RUAS (Review of Urbanism and Architectural Studies)
eISSN: 2477-6033 | pISSN: 1693-3702
journal homepage: https://ruas.ub.ac.id
RUAS Vol. 24 No. 1 (2026) DOI: https://doi.org/10.21776/ub.ruas.2026.024.01.5

Adaptive Continuity in Sasak Vernacular Architecture: The *Berugaq* of North Lombok

Andi Prasetiyo Wibowo[1], Vincentia Reni Vitasurya[2], Gregorius Agung Setyonugroho[3], Khaerunnisa, Anna Pudianti[4], Trias Mahendarto[5]

[1,2,3,4,5]*Department of Architecture, Faculty of Engineering, Universitas Atma Jaya Yogyakarta, Yogyakarta, 55281, Indonesia*

ARTICLE INFO

Article History:
Received: December 28, 2025
Received in revised form: May 3, 2026
Accepted on: May 11, 2026
Available Online: June-November 2026

Keywords: vernacular architecture, material transformation, cultural heritage, berugaq, North Lombok

ABSTRACT

Vernacular architectural transformation reflects the ongoing negotiation between local wisdom and modernization. This study examines material transformation in the *berugaq*, a traditional communal structure of the Sasak community in Bayan, North Lombok, and its implications for cultural identity. A qualitative comparative case study was conducted in two neighboring villages, Karang Bajo and East Bayan. Data were collected through field observations, photographic documentation, and semi-structured interviews and analyzed using a comparative thematic approach. The findings reveal contrasting patterns of material adaptation. Karang Bajo largely retains traditional materials, such as bamboo and thatch roofing, reflecting a strong commitment to cultural preservation and ecological harmony. In contrast, East Bayan adopts modern materials, including zinc roofing and metal connectors, driven by considerations of durability, availability, and maintenance efficiency. The findings suggest that material transformation does not necessarily result in cultural loss but can represent a process of adaptive continuity, whereby traditional forms, functions, and meanings are selectively maintained while accommodating contemporary needs. This study contributes to discussions on vernacular transformation and sustainable architecture by highlighting how local communities negotiate between heritage preservation and modernization through material practices.

Corresponding Author:
Andi Prasetiyo Wibowo
Department of Architecture, Faculty of Engineering, Universitas Atma Jaya Yogyakarta
andi.prasetiyo@uajy.ac.id

ORCID ID:
https://orcid.org/0000-0003-0060-3728

Transformasi arsitektur vernakular mencerminkan negosiasi antara kearifan lokal dan modernisasi. Penelitian ini mengkaji transformasi material pada berugaq, struktur komunal tradisional masyarakat Sasak di Bayan, Lombok Utara, serta implikasinya terhadap identitas budaya. Penelitian menggunakan studi kasus komparatif kualitatif pada dua desa, Karang Bajo dan Bayan Timur. Data dikumpulkan melalui observasi lapangan, dokumentasi fotografi, dan wawancara semi-terstruktur, kemudian dianalisis secara tematik-komparatif. Hasil penelitian menunjukkan perbedaan pola adaptasi material. Karang Bajo mempertahankan material tradisional seperti bambu dan atap jerami, yang mencerminkan orientasi pada pelestarian budaya dan harmoni ekologis. Sebaliknya, Bayan Timur mengadopsi material modern, seperti atap seng dan sambungan logam, karena pertimbangan ketahanan, ketersediaan, dan efisiensi pemeliharaan. Temuan ini menunjukkan bahwa transformasi material tidak selalu menghilangkan identitas budaya, tetapi dapat merepresentasikan keberlanjutan adaptif (adaptive continuity), ketika bentuk, fungsi, dan makna tradisional tetap dipertahankan sambil mengakomodasi kebutuhan kontemporer. Penelitian ini berkontribusi pada diskursus transformasi vernakular dan arsitektur berkelanjutan dengan menunjukkan bagaimana komunitas lokal menegosiasikan pelestarian warisan dan tuntutan modernisasi melalui praktik material.

1. Introduction

Traditional architecture reflects vernacular knowledge, values, beliefs, and environmental responses developed by communities within specific regions. Indigenous dwellings embody this knowledge through locally available materials such as bamboo, thatch, timber, and grass, combined with construction techniques transmitted across generations. Beyond providing shelter, these buildings maintain cultural identity and social continuity by expressing interactions among nature, culture, society, and economy.

