

## Exploring the Vernacular Architecture in the Eastern Commercial and Tourism Districts of Mueang Chiang Mai

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**ABSTRACT—:** This research article aims to analyze the vernacular architecture in the commercial and tourist districts of eastern Chiang Mai, covering the Chang Moi, Wat Ket, and San Pa Khoi districts. The methods of study are field surveys, historical documentation, and architectural analysis focusing on exploring the architectural elements, materials, and design principles that shape the urban environment in Mueang Chiang Mai. The study results identified six vernacular architecture styles in the study areas: wooden houses, wooden shophouses, wooden-concrete houses, wooden-concrete shophouses, concrete houses, and concrete shophouses. First, the vernacular architecture was built mainly from wood, representing the use of natural resources in the settlement area and local wisdom in construction. Second, the vernacular architecture was built with concrete and wood, combining local wisdom in traditional construction with modern construction techniques. Finally, vernacular architecture was built mainly with concrete, which uses both natural and engineering materials, reflecting the adaptation of vernacular architecture to support the popular functional changes over time, resulting in various improvement and developments. Conditions make vernacular architectural styles change from the original but still show the continuity of local wisdom in building, and timeless aesthetics. The prevalence and popularity of vernacular architecture styles found in the study area were 51 wooden houses in the Chang Moi district, 23 wooden-concrete houses in the Wat Ket district, and 8 concrete shophouses in the San Pa Khoi district.

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## **Introduction**

Chiang Mai, located in northern Thailand, is renowned for its rich cultural heritage and unique architectural traditions. The city's historical significance, cultural preservation efforts, traditional building practices, availability of natural resources, cultural exchange, and the impact of tourism have contributed to the abundance of valuable vernacular architecture in Chiang Mai. This architectural landscape showcases the city's cultural heritage and is vital to its enduring appeal as a destination (Tansukanun 2019).

The vernacular architecture in Chiang Mai is closely related to the local climate and natural environment. Traditional buildings incorporate design principles considering ventilation, shading, and rainwater management. Structures are often elevated on stilts to mitigate flooding, while their orientation maximizes natural airflow and minimizes heat gain. The value and importance of vernacular architecture in Chiang Mai lies in its representation of cultural identity, historical significance, architectural diversity, sustainable practices, community engagement, and its contribution to tourism and economic development. Recognizing and appreciating the value of vernacular architecture is crucial for preserving Chiang Mai's unique architectural heritage and ensuring its legacy for future generations (Leaurungreong 2005).

However, the rapid urbanization and development in developed areas often prioritize modern architectural styles and high-rise structures over vernacular architecture. The demand for land and commercial spaces can lead to demolishing or modifying existing vernacular buildings, resulting in the loss of architectural heritage (Thinnakorn, Tandikul, and Inpuntung 2020). The globalization and spread of standardized architectural styles further contribute to the homogenization of urban landscapes, diminishing their diversity and cultural distinctiveness (Suwathcharapinun 2015). To

address these threats, concerted efforts from various stakeholders, including government bodies, preservation organizations, communities, and architects, are necessary. Raising awareness about the value of vernacular architecture, implementing supportive policies, providing financial incentives for restoration and adaptive reuse, and fostering community engagement are essential for preserving and recognizing these invaluable architectural treasures (Suwatcharapinun, et al. 2022).

The study of vernacular architecture in the eastern commercial and tourism districts of Chiang Mai holds significance as these areas have undergone significant development and transformation over time. Understanding the vernacular architecture in this context provides insights into the historical, social, and cultural contexts of Chiang Mai. It contributes to the understanding of the cultural products of local communities. This research article is part of a larger project titled “Adaptation of Urban Vernacular Architecture in the Main Tourist Cities of Thailand,” aimed at creating basic knowledge to guide the preservation and further development of vernacular architecture in Chiang Mai.

In conclusion, the value and importance of vernacular architecture in Chiang Mai stems from its representation of cultural identity, historical significance, architectural diversity, sustainable practices, community engagement, and contribution to tourism and economic development. Preserving and studying vernacular architecture in the face of urbanization and development challenges is essential to maintain the city’s cultural heritage and ensure its continued uniqueness and appeal.

## **Objectives**

This research article aims to analyze the vernacular architecture in the commercial and tourist districts of eastern Chiang Mai, covering the Chang Moi, Wat Ket, and San Pa Khoi districts.

