



KAMPUS
WAKAF



CENTER FOR
KNOWLEDGE & UNDERSTANDING OF
TROPICAL ARCHITECTURE & INTERIOR
KUTAI



eISSN : 3030-5543

The 16th Regional Symposium of The Malay Archipelago

16TH SIMPORA

International Conference

Religion, Traditions and Local Wisdom

Proceedings International **SYMPOSIUM NUSANTARA**

Organised by:

Centre for Knowledge and Understanding of Tropical Architectural and Interior (KUTAI)
Universiti Teknologi MARA Perak Branch
Seri Iskandar Campus, Perak, MALAYSIA



**PROCEEDINGS OF THE 16TH REGIONAL
SYMPOSIUM OF THE MALAY ARCHIPELAGO
SIMPORA XVI: 2025**

Organised by:

Centre for Knowledge and Understanding of Tropical Architectural and Interior (KUTAI)
Universiti Teknologi MARA Perak Branch
Seri Iskandar Campus, Perak, MALAYSIA

Diterbitkan oleh:

Unit Penerbitan UiTM Perak

Alamat:

Unit Penerbitan UiTM Perak,
Pejabat Jaringan Industri, Masyarakat dan Alumni (PJIMA)
Universiti Teknologi MARA, Perak Branch,
32610 Seri Iskandar Perak, Malaysia.

05-3742716

uitmperakpress@gmail.com

© Unit Penerbitan UiTM Perak, 2025

All rights reserved. No part of this publication may be reproduced, copied, stored in any retrieval system, or transmitted in any form or by any means; electronic, mechanical, photocopying, recording, or otherwise; without permission on writing from the director of Unit Penerbitan UiTM Perak, Universiti Teknologi MARA, Perak Branch, 32610 Seri Iskandar Perak, Malaysia.

Perpustakaan Negara Malaysia

Cataloguing in Publication Data

No e- ISSN: 3030-5543

Cover Design: Richard Mareno

Typesetting : Dr Nur Huzeima Mohd Hussain

Dr Wan Faida Binti Wan Mohd Azmi

**PROCEEDINGS OF THE 16TH REGIONAL SYMPOSIUM
OF THE MALAY ARCHIPELAGO
SIMPORA XVI: 2025**

EDITOR-IN-CHIEF

Dr Nur Huzeima Mohd Hussain

EDITORS & REVIEWERS

Associate Professor Dr Kartina Alauddin
Associate Professor Sr Dr Yuhainis Abd Talib
Dr Wan Faida Wan Mohd Azmi
Dr Lilawati Ab Wahab
Dr Suriati Ahmad
Dr. Ir. Cut Azizah, S.T., M.T
Ir. Zuraihan, S.T., M.T. (L)
Ir, Richard Mareno, S.T., M.T. IPP

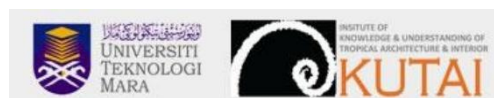
PROOFREADERS

Pn Noraziah Azizan
Pn Farahidatul Akmar Awaludin

Organized by;

Centre for Knowledge and Understanding of
Tropical Architectural and Interior (KUTAI)

Universiti Teknologi MARA Perak Branch
Seri Iskandar Campus, Perak, MALAYSIA



SIMPORA XVI 2025: MAIN ORGANISING COMMITTEE

PATRON

YBhg. Profesor Datuk Ts. Dr. Shahrin bin Sahib @ Sahibuddin, FASc (VICE CANSELOR UiTM)

ADVISOR

Associate Professor Dr Nur Hisham Ibrahim (Rector UiTM Perak)

CHAIRMAN I

Associate Professor Dr Mohd Sabrizaa Abd Rashid (KUTAI UiTM Perak)

CHAIRMAN II

Hakim Muttaqim, B.Soc.,Sc.,S.H.,M.Ec.Dev.,AFA (Universitas Almuslim)

SIMPORA XVI: 2025 CONFERENCE & DINNER

Ir.Richard Mareno, S.T.,M.T., IPP

INTERNATIONAL STUDENT WORKSHOP

Ir. Idayani, S.T.,M.T

EXCURSION

Dr. Ir. Cut Azizah, S.T., M.T

SECRETARY

Ir. Zuraihan, S.T.,M.T.