Community structures likewise contribute to cultural identity by facilitating social interaction and representing shared values such as cooperation and collective responsibility. Traditional architecture, therefore functions not only as a physical structure but also as a cultural narrative shaped by continuity and change. While the preservation of traditional materials reinforces connections with the past, material substitution may reflect evolving social values and cultural norms.

The concept of *kearifan lokal* (local wisdom) refers to knowledge and practices developed through long-term interaction with the environment. Studies of Kampung Naga in West Java show how local wisdom promotes harmonious relationships between humans and nature. Through its ecological functions, social roles, and symbolic meanings, vernacular architecture reflects place-based knowledge that enables communities to live in balance with their environment (Lestari, 2025). However, vernacular architecture is not static. Architectural traditions continue to evolve alongside social change, technological development, and the introduction of new materials, allowing traditional and modern elements to coexist without necessarily diminishing cultural identity (Rahim et al., 2023).

Current architectural discourse increasingly emphasizes balancing environmental sustainability and cultural preservation. Many traditional materials are renewable, climate-responsive, locally available, and require less energy than industrial alternatives. This perspective aligns with conservation principles promoted by UNESCO and ICOMOS, which advocate holistic approaches integrating cultural significance and sustainability (Liang et al., 2023). Recent studies have also highlighted the potential of hybrid construction systems that combine traditional and modern technologies while maintaining cultural relevance (Teba & Di Raimo, 2025).

Across Southeast Asia, traditional materials such as bamboo have often been replaced by concrete, steel, cement, and zinc roofing due to maintenance concerns, material availability, and resistance to pests (Stolz, 2022). Similar transformations have been documented elsewhere. In Japan, contemporary wooden houses integrate energy-efficient technologies while maintaining traditional construction principles (Tamura, 2024). In Yazd, Iran, vernacular adobe architecture remains valued for its socio-cultural significance and sustainability (Formolly & Saraei, 2024). Conversely, studies from Baghdad and Jeddah highlight tensions between modernization and vernacular heritage preservation (Alnaim, 2025; Naser & Mohammadi, 2012). These cases demonstrate that

material transformation is a global phenomenon shaped by local attitudes, resources, and policy contexts.

Modernization, globalization, and urbanization have accelerated changes in traditional architecture. Vernacular buildings increasingly struggle to accommodate contemporary needs, contributing to the abandonment of many traditional settlements worldwide (Zong et al., 2025). At the same time, industrial materials are widely adopted because they are perceived as durable, economical, and easy to maintain (Wibowo, 2020). While these changes may improve functionality, they also raise concerns regarding cultural continuity and heritage preservation. In Indonesia, one example is the *berugaq* of the Sasak community on Lombok Island. The *berugaq* is an open pavilion supported by four or six pillars that functions as a space for receiving guests, conducting ceremonies, and accommodating various social activities. In some contexts, such as Sade Village, it may also serve as a rice storage structure (Wahyudi, 2025). As a communal space, the *berugaq* performs a role comparable to a "third place," where people gather, interact, and strengthen community ties (T.A.K., 2022).

The material composition and architectural character of the *berugaq* reflect Sasak cultural values, particularly simplicity, cooperation, and harmony with nature. However, neighboring communities in North Lombok have responded differently to modernization. In Karang Bajo Village, *berugaq* structures largely retain bamboo and thatch, whereas many *berugaq* in East Bayan Village have adopted zinc roofing while maintaining timber structural systems. These differences illustrate alternative approaches to balancing modernization and cultural continuity. Examining material transformation in the *berugaq* therefore, provides insight into how local wisdom adapts to contemporary pressures and whether cultural identity can be sustained through changes in the built environment.

Studies on vernacular architecture and material transformation have expanded in recent years (Baglioni, 2011; Pardo, 2023), most focused on regional patterns or typological change (Mouraz et al., 2023). Comparative studies involving culturally similar neighboring communities remain limited, particularly regarding how material transformation affects the *berugaq* as a communal space and its role in maintaining cultural identity. To address this gap, this study investigates material transformation in *berugaq* structures in Karang Bajo and East Bayan, North Lombok, and examines how these changes reflect different forms of cultural identity negotiation. This study contributes to the discourse on vernacular transformation by highlighting how cultural identity is maintained through material adaptation.