## **Literature Review**

The study of vernacular architecture has gained recognition in the academic sphere since the 19th century, initially focusing on tribal and ethnic architectural practices. Its prominence further increased in the 20th century, particularly with the exhibition “Architecture without Architects,” which led to its acceptance as a legitimate architectural form by scholars and professionals. The concept of vernacular architecture has evolved with modern and postmodern architectural ideas, blending traditional wisdom with contemporary practices (Muadthong, Tovivich, and Panin 2019).

In addition, the study of vernacular architecture has expanded to examine its dynamics and responses to economic, social, and cultural developments. Globalization, consumerism, global warming, and natural disasters have prompted multidisciplinary investigations into the relationship between architecture and environmental forces. This multidisciplinary nature has attracted attention from various fields, including social sciences, anthropology, psychology, philosophy, geography, and environmental studies (Satheinnam and Thungsakul 2016).

Within the Thai context, studying vernacular architecture has gained significance, focusing on the relationship between humans and the environment and formulating diverse architectural styles based on contextual factors. Scholars have proposed educational frameworks to address the challenges and changes encountered in vernacular architecture. These frameworks emphasize an understanding of environmental principles, the dynamics of change, and the integration of different academic disciplines. Past academic works underscore the fundamental aspects and evolution of studying vernacular architecture, highlighting its connection to local wisdom, wherein the designer, builder, and user often belong to the same group. Vernacular architecture is recognized as a dynamic form that adapts and evolves to meet the needs and aspirations of the local society (Oranratmanee 2017).

The literature review particularly emphasizes the significance of studying vernacular architecture within the Thai context, shedding light on the relationship between humans and the

environment, contextual influences on architectural styles, and the necessity for comprehensive educational frameworks. It underscores the importance of integrating diverse academic disciplines and expanding educational approaches to address the challenges and changes that vernacular architecture faces today. Overall, the literature review provides a comprehensive overview of the critical themes, historical context, and interdisciplinary nature inherent in studying vernacular architecture. It serves as a foundation for further research and exploration into vernacular architecture's dynamics, preservation, and significance within various cultural, social, and environmental contexts.

## **Methodology**

The investigation into vernacular architecture within the Eastern Commercial and Tourism Districts of Mueang Chiang Mai, focusing on Chang Moi, Wat Ket, and San Pa Khoi districts, employed a mixed-methods approach. This approach seamlessly integrated qualitative and quantitative research methods comprehensively to understand the subject. The study utilized vernacular architecture surveys and unstructured interviews as its primary data collection tools. Key informants were thoughtfully selected through purposive sampling, considering specific characteristics that rendered them knowledgeable about the study area. The resulting interview data was meticulously analyzed and presented using various techniques, including written descriptions, maps, and illustrative visuals. The process of selecting the population and sample groups involved identifying key informants who deeply understood the study area and were proficient in the Thai language. Joint field surveys were conducted alongside residents with in-depth knowledge of the region. The purposive sampling method was skillfully applied to form two distinct sample groups. Group 1 comprised community leaders, including governance leaders, spiritual figures, religious leaders, and ceremonial leaders, with a ratio of three individuals per area. Group 2 consisted of community residents, with a ratio of ten individuals per area. Thirty-nine key informants participated in the study across the

three areas. The research commenced with an extensive literature review, establishing a robust theoretical framework to understand vernacular architecture in commercial and tourism development comprehensively. This review identified and synthesized essential concepts, theories, and previous research studies relevant to the research topic. Subsequently, site visits were conducted within the study areas, enabling direct observation and documentation of vernacular architecture. These site visits involved meticulous examinations of various types of buildings, encompassing architectural styles, construction materials, and spatial arrangements. Interviews were also conducted with residents and community leaders to acquire valuable insights into the historical context, cultural significance, and contemporary challenges associated with vernacular architecture in the selected districts. In addition to qualitative data collection methods, a survey form was administered to gather quantitative data regarding the number of vernacular architectures in the study area. This quantitative data collection process focused on exploring architectural elements, materials, and design principles that shaped the urban environment in Mueang Chiang Mai. The qualitative data collected from site visits, interviews, and document analysis was analyzed using qualitative techniques such as content analysis and thematic coding. These analytical methods facilitated the identification of common themes, patterns, and distinctive characteristics of vernacular architecture within the study area. Simultaneously, quantitative data from the survey form was analyzed using appropriate statistical methods, yielding meaningful insights and enabling informed conclusions. The research article emphasized the practice of data triangulation, which involves integrating data from multiple sources and utilizing diverse methods to ensure the validity and reliability of the findings. By seamlessly integrating qualitative and quantitative approaches, the study comprehensively analyzed vernacular architecture within the study areas. This analysis shed light on the significance of vernacular architecture within the region's commercial and tourism contexts.