Ir. Maysa Fitri, S.ST., M.T

TREASURER

Rudi Juli Saputra, M.Pd

Sriyanti, S.E

GRAPHIC & PROMOTION

Fitri Muliani, S.Ars., M.T

Mauliana Wahyudi, M.Pd

PUBLICATION

Dr Nur Huzeima Mohd Hussain

Dr Wan Faida Wan Mohd Azmi

MOU/MOA/COLLABORATION

Muhammad Yanis, S.T., M.T

Shaumil Hadi, M.A

WORKSHOP MODULE

Prof. Dr. Cut Dewi, S.T., M.Sc (L)
Dr. Ir. Laina Hilma Sari, S.T., M.Sc

FIELDWORK

M. Cahyo Novianto, S.T. (JAAI)
Ir. Royanna Sakura, S.ST., M.S.N

DOCUMENTATION

Muzammil, S.I.kom
Suherman, S.Kom

LOGISTIC

Muhammad Rizal, M.Si (L)
Pemda (Kabupaten Bireuen)

BANQUET

Muhammad Darwis, M.Pd (L)
Kumita, S.T.,M.T

REGISTRATION & KIT

Marisa Hajrina, S.Ars, M.T
Tira Ayudya Halisya, S.P.W., M.Si

MASTER OF CEREMONY (MC)

Dr. Sri Wahyuni, M.Si
Azka Rizkina, S.E., M.Si

MODERATOR

IDr Dr Othman Mohd Nor
Dr. Silvi Listia Dewi, M.Pd
Dr.rer.nat. Ernawita, M.Sc

SPECIAL TASK

Dr. MARWAN, M.Pd

KUTAI DELEGATION

Associate Professor Dr Mohd Sabrizaa Abd Rashid
Professor Dato' Dr. Abdullah Mohamad Said
IDr Dr Othman Mohd Nor
Dr Lilawati Ab Wahab
Dr Iryani Abd Halim Choo
Associate Professor Sr Dr Yuhainis Abd Talib
Associate Professor Dr Shahrul Yani Said
Dr Salwa Ayob
Dr Mawar Masri
Nor Idayu Ibrahim

SIMPORA XVI 2025: KEYNOTE SPEAKERS

KEYNOTE SPEAKER 1

DR. KELLY REED,
OXFORD BROOKES UNIVERSITY

KEYNOTE SPEAKER 2

PROFESOR DATO' DR. ABDULLAH MOHAMAD SAID
UNIVERSITY TEKNOLOGI MARA, PERAK BRANCH, MALAYSIA

RESILIENT VERNACULARITY: ARCHITECTURAL SHIFTS OF RANTAU MINANGKABAU TRADITIONAL HOUSES IN PAUH, PADANG, INDONESIA

Desy Aryanti^{1*}, Othman Mohd Nor², Mohd Sabrizaa Abd Rashid³

¹*Department of Architecture, Faculty of Civil Engineering and Planning, Universitas Bung Hatta, Padang, INDONESIA*

^{2,3}*Centre for Knowledge & Understanding of Tropical Architecture & Interior (KUTAI), Faculty of Architecture, Planning & Surveying, Universiti Teknologi Mara (UiTM), Perak Branch, MALAYSIA*

Corresponding Author: desyaryanti@bunghatta.ac.id*

Abstract: Architecture is more than protection—it is an evolving story of how people interact with their environment and maintain identity through built expression. In Minangkabau society, the longstanding custom of merantau (outmigration) has not only shaped social life but also influenced the evolution of traditional houses. In Padang's Pauh district, an unusual variety of Rumah Gadang has developed: the Rumah Gadang Kajang Padati (RGKP), demonstrating both continuity and discontinuity in vernacular architecture. This qualitative case study follows a field-observation method, in partnership with interviews with local cultural personalities and architectural documentation via measured drawings. Architectural morphology is the analytical framework within which the twelve fundamental principles of the Rumah Adat Minangkabau (RAM) from the highlands (Darek) are compared alongside twenty-one RGKP dwellings in the Rantau context. The outcome indicates that while a number of prominent elements—such as roof shape and orientation and spatial arrangement—have changed, many of the symbolic and matrilineal attributes remain ingrained. These modifications indicate resilience rather than deterioration of the culture. Ultimately, RGKP is an example of how vernacular architecture endures, adapting thoughtfully within fluctuating socio-environmental circumstances while maintaining hold on those strands of culture which define it.

