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## WORKING PAPER SERIES

### DEPLOYING VERNACULAR TRADITIONS IN DOMESTIC AND COMMUNITY PRACTICES

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## DEPLOYING VERNACULAR TRADITIONS IN DOMESTIC AND COMMUNITY PRACTICES

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# **Traditional Dwellings and Settlements**

Working Paper Series

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## **FUSED OLD TRADITIONS: MORPHOLOGICAL STRATIFICATION OF ANCESTRAL HOUSES IN THE CENTRAL MOUNTAINOUS REGION OF FUJIAN, CHINA**

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*Cai Xuanhao, Ying Jiakang*

## FUSED OLD TRADITIONS: MORPHOLOGICAL STRATIFICATION OF ANCESTRAL HOUSES IN THE CENTRAL MOUNTAINOUS REGION OF FUJIAN, CHINA



*In the central mountainous region of Fujian Province in southeastern China, there exists a distinctive building type known as “zucuo” (ancestral house 祖厝): two- to three-story timber-framed structures with ritual halls located on upper floors, often featuring raised-floor (ganlan 干栏) construction at the ground level, which differs significantly from the common single-story courtyard compounds. This paper argues that such buildings are not static traditional forms, but rather the product of morphological stratification resulting from the fusion of indigenous vernacular traditions and Ming-Qing Confucian ritual architecture. The study identifies two spatial traditions that merged within zucuo architecture: (1) the indigenous Min-style tradition of “louting” (upper-floor halls 楼厅) and front-rear hall (qianhou厅 前后厅) layouts, serving funeral rituals and ancestral worship; and (2) the imported “ground-floor hall” (dimianting 地面厅) tradition of officially sanctioned ancestral temples, which became accessible to commoners following the “Great Rites Controversy” (大礼议) of the mid-Ming period. The resulting hybrid forms—classified as “single-floor hall” (danlouting), “vertical upper-lower” (zheng shangxia), and “diagonal upper-lower” (xie shangxia) types—demonstrate how architectural morphology records institutional change and social transformation. Through comparison with vernacular architecture across the eastern Asian continent, the study further reveals the shared spatial symbolism of front-rear hall layouts as a fundamental substrate of vernacular architectural heritage.*

### 1. INTRODUCTION

In the aftermath of modernity’s rupture with the past, traditional vernacular architecture is often perceived as a static, homogeneous entity—a timeless mirror reflecting the mutability of modern built forms. However, these traditions embody dynamic processes of transformation through the fusion of multiple source traditions. In the history of Chinese architecture, the same building type may exhibit diverse morphological expressions and hybrid forms within a single region due to the sequential influence of changes occurring at different historical moments and transmitted along varying geographical paths. This phenomenon of “stratified fusion” represents a distinctive mechanism of architectural cultural formation within China’s vast territory as a “civilization-state” and arguably extends across East Asia more broadly.

The “zucuo” (literally “ancestral house”, 祖厝) of the central mountainous region in Fujian Province exemplifies this phenomenon (Fig 1.). These two- to three-story timber-framed structures, with ritual halls positioned on upper floors and raised-floor (ganlan 干栏) construction at the ground level, serve as venues for annual ancestral sacrifices during the Lunar New Year and the Zhongyuan Festival (Ghost Festival, 中元节). Yet they maintain another crucial function: when clan members pass away, portions of the deceased’s eyebrows and fingernails are collected, ritually burned into ash (termed “incense fire” *xianghuo* 香火), and poured into incense burners within the zucuo, thereby completing the funeral ceremony.



Figure 1: Zucuo in Youxi County, Fujian Province (Source: Author).

Significantly, the hall where this ritual actually occurs—the “incense-fire hall” (*xianghuo ting* 香火厅)—is consistently located on an upper floor, while the ground-floor hall serves only for public gatherings, receptions, and banquets. The upper hall is austere in decoration, secluded and accessible only via concealed, steep staircases; the lower hall is ornate, spacious, and opens toward the courtyard for communal assemblies. This strict functional differentiation, consistently observed across nearly one hundred documented cases in Youxi, Dehua, and Datian counties, suggests a stable cultural logic rather than accidental construction.