## **Research Result**

### **Exploring the Vernacular Architecture in Chang Moi District.**

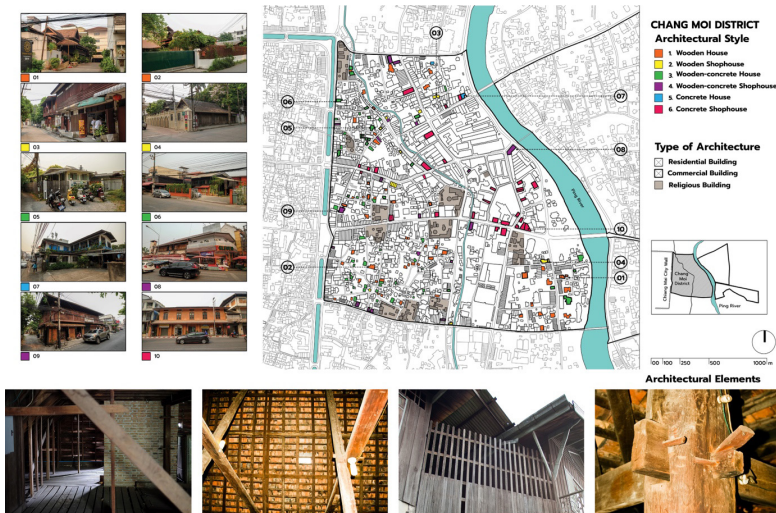
Chang Moi District, located on the eastern bank of the Ping River in Chiang Mai, Thailand, possesses a significant historical and cultural background that contributes to its distinct character and appeal. Originally a part of the ancient Lanna Kingdom from the 13th to the 18th century, Chang Moi played a vital role within the kingdom's fortifications, serving as a crucial district for the defense and administration of the capital city, Chiang Mai. Throughout its history, Chang Moi has been a center of cultural activities closely tied to local traditions, festivals, and ceremonies. The district is renowned for its association with religious practices. It boasts numerous temples and sacred sites, including the historically and spiritually significant Wat Chiang Man, the oldest temple in Chiang Mai (Tansukanun 2023).

As the years progressed, Chang Moi became a bustling commercial and residential hub, capitalizing on its strategic location along the Ping River and proximity to the Old City. Its prominence as a trade and commerce center is evident through its vibrant markets, diverse shops, and lively street life. This economic development has contributed to the district's cultural diversity, comprising both Thai locals and a significant expatriate population. This blending of cultural influences has resulted in a vibrant atmosphere and cosmopolitan character unique to Chang Moi. Moreover, the district's central location and rich cultural offerings have made it a popular tourist destination. Visitors are drawn to Chang Moi's lively markets, street food stalls, traditional craft shops, and art galleries, where they can immerse themselves in the local way of life, savor authentic Thai cuisine and explore the cultural heritage of Chiang Mai (Shummadtayar, et al. 2022).

In summary, the historical significance, cultural heritage, commercial prominence, cultural diversity, and popularity as a tourist destination shape the background of Chang Moi District. Understanding this background allows for a deeper appreciation of the district's unique character and its significant contribution

to the overall allure of Chiang Mai.

The study's findings reveal a rich and diverse range of vernacular architecture in Chang Moi District. The survey identified 51 wooden houses, 9 wooden shophouses, 50 wooden-concrete houses, 18 wooden-concrete shophouses, 2 concrete houses, and 29 concrete shophouses. These buildings represent distinct architectural styles and construction materials commonly found within the district (Figure 1).