Keywords: vernacular architecture, Minangkabau, Rumah Gadang Kajang Padati, architectural morphology, cultural resilience

INTRODUCTION

Vernacular architecture is a living cultural record, adapting to environmental, socio-economic, and communal changes while preserving symbolic meaning (Oliver, 2006; Rapoport, 1969). In Minangkabau culture, guided by *adat basandi syarak, syarak basandi Kitabullah* (Fachri, 2013; Nasroen, 1957), the Rumah Gadang embodies matrilineal kinship, environmental adaptation, and the merantau tradition (Kato, 1982; Naim, 1984). In Pauh, Padang, migration and urban constraints shaped the Rumah Gadang Kajang Padati (RGKP), with simplified gable roofs resembling ox-cart canopies, replacing the highland's elaborate gonjong. While forms, materials, and layouts evolved, core matrilineal customs endure (Aryanti, 2025).

This study uses an architectural morphology approach to compare twelve traditional Rumah Adat Minangkabau (RAM) principles with 21 RGKP cases, examining roof forms, spatial organisation, orientation, ornamentation, materials, and techniques. The analysis reveals mechanisms of resilient vernacularity—balancing tradition with modern demands—and addresses a research gap on rantau architecture. The findings deepen understanding of cultural continuity in adaptive design and offer a framework for conserving tangible and intangible Minangkabau heritage.

Figure 1 depicts the Minangkabau region in West Sumatra, showing the Darek (highland heartland) and Rantau (lowland peripheries). The Luhak Nan Tigo—Tanah Datar, Agam, and Lima Puluh Kota—forms the cultural core, while arrows trace migration flows to the Rantau, including Negeri Sembilan, Malaysia, linking geography, tradition, and mobility in shaping identity.

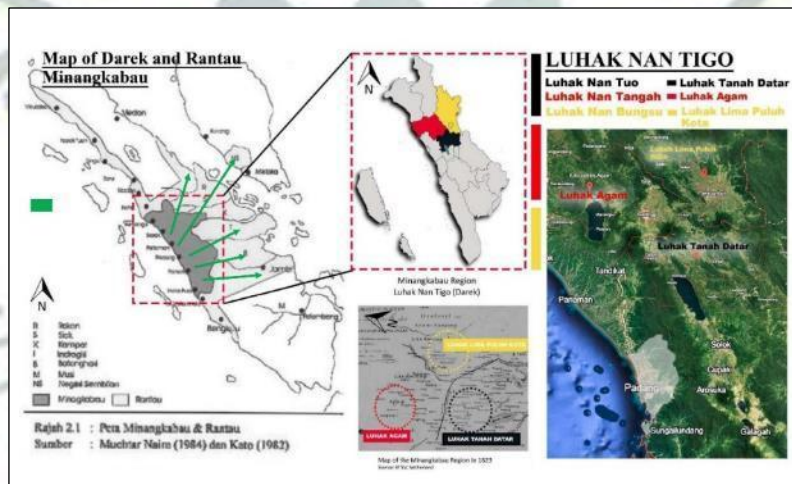


Figure 1: Map of Darek and Rantau Minangkabau

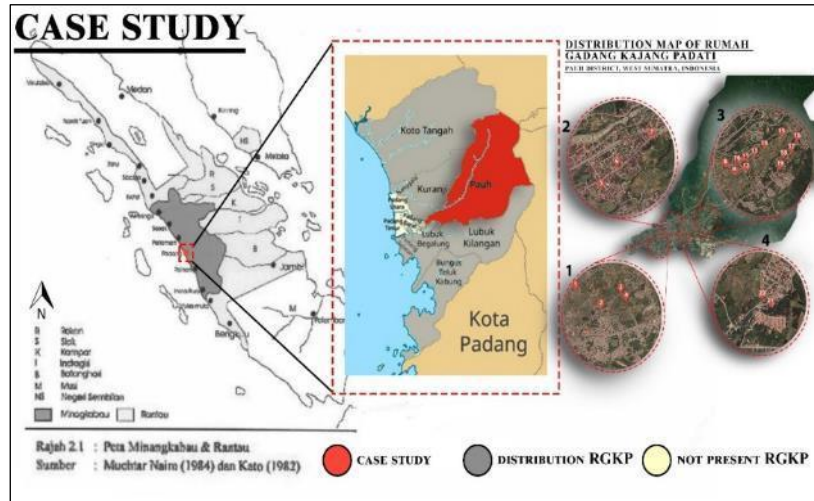


Figure 2: Map of Pauh and distribution of RGKP

Figure 2 highlights RGKP distribution in Pauh, Padang. The main map situates Pauh within the Minangkabau region, a globe shows its location in Padang, and the distribution map marks RGKP sites (red circles), underscoring local heritage preservation.