2. Materials and Methods

By a qualitative comparative case study approach to examine material transformation in traditional *berugaq* architecture in Bayan, North Lombok, this study focuses on two neighboring villages, Karang Bajo and East Bayan. Those villages share a similar Sasak cultural background but exhibit different patterns of material adaptation.

This comparative setting provides an opportunity to examine how cultural identity is negotiated through architectural change in response to modernization.

The research subjects consisted of *berugaq* structures and residents involved in their construction, maintenance, and use. Approximately 10 *berugaq* units were observed, and six key informants, including village elders and household representatives, participated in semi-structured interviews. These villages offer a suitable context for exploring the relationship between material transformation and cultural continuity within a shared socio-cultural environment.

Data were collected through field observations, photographic documentation, and semi-structured interviews. Observations focused on the physical characteristics of *berugaq* structures, including roofing materials, structural systems, and construction details, while photographs provided visual evidence for comparative analysis. Interviews explored local perspectives on material selection, including considerations of durability, availability, maintenance, and cultural values. Participants were purposively selected based on long-term residence and familiarity with local building practices through direct involvement or everyday interaction with traditional dwellings. To enhance data credibility, interview responses were compared across participants to identify recurring patterns and shared viewpoints. A simple triangulation process was applied by relating interview findings to observations made during site visits, ensuring that interpretations reflected both participant accounts and actual material conditions in the field.

Data were analyzed using a comparative thematic approach. Observational and visual data were categorized according to material characteristics and structural features, while interview data were manually coded to identify recurring themes such as practicality, availability, maintenance considerations, and cultural meaning. These themes were then compared between the two villages to reveal patterns of similarity and difference. The analysis aimed to explain how material transformation reflects broader processes of cultural adaptation and identity negotiation.

This research involved direct interaction with the local community. All participants joined the interviews voluntarily, and informed consent was obtained after a clear explanation of the study. Photographic documentation was conducted with permission, while ensuring that personal privacy and cultural sensitivity were respected. The study also emphasizes the respectful representation of local knowledge and avoids imposing external judgments on community practices.

3. Results and Discussion

The *berugaq* is a traditional Sasak communal structure characterized by an open-sided form supported by four or six pillars (Figure 1). Its raised-floor design creates an elevated platform that improves air circulation beneath the structure and helps maintain a dry floor surface (Mufidah et al., 2023).

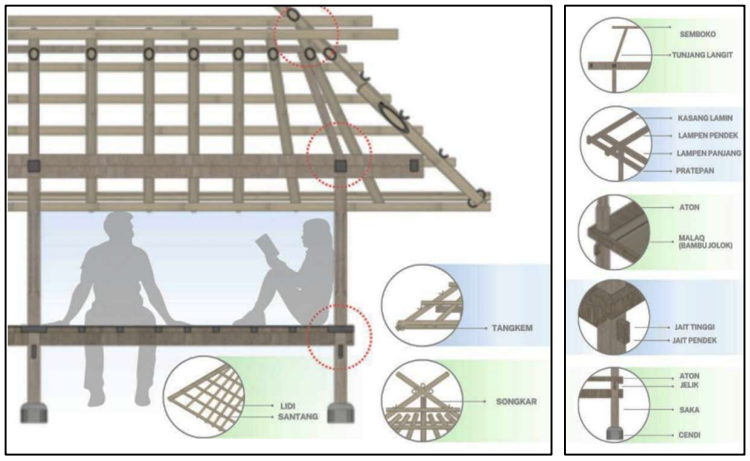

Figure 1. The structure of *berugaq*

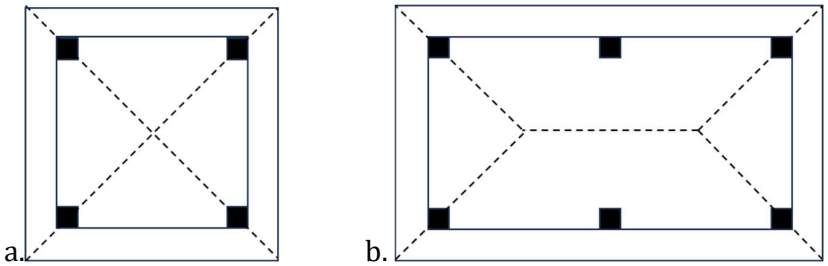

Figure 2. The layout of *berugaq*; *sakapat* (a) and *sakenem* (b)