**Figure 1:** Map illustrating the exploration of vernacular architecture in Chang Moi District.

Modified Map Incorporating Tansukanun's Scholarly Findings in 2023

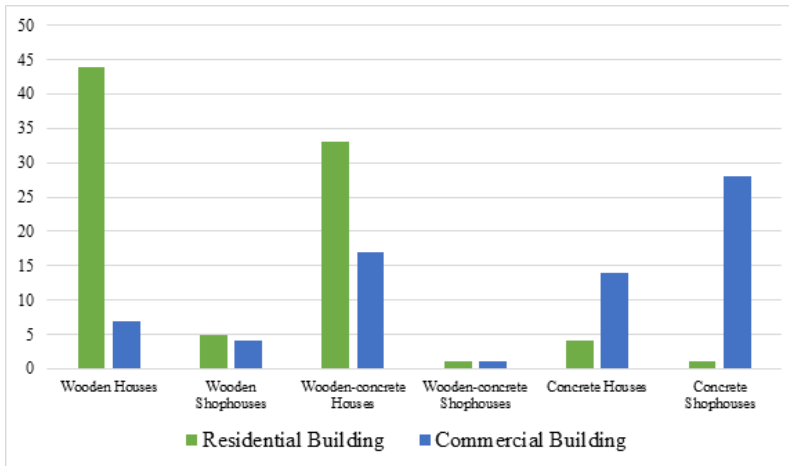
Wooden houses and shophouses emerge as significant components of the vernacular architecture in Chang Moi District. These structures showcase characteristic features of traditional Lanna architecture, including intricate wood carvings, steep roofs, and elevated floor levels. The prevalent use of wood in these build-



ings exemplifies the local craftsmanship and the adaptation to the climatic conditions specific to the region.

In recent years, a notable trend has been the emergence of hybrid structures that combine wood and concrete elements. Wooden-concrete houses and shophouses represent a contemporary approach that integrates traditional aesthetics with modern construction techniques. While wooden houses and shophouses dominate the architectural inventory in Chang Moi District, concrete houses and shophouses constitute a relatively smaller proportion. These concrete structures signify the influence of urbanization and modernization on the district's-built environment.

The distribution of these vernacular buildings is scattered throughout Chang Moi District, contributing to the display of its rich architectural heritage and cultural diversity. The wooden houses and shophouses are predominantly concentrated in the older sections of the district, reflecting the area's historical legacy. In contrast, wooden-concrete and concrete structures are more prevalent in areas that have undergone urban development and modernization (Chart 1).



**Chart 1:** Comparative analysis of the quantity of vernacular architectures observed in Chang Moi District.

### Exploring the Vernacular Architecture in Wat Ket District.

Wat Ket District, situated in Chiang Mai, Thailand, possesses a significant historical and cultural background that provides valuable insights into its development and cultural heritage. The district's history can be traced back to the ancient Lanna Kingdom, which flourished from the 13th to the 18th century. As an integral part of the capital city, Chiang Mai, Wat Ket played a crucial role in regional administration and cultural life. Its location along the Ping River established it as a prominent trading hub, facilitating connections between Chiang Mai and neighboring regions (Tansukanun 2023).

The district derives its name from the leading cultural and religious site, Wat Ket Temple, officially known as Wat Ket Karam. This temple holds immense historical significance and is renowned for its architectural beauty. It showcases the traditional

Lanna architectural style through its main vihara, chedi, and ordination hall. Wat Ket has a rich heritage as a center of trade and commerce. Its strategic position along the Ping River facilitated the transportation of goods, attracting merchants and traders from surrounding areas. The river was vital for exchanging goods, contributing to the district's economic prosperity (Tansukanun and Daungthima 2017).

Wat Ket is characterized by its cultural diversity, housing various ethnic communities, including Thai locals, the descendants of Chinese migrants, and other minority groups. This multicultural environment has shaped the district's unique cultural fabric, evident in its architecture, cuisine, and festivals. The district boasts a rich tradition of craftsmanship, with skilled artisans preserving and passing down traditional crafts such as woodworking, silverware, and textile production. Craft shops and workshops in Wat Ket are renowned for their high-quality products, attracting visitors interested in authentic handcrafted items. In recent years, efforts have been made to preserve the cultural heritage of Wat Ket. Numerous organizations and community initiatives have focused on restoring and revitalizing historical buildings, promoting cultural activities, and raising awareness about the district's significance (Siriwatchaiporn and Issarathumnoon 2018).

In summary, the background of Wat Ket District showcases its historical importance within the ancient Lanna Kingdom, its association with the renowned Wat Ket Temple, its role as a trading and commercial hub, its cultural diversity, and the preservation efforts dedicated to safeguarding its rich heritage. Understanding this background enables a deeper appreciation of the district's cultural richness and its significant contribution to the historical and cultural landscape of Chiang Mai.