Resilient Vernacularity

Resilient vernacularity describes the adaptive capacity of traditional architecture to respond to environmental, socio-cultural, and economic changes while retaining its cultural essence (Oliver, 2006; Rapoport, 1969). Vernacular buildings are shaped by local resources, climate conditions, and social systems (Frick, 1996; Waterson, 2012) yet they are not static; rather, they evolve as living heritage (Pradoto, 2020). In many Southeast Asian contexts, resilience manifests through the selective integration of new materials, technologies, and layouts without abandoning symbolic identity (Ng, E., & Lin, 2012). This framework is particularly relevant to understanding the transformation of Rumah Gadang Kajang Padati (RGKP) in Pauh, where adaptation reflects both necessity and cultural continuity.

Traditional Minangkabau Architecture

The Rumah Adat Minangkabau (RAM) is an architectural embodiment of the matrilineal kinship system and the philosophy adat basandi syarak, syarak basandi Kitabullah (Fachri, 2013; Nasroen, 1957). It is distinguished by its gonjong roof, raised timber structure, and intricate carvings (*ukiran*) that encode cultural values (Franzia, E., Bahauddin, A., & Awaluddin, 2015; Navis, 1984). Spatial organisation serves communal and ceremonial functions, with the main hall (*tengah rumah*) and sleeping rooms (*biliak*) designated for female family members. In the rantau context, these principles remain important, but their physical expression can

shift due to resource limitations, the availability of construction skills, and local climatic conditions.

Transformation in the Rantau Context

Migration (*merantau*) has historically shaped the cultural and architectural landscapes of Minangkabau communities (Kato, 1982; Naim, 1984). In rantau regions such as Pauh, restricted land parcels, urban growth, and new material economies have influenced the evolution of RGKP. This typology departs from the highland RAM by adopting the gable-like *kajang padati* roof, reduced ornamentation, and hybrid construction materials such as reinforced concrete and corrugated zinc (Aryanti, 2025). Despite these changes, key symbolic values—orientation, communal space, and matrilineal inheritance—are preserved, underscoring the resilience of vernacular form (Pradoto, 2020).

Conceptual Framework for Analysis

This study applies an architectural morphology approach, adapted from (Aryanti, 2014, 2025; Aryanti et al., 2022; Asri, 2004), to analyse resilient vernacularity by breaking built form into variables—roof form, spatial layout, orientation, ornamentation, materials, construction techniques, and socio-cultural functions—and tracing their adaptation to changing contexts. As Rapoport (1969) noted, morphology reveals the interplay among environment, society, and symbolism, making it vital for studying architectural change. Regional parallels—from Balinese compounds (Cole, 2015) to Javanese *joglo* (Handinoto, 2010) stilt houses (Delanghe, 2018)—show adaptation as a negotiated process, not linear change, aligning with (Oliver, 2006) and (Sharma, 2017) notion of resilient vernacularity. In Minangkabau architecture, symbolic logics in spatial order and roof form endure despite evolving materials and methods (Heath, 2009).

Diaspora contexts like Pauh illustrate this dynamic. Migration (*merantau*) circulates ideas and practices (Kato, 1982; Naim, 1984), as seen in adaptations in Negeri Sembilan (Said, S., & Musa, 2019). The Rumah Gadang *Kajang Padati* retains cultural identity through its *kajang padati* roof while responding to urban constraints via spatial simplification, material substitution, and reduced ornamentation (King, 2008). The framework integrates: (1) morphological comparison of RAM and RGKP across twelve variables, (2) assessment of symbolic and functional continuity, and (3) analysis of environmental and economic adaptations—offering a holistic and replicable model for studying resilient vernacularity in diaspora settings.

