michel Chalhoub)
- Grouting for Masonry Strengthening: The Importance of Ensuring Injectability (Androniki Miltiadou-Fezans; Elizabeth Vintzileou)
- Using static structural monitoring on damaged buildings (Tom Morrison)

16:00 Coffee Break

16:30 20 years of the SAHC MSc programme on Heritage Structures

Panel on Needs for Training, Practice and Research, Chairman: Tom Morrison

Cláudia Pinto (Lisbon Municipality), Daniel V. Oliveira (University of Minho),

Filipe Ferreira (Gecorpa), Vasco Appleton (APPC), Bernd Mittnacht (Iscarsah)

18:00 Closure