The research findings present a diverse range of vernacular architecture in Wat Ket District. The study documented 21 wooden houses, 15 wooden shophouses, 23 wooden-concrete houses, 11 wooden-concrete shophouses, 2 concrete houses, and 3 concrete shophouses. These buildings represent distinct architectural styles and construction materials commonly observed in

the district (Figure 2).



**Figure 2:** Map illustrating the exploration of vernacular architecture in Wat Ket District. Modified Map Incorporating Tansukanun’s Scholarly Findings in 2023

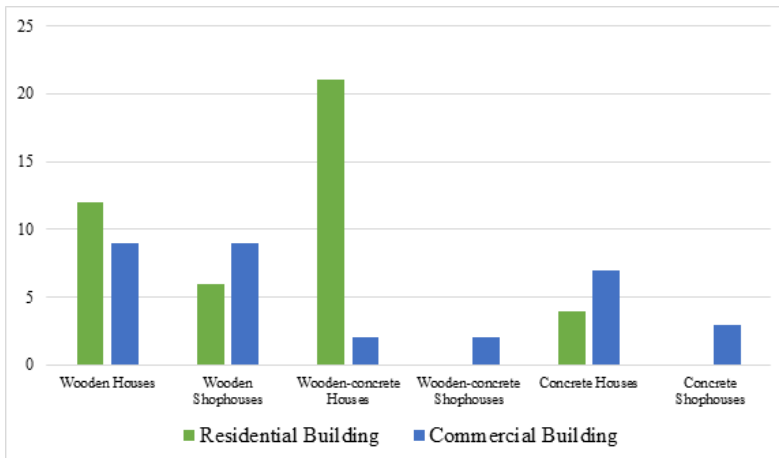
Like Chang Moi, wooden houses and shophouses hold significant prominence in the vernacular architecture of Wat Ket District. These structures often exhibit characteristic features of the Lanna architectural style, including intricate wood carvings, steeply pitched roofs, and raised floor levels. The substantial utilization of wood in these buildings showcases local craftsmanship and reflects their adaptation to the prevailing climatic conditions.

In recent years, there has been a noticeable emergence of hybrid structures that combine elements of both wood and concrete. Wooden-concrete houses and shophouses signify a contemporary approach seamlessly integrating traditional aesthetics with modern construction techniques.

Concrete houses and shophouses constitute a relatively

smaller proportion of the architectural inventory in Wat Ket District. These structures exemplify the influence of urbanization and modernization on the built environment, indicating the evolving architectural landscape within the district.

The distribution of these vernacular buildings is scattered throughout Wat Ket District, exemplifying the district's architectural heritage and cultural diversity. Wooden houses and shophouses are predominantly found in the older sections of the district, serving as symbols of its historical legacy. Conversely, wooden-concrete, and concrete structures are more prevalent in areas influenced by urban development and contemporary influences (Chart 2).



**Chart 2:** Comparative analysis of the quantity of vernacular architectures observed in Wat Ket District.

## **Exploring the Vernacular Architecture in San Pa Koi District.**

San Pa Khoi District, located in Chiang Mai, Thailand, is renowned for its unique historical and cultural heritage. The district's origins can be traced back to the ancient Lanna Kingdom, which prospered from the 13th to the 18th century. San Pa Khoi significantly influenced regional administration and cultural evolution as part of this kingdom. Its rich architectural heritage and enduring cultural traditions underscore its historical importance (Tansukanun, and Daungthima 2017).