2. METHODOLOGY

This study uses a qualitative descriptive method to examine resilient vernacularity in Rumah Gadang *Kajang Padati* (RGKP) of Pauh, Padang, focusing on how traditional dwellings adapt while preserving cultural identity. A purposive sample of 21 RGKP representing various clans ensured architectural authenticity. Data collection, guided by Asri (2004) and combining field

surveys, interviews with homeowners and customary leaders, and historical document analysis, involved 12 Rumah Adat Minangkabau (RAM) variables. These variables structured the analysis of physical and cultural adaptations through data reduction, spatial and clan mapping, and triangulation, revealing patterns of continuity and change that sustain Minangkabau architectural identity in rantau contexts.

3. RESULT AND DISCUSSION

3.1 Roof Form: Evolution and Symbolism

The Rumah Gadang Kajang Padati (RGKP) in Pauh features the kajang padati roof, adapted from the canopy of a traditional ox cart. Unlike the dramatic gonjong of highland Rumah Adat Minangkabau (RAM), it is lower-pitched, compact, and suited to the coastal climate, yet retains cultural recognisability. All documented RGKP roofs use corrugated zinc, replacing traditional thatch for durability—reflecting a broader Southeast Asian trend where material changes ensure form survival (Heath, 2009; Sharma, 2017). Residents regard the roof as a diasporic marker of Minangkabau identity, shaped by both heritage and environmental demands. Steeper gables and shorter eaves address heavy rain, wind, and salt-laden air, paralleling adaptations in coastal Malay houses. Thus, the kajang padati roof embodies resilient vernacularity—preserving symbolic meaning while pragmatically responding to the rantau context.



Figure 3: The roof form of *darek* and *rantau*

3.2 Spatial Layout: Shifting Patterns of Lanja and Communal Function

The Rumah Gadang Kajang Padati (RGKP) features a simpler spatial layout than the multi-bay Rumah Adat Minangkabau (RAM). Typically arranged into three main lanja—langkan (front), ruang tapi (transition), and ruang tengah (central hall)—with bedrooms along the main axis

and a detached kitchen, it reflects adaptations to smaller urban plots, reduced household sizes, and changing social practices. While spaces are smaller, the sequence preserves the hierarchical logic of the RAM (Asri, 2004), aligning with Rapoport's (1969) view that spatial patterns endure due to social and symbolic imperatives. Detached kitchens, common in coastal Malay and Bugis houses, address fire safety, ventilation, and maintenance efficiency. Economic constraints, limited high-quality timber, and fewer master carpenters further influence simplification. Despite these changes, core cultural functions—guest reception in the langkan and family gatherings in the ruang tengah—remain intact, underscoring RGKP's resilience in maintaining spatial logic and social meaning amid adaptation.