Based on the number of pillars, *berugaq* are classified into two typologies: *sakapat* (*sakepat*; *sekepat*) with four pillars and *sakenem* (*sakanem*; *sekenam*) with six pillars (Figure 2). Despite its simple form, the *berugaq* occupies an important role in Sasak social life. Functionally, it serves as the main space for receiving guests, conducting community discussions, and hosting traditional ceremonies. As an intermediary between the household and the wider community, the *berugaq* reflects the values of hospitality, openness, and collective identity.

At the same time, the *berugaq* is remarkably flexible. Its open design allows it to be adapted to the needs of its owner, whether as a resting place, a venue for informal conversations, or a stage for ritual practice. This adaptability ensures that the *berugaq* remains relevant across generations, accommodating both traditional functions and contemporary uses. As such, the *berugaq* is not only an architectural form but also a cultural institution, mediating between everyday life and ceremonial expression. These characteristics establish the *berugaq* as a key cultural and spatial element in Sasak vernacular architecture.

The structural system of the *berugaq* is distinguished by the number and arrangement of its primary columns. Two main typologies are recognized in Sasak architecture: *sakapat* (*sakepat* or *sekepat*) and *sakenem* (*sakanem* or *sekenam*). These

typologies differ in structural configuration, spatial capacity, and functional use. The *sakapat* (Figure 2a) type consists of four main columns arranged in a square plan. This configuration forms a compact structural system in which roof loads are transferred through the columns to the foundation. Due to its relatively small size and simple construction, *sakapat* is commonly found in agricultural areas and serves as a shelter for resting and informal activities. Its open-sided design allows effective natural ventilation and provides thermal comfort in a tropical environment. The *sakenem* type (Figure 2b) is supported by six main columns arranged in a rectangular plan. The additional columns increase structural stability and enable a wider roof span and larger floor area. Consequently, *sakenem* can accommodate a greater number of users and is generally used for communal gatherings, traditional ceremonies, and receiving guests. Compared with *sakapat*, this typology exhibits a more formal spatial organization and a higher capacity for collective activities.

Despite these differences, both typologies share similar structural characteristics. The *berugaq* employs a raised-floor construction, a timber column-and-beam system, and an open-sided enclosure. This structural arrangement enhances air circulation beneath and around the building while providing a flexible space for various social activities. Such characteristics demonstrate the adaptation of the Sasak vernacular architecture to local environmental conditions and community needs.

The orientation of the *berugaq* is never arbitrary; it is always aligned along the north–south axis, reflecting the Sasak cosmological worldview. In North Lombok, the south side symbolizes Mount Rinjani, the sacred mountain regarded as the source of life, fertility, and ancestral connection. The north side, by contrast, represents the sea, associated with openness, trade, and external encounters. This spatial alignment situates the *berugaq* within the natural and spiritual geography of Lombok, embedding the structure in a larger cosmological order that links daily life to the environment.

Symbolism is further reinforced through ritual practice and social hierarchy. During traditional ceremonies held in the *berugaq*, the village chief or elders occupy the south side (mountain side), embodying wisdom, authority, and ancestral continuity. In this way, the *berugaq* becomes more than a physical pavilion: it is a cultural stage where orientation encodes values of respect, hierarchy, and balance between tradition and openness. The structure thus mediates between nature and society, anchoring Sasak identity in both physical space and symbolic meaning.

3.1. Berugaq in Karang Bajo Village

Karang Bajo village, located in Bayan, North Lombok, is one of the communities that continues to uphold traditional Sasak architectural practices. Within this context, the *berugaq* remains a central element in the spatial organization of the settlement, functioning as both a social and cultural space that supports daily and ritual activities.

Field observations indicate that *berugaq* in Karang Bajo largely retain traditional materials and construction techniques (Figure 3). Bamboo is widely used for flooring and

supporting elements, while thatch serves as the primary roofing material (Figure 4). Timber frameworks provide structural stability, and traditional wooden dowels are employed as connectors. These construction methods reflect locally embedded knowledge and skills that have been transmitted across generations.