From an architectural historical perspective, the “double-hall” (*chongting* 重厅) phenomenon of *zucuo* raises a fundamental question: why does a single building require two functionally distinct halls? The answer must transcend superficial formal description to delve into the specific scenes of ritual practice, social organization, and historical transformation. Vernacular architecture should be understood as a dynamic “structural process” rather than a fixed type—a concept developed by anthropologists and historians including Siu Helen F. (萧凤霞), Liu Zhiwei (刘志伟), and Zhao Shiyu (赵世瑜), which emphasizes that architectural forms accumulate historical layers over time, with each modification reflecting specific social, economic, or ritual imperatives. This paper employs historical anthropological methods, integrating field surveys, architectural documentation, interpretation of folk historical documents, and observation of ritual activities, to restore architectural morphology to its historical scene of production, tracing how indigenous vernacular traditions gradually incorporated Confucian ritual architectural elements, thereby comprehending the historical stratification logic of this unique form.

## 2. INDIGENOUS TRADITIONS: THE LONGHOUSE PROTOTYPE AND THE LOUITING (UPPER-FLOOR HALL)

The indigenous architectural tradition of central Fujian's mountainous region centers on the "longhouse" (*changwu* 长屋) prototype: elongated timber-framed structures of three to seven bays in width, featuring multi-story construction with the principal ritual hall positioned on an upper floor. Field surveys across Youxi, Dehua, and Datian counties have documented nearly one hundred cases of such "multi-story ancestral houses" (*louxing zucuo* 楼型祖厝), revealing consistent patterns of entirely timber-framed construction with overhanging (*xieshan* 悬山) roofs and open galleries (*pixia* 披厦 or *piyan* 披檐) along the gable ends, creating exceptionally permeable boundaries between interior and exterior. These buildings are always sited against hills and facing streams, their volumes rising and falling in picturesque composition reminiscent of architectural depictions in Song dynasty landscape paintings.

These *zucuo* buildings can be further classified into three types according to the spatial position of the upper-floor hall. The first, termed "single-floor hall" (*danlou ting* 单楼厅), concentrates all functional spaces on the second floor, while the ground level consists entirely of open stilt columns (*ganlan* structure) without partitions or functional assignments. The Lian Family Ancestral House in Getou Village, Dehua County, exemplifies this type: its ground floor is vacant or used for storage, while the second floor contains a three-bay ritual hall with ancestral tablets and incense burners, flanked by "official rooms" (*guanfang* 官房) serving storage rather than residential purposes. This building essentially lifts an entire single-story dwelling onto columns, preserving the spatial relationships of ordinary vernacular houses while adding vertical symbolic hierarchy.

The ritual function of upper halls centers on what local communities call the "incense-fire hall" (*xianghuo ting*). When a clan member dies, the funeral ceremony requires collecting small portions of the deceased's eyebrows and fingernails, wrapping them in red paper, and burning them to ash using incense sticks. After obtaining auspicious divination results (*shengbei* 圣杯), the ash is carried upstairs and poured into the incense burner before the ancestral tablets, formally incorporating the deceased into the lineage's ancestral pantheon. The bowl used for this purpose is then inverted behind the building, marking ritual completion. Local informants distinguish strictly between the spiritual functions of upper and lower halls: in some communities, deceased individuals under fifty years of age may not have their incense fire placed in the upper hall's burner; instead, it must remain in the lower hall. This regulation reveals the upper hall's superior ritual status and its association with full ancestral membership, while the lower hall serves as a liminal space for those not yet qualified for complete integration into the ancestral lineage.

### 3. THE CONFUCIAN TURN: IMPERIAL RITUAL ARCHITECTURE AND ITS VERNACULAR ADOPTION

The incorporation of ground-floor ceremonial halls into *zucuo* architecture represents a fundamental transformation linked to the “Great Rites Controversy” (大礼议) of 1524 during the Ming Jiajing reign. This political-theological dispute, triggered by the emperor's desire to elevate his biological father to imperial ancestral status, ultimately resulted in expanded ritual privileges for commoner lineages. Most significantly, the controversy's resolution permitted commoners to establish ancestral temples (*jiamiao* 家庙) dedicated to founding ancestors (*shizun* 始祖)—a privilege previously restricted to officials with examination degrees or imperial honors. This institutional change triggered widespread architectural emulation across southeastern China, as commoner families sought to replicate the ceremonial spaces previously monopolized by the elite.