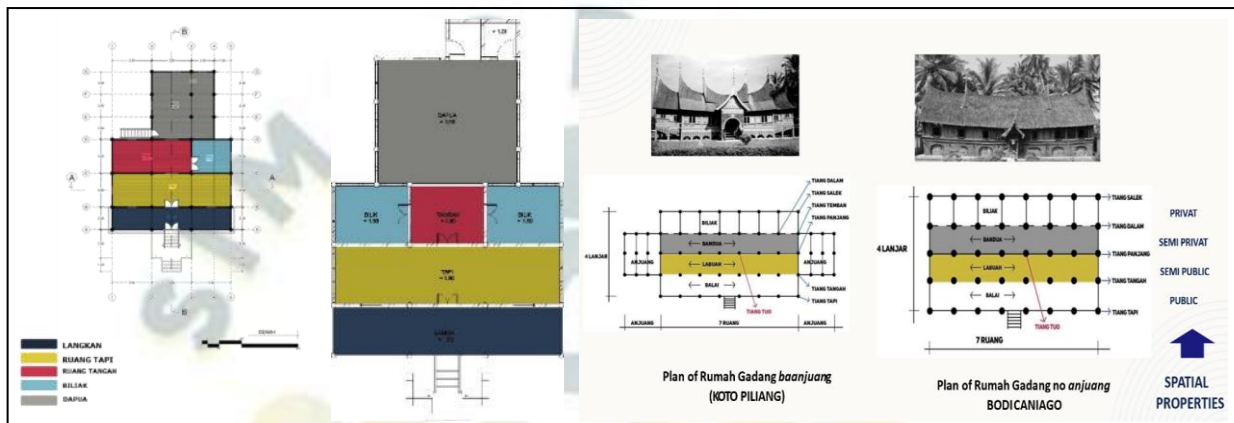


Figure 4: Spatial Layout of RGKP and RAM

3.3 Orientation and Site Response

The orientation of Rumah Gadang Kajang Padati (RGKP) in Pauh reflects a balance between Minangkabau cultural values and the realities of rantau life. While highland Rumah Adat Minangkabau traditionally face Mount Marapi or other sacred landmarks, most RGKP (66.67%) orient toward the Batang Arau River, underscoring its role as both a livelihood resource and a symbolic lifeline. This mirrors patterns in Malay and Bugis waterfront settlements, where water-facing layouts serve practical, climatic, and cultural functions. Variations—such as river-backing houses—arise from topography, land subdivision, and road alignments, yet symbolic “river-facing” identity often persists regardless of physical frontage. Orientation choices also consider flood safety, echoing adaptive practices in the Mekong Delta. Thus, RGKP orientation demonstrates resilient vernacularity: preserving symbolic meaning while accommodating environmental and spatial constraints.

Table 1: Orientation of the house to the river

Orientation of the house to the river	Number of houses	Percentage (%)
Front of the river	14	66,67%
Back of the river	4	19,05 %
Right side of the river	2	9,52%
Left side of the river	1	4,76%
Total Amount	21	100 %

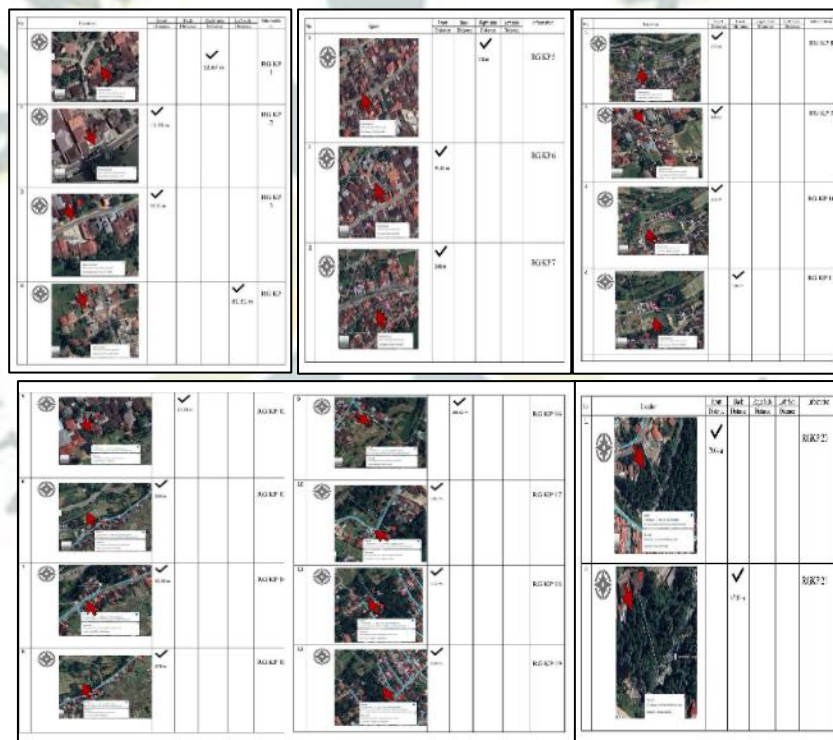


Figure 5: Orientation of the house

3.4 Decorative Elements and Symbolic Expression

In Pauh's Rumah Gadang Kajang Padati (RGKP), decoration is minimal compared to the ornate carvings (*ukiran*) of highland Rumah Adat Minangkabau (RAM). Traditional motifs—rich in symbolic meaning—are often replaced with painted panels, simple patterns, or prefabricated mouldings, largely due to the decline of *tukang tuo* (master craftsmen) and the cost of intricate work. This shift reflects functional conservation (Oliver, 2006), in which essential spatial and structural elements are preserved while ornamentation adapts to resource constraints. Yet symbolic continuity persists through colour schemes and simplified motifs echoing traditional iconography, supported by oral and ritual traditions. Thus, RGKP

decorative minimalism embodies resilient vernacularity, maintaining cultural identity through accessible, adaptive forms.