Figure 3. Berugaq in Karang Bajo Village



Figure 4. Bamboo frames and thatched roofs

The material composition of the *berugaq* is closely associated with environmental conditions and local resource availability. Bamboo and thatch contribute to climatic responsiveness by enhancing natural ventilation and thermal comfort (Figure 4). Likewise, the raised-floor system improves air circulation beneath the structure while reducing exposure to ground moisture, illustrating the environmental adaptation of the building. Beyond environmental considerations, material selection is also influenced by

practical factors, including availability, construction efficiency, and maintenance requirements.

Functionally, the *berugaq* serves multiple roles within village life, including family gatherings, community meetings, and ritual activities. Its open design facilitates social interaction and visual connectivity, while its placement within the household compound reflects the spatial logic of Sasak domestic life. Together, these characteristics demonstrate the continued use of traditional materials and construction practices in sustaining the role of the *berugaq* as a communal space.

3.2. Berugaq in East Bayan Village

East Bayan Village, located near Karang Bajo in North Lombok, presents a contrasting pattern of *berugaq* development. Although its floor plan remains largely similar to that of Karang Bajo (Figure 5), noticeable changes have occurred in material composition and construction techniques. While the *berugaq* continues to serve as an important social and cultural space, these transformations reflect ongoing adaptation to contemporary needs. The changes are also associated with the growing development of homestays in East Bayan (Vitasurya et al., 2024).



Figure 5. Typical of *berugaq* in East Bayan Village

Field observations indicate that *berugaq* in East Bayan increasingly incorporates modern materials. Zinc sheets (metal-based roofing) are commonly used as roofing materials, replacing traditional thatch. Timber frameworks are still retained, preserving the overall form and structural configuration of the *berugaq*. However, traditional wooden dowels used as connectors are largely replaced with bolts and nuts, indicating a shift in construction techniques. The use of bolts and nuts as connectors, as illustrated in Figure 6, reflects changes in construction practices, resulting in a hybrid material composition that combines traditional structural elements with modern components. This condition reflects a practical adaptation by residents, particularly in response to changing material availability and construction efficiency.

Despite these material changes, the *berugaq* continues to function as a communal space. It is used for family gatherings, village meetings, and ritual activities, maintaining its role within the social structure of the community. The open design and placement within the household compound remain consistent with traditional spatial organization. These changes are closely related to practical considerations. Informants frequently mentioned the use of zinc roofing due to its durability and lower maintenance requirements. Similarly, bolts and nuts (Figure 6) were perceived as more reliable and easier to install compared to traditional wooden connectors.

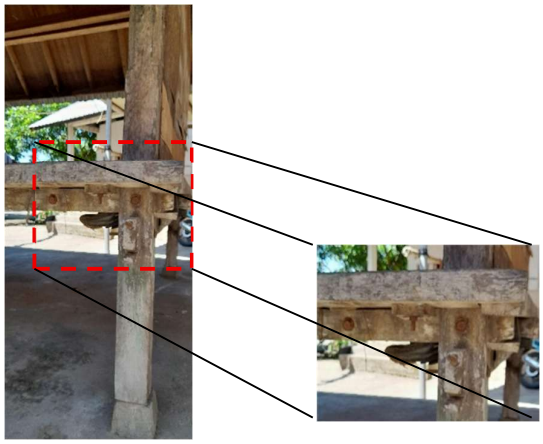

Figure 6. Bolts and nuts as a connector instead of a dowel

In addition, the availability of materials plays a significant role. Residents reported that thatch has become increasingly scarce and expensive, partly due to demand from tourism-related developments in Lombok and Bali. Modern materials, in contrast, are more readily available in local markets. Economic considerations further support this transition, as households perceive modern materials to be more cost-efficient in the long term. These findings indicate a shift in material preference toward solutions that emphasize availability and maintenance efficiency within the context of everyday use. At the same time, the continued use of timber frameworks suggests that certain elements are still retained due to their cultural significance within the local architectural tradition.

3.3. Comparison

Field observations reveal clear differences in the material composition and construction practices of *berugaq* structures between Karang Bajo and East Bayan. In Karang Bajo, *berugaq* predominantly maintain traditional materials, including bamboo, thatch, and wooden dowels, reflecting continuity in local construction practices. In contrast, *berugaq* in East Bayan exhibits a hybrid material composition, characterized by the use of zinc roofing and metal connectors while retaining timber structural elements.