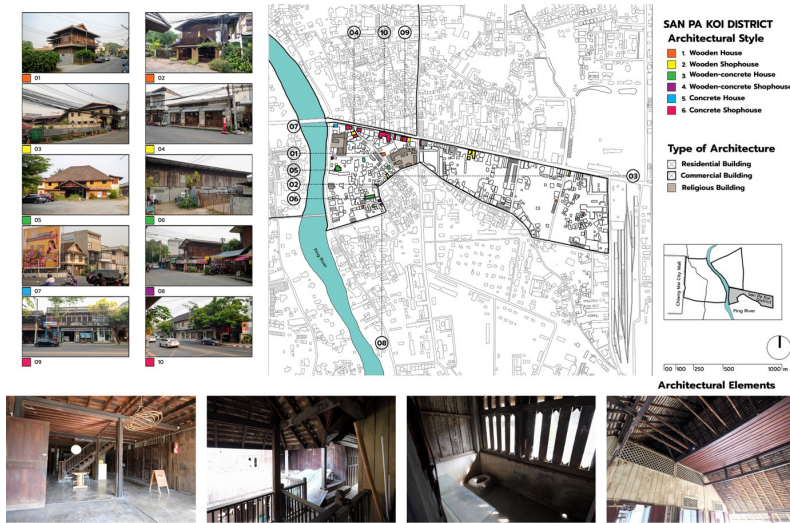
San Pa Khoi District is renowned for its cultural heritage and traditional practices. The district has various temples and sacred sites with historical and spiritual significance. Notable examples include Wat Pa Khoi and Wat Ched Yod, revered by locals and visitors for their architectural beauty and religious importance. Unlike other districts in Chiang Mai, San Pa Khoi has a more rural and agricultural character. The district is surrounded by picturesque landscapes, including lush fields, orchards, and mountains, offering a peaceful and serene environment that attracts nature enthusiasts and those seeking a retreat from the city. Agriculture plays a vital role in the district's economy. The fertile land in San Pa Khoi supports the cultivation of crops such as rice, fruits, and vegetables. The district is also known for its traditional handicrafts, including bamboo weaving, pottery, and textiles, contributing to the local economy and cultural heritage (Tansukanun 2023).

San Pa Khoi District is characterized by its strong sense of community and local traditions. Residents actively participate in community events, festivals, and ceremonies, preserving their cultural practices and fostering a close-knit community spirit. Efforts have been made to preserve the cultural heritage and natural beauty of San Pa Khoi. Local organizations and community initiatives have played a crucial role in the conservation and restoration of historical sites and the promotion of sustainable tourism practices (Daungthima and Tansukanun 2018).

In summary, the background of San Pa Khoi District showcases its historical significance, cultural heritage, rural set-

ting, local industries, community spirit, and preservation efforts. Understanding this background provides valuable insights into the district's unique identity and its contribution to the cultural and natural landscape of Chiang Mai.

The research findings reveal limited vernacular architectural structures in the San Pa Koi District. The study documented 5 wooden houses, 5 wooden shophouses, 5 wooden-concrete houses, 3 wooden-concrete shophouses, 1 concrete house, and 8 concrete shophouses. These buildings represent various architectural styles and construction materials commonly observed in the district (Figure 3).



**Figure 3:** Map illustrating the exploration of vernacular architecture in San Pa Koi District.

Modified Map Incorporating Tansukanun's Scholarly Findings in 2023

Wooden houses and shophouses also hold significant prominence in the vernacular architecture of the San Pa Koi District.

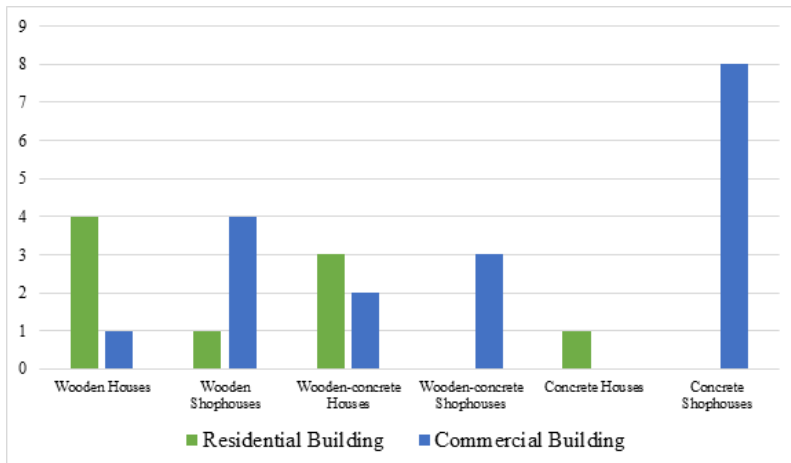
These structures exhibit characteristic features of traditional design, including intricate woodwork, elevated floor levels, and steep roofs. The prevalent use of wood highlights the local craftsmanship and the adaptation to the region's climatic conditions.

In recent years, wooden-concrete houses and shophouses have emerged, reflecting a contemporary approach that integrates traditional aesthetics with modern construction techniques. These hybrid structures contribute to the district's evolving architectural landscape, combining traditional and modern design elements.