Figure 6: Decorative Elements of RGKP

3.5 Materials and Construction Techniques

The Rumah Gadang Kajang Padati (RGKP) in Pauh blends traditional Minangkabau construction with adaptive material changes. While highland Rumah Adat Minangkabau (RAM) once used durable timbers and organic roofing, scarcity and cost in the diaspora context have led to cheaper local woods and corrugated zinc, replacing ijuk or rumbia. Key traditions like pasak (wooden peg) joinery persist, ensuring seismic resilience, but declining numbers of tukang tuo have reduced the quality of craftsmanship. Hybrid timber–concrete structures now address flood risk, termites, and durability demands, echoing patterns in other Southeast Asian vernacular houses. These choices reflect selective preservation—maintaining emblematic techniques and aesthetics while adapting materials to urban, coastal realities.

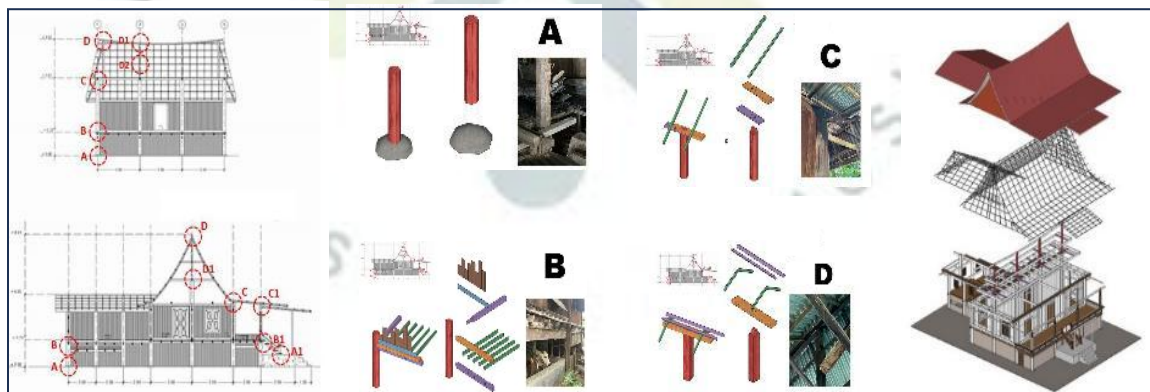


Figure 7: Visual of Structure and Construction

4. CONCLUSION

This study shows that the Rumah Gadang Kajang Padati (RGKP) in Pauh, Padang, exemplifies “resilient vernacularity,” where architectural change reinforces cultural identity through adaptive continuity. Using a twelve-variable architectural morphology framework, it documents transformations in form, space, orientation, decoration, materials, and techniques, revealing adaptations rooted in Minangkabau socio-cultural philosophy. The findings extend vernacular architecture theory by showing that resilience persists in diaspora contexts through selective preservation and strategic adaptation, even under urban

constraints. Methodologically, integrating form-based analysis and socio-cultural interpretation offers a replicable model for studying transitional vernacular architecture across Southeast Asia.

Practically, the findings have direct implications for heritage conservation, urban design, and architectural education:

Heritage Conservation:

Conservation frameworks should recognise that authenticity in vernacular architecture is not static but adaptive. Policies must accommodate material substitutions and spatial reconfigurations arising from local environmental, economic, and social conditions, while safeguarding symbolic and functional elements that carry cultural meaning.

Urban Design:

In rapidly urbanising coastal towns like Pauh, zoning and planning regulations should facilitate the retention of river-facing orientation where possible, integrate flood-resilient construction methods, and incentivise the preservation or reinterpretation of culturally significant roof forms.

Architectural Education:

Training programs for young craftsmen and architecture students should integrate vernacular knowledge systems—such as Minangkabau joinery techniques, spatial symbolism, and adaptive design strategies—into modern building practices, ensuring the transmission of skills and innovation rooted in cultural heritage.