Table 1. Comparative analysis of *berugaq* transformation

Aspect	Karang Bajo	East Bayan
Material Use	Predominantly traditional (bamboo, thatch, timber)	Hybrid (timber structure with zinc roofing and metal connectors)
Construction Technique	Traditional joinery using wooden dowels	A combination of traditional structure and modern fastening systems
Availability	Relies on locally sourced natural materials	Increasing dependence on market-available materials
Maintenance	Higher maintenance is accepted as part of tradition	Preference for low-maintenance materials
Cultural Meaning	Strongly preserved and embedded in practice	Partially retained alongside practical considerations
Driving Factors	Cultural continuity and inherited knowledge	Practicality, durability, cost efficiency, and availability

Table 2. Identified themes in material selection

Theme	Karang Bajo	East Bayan	Interpretation
Practicality	Less emphasized; traditional methods are maintained despite complexity	Strongly emphasized; preference for efficient construction methods	Indicates a shift toward efficiency-driven decision-making in East Bayan
Availability	Relies on locally sourced natural materials	Increasing dependence on market-available materials	Reflects transition from local resource reliance to market-oriented supply
Maintenance	High maintenance is accepted as part of tradition	Preference for low-maintenance materials	Suggests differing tolerance toward upkeep in relation to cultural values
Cultural Meaning	Strongly preserved through material continuity	Partially retained despite material changes	Shows that cultural meaning can persist even with material transformation

Community perspectives also reflect these differences and point to several recurring considerations in material selection. Residents in Karang Bajo emphasize the importance of maintaining traditional materials as part of cultural practice, despite the higher maintenance requirements. Meanwhile, residents in East Bayan highlight practicality, durability, and cost efficiency as key considerations in material selection. These differing perspectives suggest a shift from preservation-oriented approaches toward more adaptive strategies in response to changing material conditions. These patterns are consistent with recent research on the regenerative sustainability of traditional architecture, where material transformation is framed as a synergistic 'material coupling' (Yang et al., 2026). In this approach, locally grounded ecological materials are integrated with translated spatial prototypes (such as the 'house–forest–field–water' structure) to satisfy modern environmental and low-carbon requirements while ensuring the continuity of traditional architectural forms.

These observations indicate contrasting tendencies between preservation-oriented practices and adaptive material strategies in response to contemporary needs. This contrast illustrates how material choices are shaped not only by technical and

economic considerations, such as availability and maintenance, but also by differing cultural priorities within each community. This approach reflects a form of adaptive continuity, where traditional systems are not replaced but reactivated through selective additions and subtractions (Ordóñez-Castañón & Cunha Ferreira, 2024). This method ensures that new functions remain compatible with inherited values while allowing the architecture to evolve within modern contexts. These differences can be further understood through a thematic comparison, as summarized in Table 1.

The analysis of interview data with residents reveals several key themes influencing material selection, as summarized in Table 2. These themes reflect recurring considerations expressed by participants, including practicality, availability, maintenance, and cultural meaning. The identification of these themes is based on consistent responses across informants and supported by field observations. Presenting these themes explicitly helps to clarify how material decisions are shaped in both Karang Bajo and East Bayan.

3.4. Discussion

The findings indicate that material transformation in *berugaq* structures is not merely a technical adaptation but part of a broader negotiation of cultural identity in response to modernization. The comparison between Karang Bajo and East Bayan reveals two related approaches: preservation-oriented continuity and adaptive transformation.

East Bayan demonstrates a hybrid approach by combining traditional timber structures with modern materials such as zinc roofing and metal connectors. This transformation is driven by practical considerations, including durability, availability, and lower maintenance requirements. Although similar patterns have been reported in other vernacular contexts (Stolz, 2022), the findings suggest that material change is not simply a process of replacement but a selective adaptation in which key structural and spatial elements are retained. Material transformation does not necessarily result in the loss of cultural identity. Despite changes in material composition, the *berugaq* in East Bayan continues to function as a communal space and retains its symbolic role within the Sasak cultural system. This supports the argument that vernacular architecture can accommodate change while maintaining its cultural significance (Teba & Di Raimo, 2025).

Based on these observations, this study proposes the concept of *adaptive continuity*, defined as the preservation of traditional architectural elements, functions, and meanings while building components are adjusted to evolving ecological, economic, and social conditions. In the Lombok *berugaq*, this is reflected in the persistence of its communal function and structural logic despite the adoption of modern roofing materials and treated timber for practical reasons.