Concrete houses and shophouses constitute a smaller proportion of the architectural inventory in the San Pa Koi District, indicating the influence of urbanization and modernization on the built environment. Concrete structures reflect the changing architectural preferences and the impact of contemporary design trends.

The distribution of these vernacular buildings is dispersed throughout San Pa Koi District, reflecting the area's architectural heritage and cultural diversity. Wooden houses and shophouses are predominantly found in the older sections of the district, representing the region's historical legacy. On the other hand, wooden-concrete and concrete structures are more prevalent in areas influenced by urban development and modern construction practices (Chart 3).





**Chart 3:** Comparative analysis of the quantity of vernacular architectures observed in

San Pa Koi District.

## Conclusion

Exploring the vernacular architecture in the eastern commercial and tourism districts of Mueang Chiang Mai can identify six distinct architectural styles. Each style represents a unique blend of materials, design principles, and cultural influences, contributing to the region's architectural diversity and historical fabric.

Style 1: The wooden houses, illustrate the use of natural resources and local construction wisdom. The detailed craftsmanship in the wooden framework, walls, and roofing indicates the region's cultural heritage. These elements serve functional purposes and embody the aesthetic values and traditions of Chiang Mai. These wooden houses are designed to suit the local climate, with features like elevated floors for flood mitigation and broad eaves for rain and sun protection. This functional aspect seamlessly in-

tertwines with the local way of life, where architecture harmonizes with the natural environment. In these homes, local wisdom is evident in the sustainable use of resources and traditional building techniques, reflecting a deep understanding and respect for the natural environment. This theme runs through the design and construction of the houses, showcasing a distinct cultural identity inherent in Chiang Mai's vernacular architecture. The survey found 51 houses in the Chang Moi district, 21 in the Wat Ket district, and 5 in the San Pa Khoi district.

Style 2: The wooden shophouses uniquely blend traditional and colonial influences. The ground floors are typically used for commercial purposes, while the residential quarters occupy the upper floors. This dual functionality is reflected in the architectural details, such as the distinctive wooden façades and interior layouts, which are deeply rooted in the local culture of Chiang Mai. The design of wooden shophouses is a direct response to the lifestyle and economic activities in the region. Integrating commercial and living spaces into a single structure exemplifies the practicality and efficiency valued in Chiang Mai's urban planning. The construction of these shophouses, using wood as the primary material, showcases local craftsmanship and sustainable practices. Their design and functionality reflect a deep understanding of local needs and traditions, making them an essential part of the architectural heritage of Chiang Mai. The survey found nine houses in the Chang Moi district, 15 in the Wat Ket district, and five in the San Pa Khoi district.

Style 3: The wood-concrete houses represent traditional and modern architecture fusion. Combining wood and concrete materials in these houses illustrates a blend of traditional craftsmanship with contemporary building techniques. This architectural style demonstrates an evolution in local construction practices while maintaining a connection to Chiang Mai's cultural heritage. These houses, combining wood and concrete, cater to the demands of modern living while preserving traditional aesthetics. Their design reflects an adaptation to changing lifestyles in Chiang Mai, balancing the need for sturdier, more resilient structures with respect for historical building methods. The combination of natural wood

and engineered concrete in these houses exemplifies local wisdom in adapting to modern needs without losing sight of traditional values. This architectural style showcases the region's ability to evolve and innovate while staying true to its cultural roots. The survey found 50 houses in the Chang Moi district, 23 in the Wat Ket district, and 5 in the San Pa Khoi district.

Style 4: Wood-concrete shophouses highlight wood-concrete shophouses that marry traditional wood elements with modern concrete. This style exemplifies a blend of durability and aesthetic appeal, reflecting a thoughtful fusion of old and new construction techniques. These shophouses, often featuring retail or commercial spaces on the ground floor and living quarters above, demonstrate an adaptive use of space that is deeply ingrained in the urban fabric of Chiang Mai. The combination of materials speaks to the city's evolving needs and lifestyle changes. The integration of wood and concrete in these structures is a testament to local ingenuity, combining time-honored building methods with modern requirements for strength and resilience, thus preserving the architectural heritage while adapting to contemporary needs. The survey found 18 houses in the Chang Moi district, 11 in the Wat Ket district, and 3 in the San Pa Khoi district.