By situating the RGKP within a regional and global comparative context, this study underscores that vernacular architecture is not a relic to be frozen in time, but a living tradition capable of engaging creatively with contemporary realities. The adaptive strategies of the RGKP community—whether in reinterpreting roof symbolism, restructuring spatial layouts, or hybridising materials—offer valuable lessons for sustaining cultural heritage in an increasingly dynamic and interconnected world. Ultimately, the RGKP stands as a testament to the enduring spirit of the Minangkabau diaspora: grounded in tradition, responsive to change, and resilient in the face of shifting socio-environmental landscapes.

5. ACKNOWLEDGMENT

The author would like to express sincere gratitude to Bung Hatta University for the financial support provided for this research. This assistance has been instrumental in facilitating the successful completion of the study. It is hoped that this collaboration will continue to contribute positively to the advancement of knowledge and the preservation of Minangkabau cultural heritage.

REFERENCES

Aryanti, D. (2014). *Tipologi Rumah Tradisional Padang; Studi Kasus : Pauh dan Kuranji, Seminar Internasional Diaspora Minang, Port Dickson Negeri Sembilan, Malaysia.*

- Aryanti, D. (2025). *Architectural Transformation of Rantau Minangkabau Traditional House: Case Study in Pauh, Padang, West Sumatra, Indonesia* (Doctoral dissertation, Universiti Teknologi MARA).
- Aryanti, D., Nor, O. M., Rashid, M. S. A., Nasril, S., & Asmariati, R. (2022). Typology of Padang Traditional House (Rantau Minangkabau) in Pauh, Padang. *Planning Malaysia*, 20(3), 14–24. <https://doi.org/10.21837/PM.V20I22.1123>
- Asri, S. (2004). *Prinsip-prinsip Pembinaan Rumah Adat Minangkabau*.
- Cole, D. (2015). Bali: Spirit of place. In *Singapore: Tuttle Publishing*.
- Delanghe, P. (2018). Stilt house morphology in the Mekong Basin. *Southeast Asian Architecture Review*, 7(2), 112–129.
- Fachri, A. (2013). *Arsitektur Rumah Gadang Minangkabau: Simbolisme, Fungsi, dan Nilai Budaya*. Padang: Andalas University Press.
- Franzia, E., Bahaiddin, A., & Awaluddin, W. (2015). Meaning of carving ornaments on Minangkabau traditional house in West Sumatra, Indonesia. *Mediterranean Journal of Social Sciences*, 6(5), 216–225.
- Frick, H. (1996). *Ilmu Bangunan dalam Arsitektur*. Yogyakarta: Kanisius.
- Handinoto. (2010). Transformasi bentuk rumah tradisional Jawa di perkotaan. *Dimensi Teknik Arsitektur*, 38(2), 79–88.
- Heath, K. W. (2009). Vernacular architecture and regional design: Cultural process and environmental response. In *Oxford: Architectural Press*.
- Kato, T. (1982). *Matriliny and migration. Evolving Minangkabau Traditions in Indonesia*.
- King, R. (2008). The vernacular architecture of Southeast Asia: Tradition, innovation and change. Oxford: *Oxford University Press*.
- Naim, M. (1984). *Merantau pola migrasi suku Minangkabau*.
- Nasroen, M. (1957). *Dasar falsafah adat Minangkabau*.
- Navis, A. A. (1984). *Alam berkembang jadi guru: Adat dan kebudayaan Minangkabau*.
- Ng, E., & Lin, H. (2012). Special issue on urban climate and adaptation. *Building and Environment*, 49, 1–3.
- Oliver, P. (2006). *Built to Meet Needs: Cultural Issues in Vernacular Architecture*. Routledge.
- Pradoto, W. (2020). Resilience in vernacular architecture: Adaptation of local wisdom in Indonesian traditional houses. *Journal of Architecture and Environment*, 19(2), 135–146.
- Rapoport, A. (1969). *House Form and Culture* Prentice Hall Inc. New York.
- Said, S., & Musa, H. (2019). Architectural adaptations in Negeri Sembilan's Minangkabau

houses: Negotiating heritage and modernity. *Pertanika Journal of Social Sciences & Humanities*, 27(1), 487–504.

Sharma, M. (2017). Resilience in vernacular architecture: Theory and practice. *International Journal of Heritage Studies*, 23(7), 604–619.
<https://doi.org/10.1080/13527258.2016.1269365>.

Waterson, R. (. (2012). *Living house: an anthropology of architecture in South-East Asia*. Tuttle publishing.





SIMPORA XVI : 2025