This concept contributes to the understanding of vernacular transformation by bridging the dichotomy between preservation and change, a perspective increasingly supported by literature that views traditional dwellings as “living heritage” sustained through adaptive authenticity and continuous negotiation (Alarbeed & Lakra, 2025).

Rather than opposing conditions, preservation and change coexist through ongoing adaptation. The comparison between Karang Bajo and East Bayan further suggests that the sustainability of vernacular architecture depends not only on environmental and technical factors but also on community values and site-specific contexts (Matar et al., 2023). This underscores the need for a principle-based framework that incorporates cultural strategies embedded in traditional built environments. The findings suggest that cultural identity can be maintained through multiple pathways, ranging from conservation to transformation. This challenges the assumption of a single preservation model and highlights the importance of context-specific adaptation in sustaining vernacular architecture.

4. Conclusion

This study examined material transformation in *berugaq* structures in Bayan, North Lombok, through a comparative analysis of Karang Bajo and East Bayan. The findings reveal two distinct responses to modernization. Karang Bajo largely maintains traditional materials such as bamboo and thatch, whereas East Bayan adopts a hybrid approach through the integration of zinc roofing and metal connectors. These differences indicate that material transformation is shaped not only by technical and environmental considerations but also by socio-economic conditions and community values.

The study demonstrates that changes in building materials do not necessarily undermine the cultural role of the berugaq. Instead, traditional functions, meanings, and social roles can be maintained through a process of adaptive continuity, in which contemporary materials are incorporated while key architectural and cultural attributes remain intact. This finding contributes to discussions on vernacular transformation by highlighting the capacity of traditional architecture to respond to changing needs without losing its cultural relevance. From a practical perspective, cultural preservation should focus not solely on retaining original materials but also on supporting adaptive use that reflects local needs, resources, skills, and economic capacities.

This study has several limitations, including the small number of case studies and its reliance on qualitative methods. Future research could expand the geographical scope, include different cultural settings, and incorporate quantitative approaches to evaluate material performance and long-term transformation processes.

Acknowledgement

This research was supported (funded) by LPDP and BRIN. The authors gratefully acknowledge the financial assistance provided through *the RIIM Ekspedisi* Scheme with contract number: 162/IV/KS/08/2025 and 348/LPPM-Pen/Eks, which made the fieldwork and preparation of this manuscript possible.

References

Alarbeed, B. Y., & Lakra, H. S. (2025). Living Heritage: Transformations and Adaptations of Vernacular Houses to Contemporary Needs in Sweida, Southern Syria. *ISVS E-Journal,* 12(6), 26. https://doi.org/10.61275/ISVSej-2025-12-06-03

Alnaim, M. M. (2025). Navigating Paradoxes in Traditional Architecture: Balancing Heritage, Modernity, and Urban Social Dynamics. *Journal of Asian Architecture and Building Engineering*, 1–21. https://doi.org/10.1080/13467581.2025.2579674

Baglioni, E. (2011). *Sustainable Vernacular Architecture: The Case of the Draa Valley Ksur* (Morocco). https://api.semanticscholar.org/CorpusID:198955745

Formolly, A., & Saraei, M. H. (2024). Socio-Cultural Transformations in Modernity and Household Patterns: A Study on Local Traditions Housing and The Impact And Evolution Of Vernacular Architecture In Yazd, Iran. City. *Territory and Architecture*, 11(1), 15. https://doi.org/10.1186/s40410-024-00236-6

Lestari, T. A. (2025). Identification of Biophilic Patterns in the Vernacular Architecture of Kampung Naga. *Review of Urbanism and Architectural Studies*, 23(1), 91–102. https://doi.org/10.21776/ub.ruas.2025.023.01.9

Liang, W., Ahmad, Y., & Mohidin, H. H. B. (2023). The Development of the Concept of Architectural Heritage Conservation and Its Inspiration. *Built Heritage*, 7(1), 21. https://doi.org/10.1186/s43238-023-00103-2

Matar, F., Palaiologou, F., & Richards, S. (2023). Urban Sustainability Assessment for Vernacular and Traditional Built Environments. *Journal of Urban Management*, 12(2), 129–140. https://doi.org/10.1016/j.jum.2023.01.001