Style 5: Concrete houses are characterized using concrete as the primary material. This choice reflects a shift towards modern building techniques, showcasing strength, durability, and fire resistance. Concrete's design versatility also allows for varied architectural expressions. These houses represent a modern adaptation to urban living in Chiang Mai. Their robust construction caters to the contemporary demands for safety and energy efficiency, while their versatile design aligns with modern aesthetics. Even in these modern structures, local wisdom is seen in how these houses blend into the urban landscape of Chiang Mai, respecting the city's evolving architectural narrative while maintaining functional integrity and efficiency. The survey found two houses in the Chang Moi district, 2 in the Wat Ket district, and one in the San Pa Khoi district.

Style 6: Concrete shophouses, known for their practicality

and adaptability. These structures blend modern construction techniques with traditional design, reflecting Chiang Mai's evolving architectural narrative. Concrete shophouses are integral to the urban landscape, serving commercial and residential purposes. Their design flexibility and structural stability cater to the city's dynamic urban needs, symbolizing the region's growth while maintaining its cultural essence. Adapting concrete shophouses in Chiang Mai demonstrates a balance between modern demands and preserving historical character, embodying the city's ability to innovate while respecting its architectural heritage. The survey found 29 houses in the Chang Moi district, 3 in the Wat Ket district, and eight in the San Pa Khoi district.

Understanding and appreciating the vernacular architectural styles in the eastern commercial and tourism districts of Mueang Chiang Mai offers insights into the region's cultural heritage. Each style, from wooden houses to concrete structures, showcases the area's evolution and local wisdom. The architectural styles found in Chiang Mai are like threads intricately woven into the fabric of daily life, seamlessly connecting commerce, residence, and culture. These architectural forms are not merely static structures; they are dynamic expressions of the local lifestyle, adapting to the needs and traditions of the community.

The preservation of these architectural styles is vital as they are not just buildings; they are an integral part of the cultural and historical fabric of Chiang Mai. They are the physical embodiment of the city's history and evolution and safeguarding them ensures that future generations can connect with the rich heritage of Chiang Mai. To support this preservation, proposing the creation of a comprehensive database to document Chiang Mai's architectural diversity is crucial. Such a database would aid in the conservation efforts and provide a valuable resource for research, education, and public awareness, enriching our understanding of this historically significant city.

## **Discussion**

The study has unveiled the rich tapestry of architectural styles within Chaing Mai's vernacular architecture, extending beyond their utilitarian functions to serve as powerful symbols of cultural identity. These architectural styles exemplify the dynamic essence of Northern Thai vernacular architecture by skillfully blending time-honored traditions with contemporary necessities. This delicate balance between tradition and modernity underscores vernacular architecture's profound role in preserving and expressing cultural identity. Furthermore, it has shed light on the deeply ingrained sustainable practices of Thai vernacular architecture. It embodies a sustainable approach that has endured through generations by incorporating indigenous materials like wood and harnessing local craftsmanship. This commitment to sustainability extends beyond environmental considerations, seamlessly aligning with the principles of sustainable development, including economic viability. Moreover, it masterfully strikes a balance between cultural continuity and architectural innovation. While meticulously preserving traditional architectural elements, it seamlessly integrates them with modern design principles and materials. This synthesis is a testament to the adaptability and resilience of Northern Thai vernacular architecture practices, challenging the conventional belief that tradition and progress are mutually exclusive and showcasing their harmonious coexistence in architectural development, which is integral to nurturing community bonds and fostering social cohesion. The thoughtful design of houses and shophouses, characterized by flexible spaces and dual functionality, actively encourages interaction among residents and between the broader community. This communal dimension aligns harmoniously with the cultural values of hospitality and social unity, reinforcing the intrinsic connection between architecture and society. The study underscores the pivotal role of Northern Thai vernacular architecture in cultural heritage tourism. These distinct architectural styles possess the inherent capacity to attract tourists seeking authentic cultural experiences. Therefore, preservation efforts should extend beyond physical structures to encompass the rich cultural narratives and traditions

embedded within these architectural forms. Such an approach can contribute to sustainable tourism practices that benefit the local community and visiting tourists. Finally, the study highlights the critical significance of documentation and scholarly research in preserving and evolving Northern Thai vernacular architecture. The proposal for a comprehensive database dedicated to cataloging the diverse spectrum of Thai architectural styles emerges as an invaluable resource for scholars, architects, and policymakers. This resource not only aids in comprehending the trajectory of architectural evolution but also serves as a guiding beacon for future developments that uphold the mantle of cultural heritage.

### **Acknowledgments**

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