The architectural model for this emulation derived from the “official-style” ancestral hall (*guanshi citang* 官式祠堂): single-story structures organized around enclosed courtyards (*tianjing* 天井), with the principal hall (*zhengtang* 正堂) positioned on the central axis and flanked by symmetrical wing rooms. The Cai Clan Ancestral Hall in Guifeng Village (constructed 1667-1669) exemplifies this form, adopting a three-bay, single-story, four-sided enclosed courtyard layout with narrow dimensions—essentially a compact, highly focused ritual container. This form showed virtually no continuity with local vernacular prototypes; instead, it resembled architectural types from northern Fujian and inland regions where Confucian institutional influence had penetrated earlier and more deeply. The building's stability over three centuries (it remains substantially unchanged since 1669) further demonstrates the official model's fixed, canonical nature once established.

The critical transformation occurred when this official model encountered indigenous *zucuo* traditions. Rather than replacing existing structures, the new ceremonial form was grafted onto them, producing hybrid buildings that simultaneously accommodated both ritual systems. Historical land deeds (*qi yue* 契约) preserved in the Cai Family Genealogy document this process with remarkable precision. During the 1790-1791 reconstruction following a devastating fire, the Cai lineage purchased multiple property parcels surrounding their ancestral house, consolidating them into a unified foundation for rebuilding. The reconstructed building—what we term the “Qianlong *zucuo*”—incorporated a ground-floor ceremonial hall modeled on official ancestral temple precedents, while preserving the upper-floor hall for traditional incense-fire rituals. The original five-bay, multi-courtyard dwelling layout was transformed into a three-bay configuration with open corridor galleries (*langyuan* 廊院) replacing solid wing rooms. The ground floor, previously occupied by multiple households, was emptied of residential functions and converted entirely into

ceremonial space. These modifications reveal how builders negotiated between inherited structural logics and new programmatic demands, producing solutions that were neither purely indigenous nor purely imported, but genuinely hybrid.

#### 4. INDIGENOUS TRADITIONS: THE LONGHOUSE PROTOTYPE AND THE LOUTING (UPPER-FLOOR HALL)

The fusion of indigenous and imported traditions generated three principal hybrid types in this region, distinguished by the spatial relationship between upper and lower halls. Each type represents a different solution to the fundamental challenge of accommodating two distinct ritual systems—one vertical and ancestral, the other horizontal and communal—within a single architectural envelope.

##### 4.1. The “Single-Floor Hall” Type: Archaic Persistence of Ganlan

The “single-floor hall” (单楼厅 *danlouting*) type preserves the most archaic configuration, with all functional spaces concentrated on an upper floor and the ground level maintained as open stilt structure. Found primarily in Dehua County with scattered examples in Yongchun and Datian, these buildings typically date to the Ming dynasty or earlier. The ground level’s emptiness—sometimes used for storage or left entirely vacant—contrasts sharply with the elaborately furnished upper hall containing incense burners, ancestral tablets, and protective deity images (Figure 2). This type represents minimal hybridization—the indigenous elevated-hall tradition persists virtually unchanged, with only superficial concessions to newer ceremonial requirements. Its persistence in certain communities suggests that the Confucian transformation did not penetrate uniformly; in peripheral or conservative areas, indigenous practices maintained their autonomy well into the late imperial period. In anthropological studies, elevation symbolizes spiritual distinction, connecting to broader Austronesian and Southeast Asian *ganlan* traditions—from Polynesian meeting houses to Borneo longhouses—where height signifies spiritual differentiation and protection from earthly dangers.

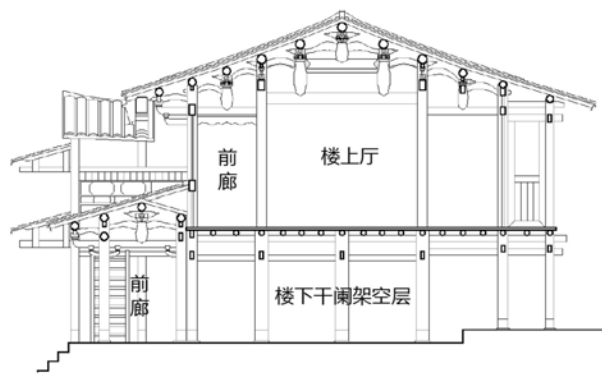


Figure 2: Section of Lians’ ancestral house in Getou Village, Dehua County (Source: Zhou Yizhi, 2019).