Mouraz, C. P., Ferreira, T. M., & Silva, J. M. (2023). Building Rehabilitation, Sustainable Development, and Rural Settlements: A Contribution to the State of the Art. *Environment, Development and Sustainability*, 26(10), 24937–24956. https://doi.org/10.1007/s10668-023-03664-5

Mufidah, M., Murti, F., Khosyati, K. E., Agustin, C. P., & Rofiq, A. R. P. A. (2023). Lantai Panggung Untuk Efisiensi Energi Pada Rumah Deret Di Tropis Lembap. *Review of Urbanism and Architectural Studies*, 21(1), 52–61. https://doi.org/10.21776/ub.ruas.2023.021.01.6

Naser, Z. D., & Mohammadi, M. K. (2012). Comparison Between Traditional and Modern Architectural Identity. *American Journal of Engineering Research*.

Ordóñez-Castañón, D., & Cunha Ferreira, T. (2024). Toward the Adaptive Reuse of Vernacular Architecture: Practices from the School of Porto. *Heritage*, 7(3), 1826–1849. https://doi.org/10.3390/heritage7030087

Pardo, J. M. F. (2023). Challenges and Current Research Trends for Vernacular Architecture in a Global World: A Literature Review. *Buildings*, 13(1), 162. https://doi.org/10.3390/buildings13010162

Rahim, M., Munir, A., Marasabessy, F., & Darmawijaya, D. (2023). Local Wisdom and Sustainable Features of Tidore Vernacular Architecture. *Civil Engineering and Architecture*, 11(2), 531–549. https://doi.org/10.13189/cea.2023.110201

Stolz, R. (2022, July 28). Transforming-Houses-in-Southeast-Asia.-New-Materials-Aspirations-and-Change-2. *12th Conference of the European Association for Southeast Asian Studies (EuroSEAS)*. Ecole des Hautes Etudes en Scieces Sociales (EHESS).

T.A.K., A. A. A. R. (2022). Karakter Spasial Ruang Publik sebagai Tempat Ketiga Studi Kasus: Pasar Seni dan Wisata Gabusan. *Review of Urbanism and Architectural Studies*, 20(1), 98–108. https://doi.org/10.21776/ub.ruas.2022.020.01.10

Tamura, J. (2024). Between Tradition and Modernity: The Sociospatial Dynamics of Japanese Residential Architecture from Pre-War to Present. *Architecture*, 4(4), 802–819. https://doi.org/10.3390/architecture4040042

Teba, T., & Di Raimo, A. (2025). *Conservation of Architectural and Urban Heritage*. Springer Cham. https://doi.org/10.1007/978-3-031-71145-9

Vitasurya, V. R., Suman, M. P., Pudianti, A., Setyonugroho, G. A., Rudwiarti, L. A., Shiraishi, H., & Wakita, Y. (2024). Development of a Traditional-Based Homestay Typology in Bayan Village, North Lombok Regency, West Nusa Tenggara. *ARTEKS: Jurnal Teknik Arsitektur*, 9(2), 255–266. https://doi.org/10.30822/arteks.v9i2.3357

Wahyudi, D. S. (2025). Revealing Ecological Values in Traditional Sasak Bale Tani for Culturally-Rooted Design Innovation. *Review of Urbanism and Architectural Studies*, 23(1), 117–127. https://doi.org/10.21776/ub.ruas.2025.023.01.11

Wibowo, A. P. (2020). Changes in the Use of Building Materials in Traditional Houses in Indonesia. In M. Awang & M. R. Meor M Fared (Eds.), *ICACE 2019* (pp. 71–78). Springer Singapore.

Yang, Y., Zhang, M., Yao, X., Zhang, M., & Zhang, Y. (2026). Spatial Translation and Material Coupling: A Synergistic Methodology for Driving the Sustainable Regeneration of Vernacular Architecture. *Sustainability*, 18(4), 1740. https://doi.org/10.3390/su18041740

Zong, J., Wan Mohamed, W. S., Zaky Jaafar, M. F., & Ujang, N. (2025). Sustainable Development of Vernacular Architecture: A Systematic Literature Review. *Journal of Asian Architecture and Building Engineering*, 24(5), 3558–3574. https://doi.org/10.1080/13467581.2024.2399685