#### 4.2. The “Vertical Upper-Lower” Type: Direct Superimposition

The “vertical upper-lower” (*zheng shangxia*) type, accounting for over half of documented cases, achieves the most direct fusion of indigenous and imported elements. In this configuration, the ground-floor hall and upper-floor hall occupy the same vertical axis, their ridge beams aligned on identical column positions. The building typically reaches three stories in height. The Cai Family Ancestral House in Guifeng Village (Qianlong reconstruction, 1791) exemplifies this type’s mature form: its ground floor houses a hall dedicated to the founding ancestor, while the third-floor hall serves the branch ancestor. Staircases positioned on both gable ends provide access, their placement reflecting careful separation of ritual circuits: the front stairs serve ordinary visitors and public ceremonies, while rear stairs accommodate funeral processions carrying incense fire to the upper hall (Figure 3).

This type’s spatial organization reveals the hierarchical relationship between the two ritual systems. The ground-floor hall, decorated with elaborate bracket sets (*chaliang*) and open toward the courtyard, presents a public face of Confucian ceremonial propriety. The upper hall, by contrast, remains relatively plain, smaller in scale, and accessible only through concealed, steep staircases. Local informants confirm that upper floors are rarely visited except during specific rituals, reinforcing their status as restricted sacred spaces. The vertical superimposition thus encodes social and ritual hierarchy: the lower hall’s openness and grandeur serve communal integration, while the upper hall’s seclusion preserves intimate connections with ancestral spirits.

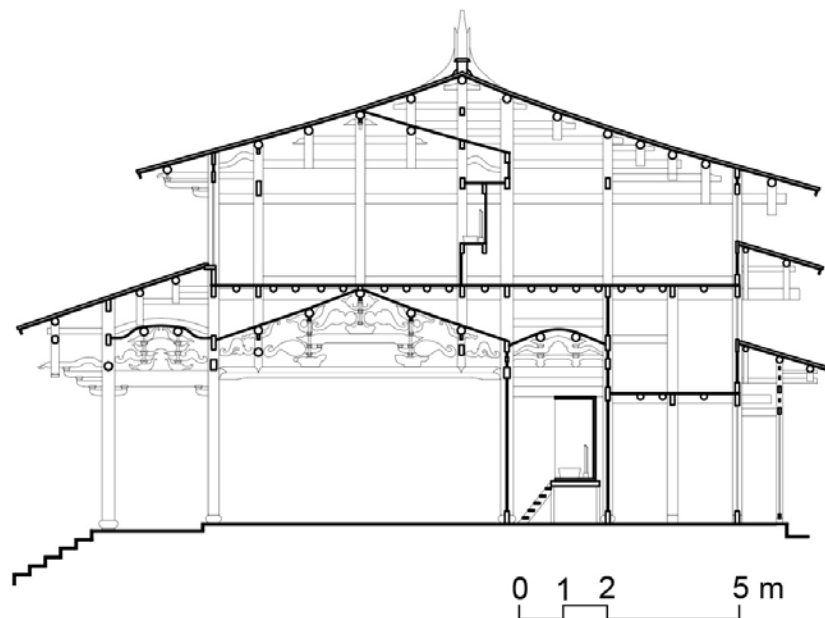


Figure 3: Section of Cais’ ancestral house in Guifeng Village, Youxi County (Source: Author).

### 4.3. The “Diagonal Upper-Lower” Type: Lateral Displacement

The “diagonal upper-lower” (*xie shangxia*) type, comprising approximately one-third of documented cases, presents a more complex spatial negotiation. Here the lower hall occupies the front portion of the building under an extended single-pitch roof, while the upper hall sits above the rear “back hall” (*houting*), creating partial vertical overlap of only one or two structural bays. The lower hall’s screen wall (*pingmen*) aligns directly beneath the upper hall’s front corridor, while the space behind the lower hall—beneath the upper hall—forms an exceptionally deep rear hall used primarily for storing coffins awaiting burial (Figure 4).

This configuration generates distinctive formal characteristics. To visually balance the extended front eaves, many examples add small gable-facing pavilions called “moon towers” (*yuelou*) on either side, creating an appearance reminiscent of a three-bay courtyard composition elevated to second-floor level. This type’s spatial logic prioritizes functional separation over vertical integration: the lower hall’s forward position maximizes its public accessibility and ceremonial prominence, while the upper hall’s rear placement preserves its seclusion and spiritual authority. The deep rear hall beneath the upper hall—sometimes extending across all bays without partition walls—maintains the indigenous tradition of substantial back halls for funeral preparations, a feature distinguishing Fujian vernacular architecture from Gan, Hui, Hakka, and Cantonese traditions where rear spaces are typically minimal or absent.

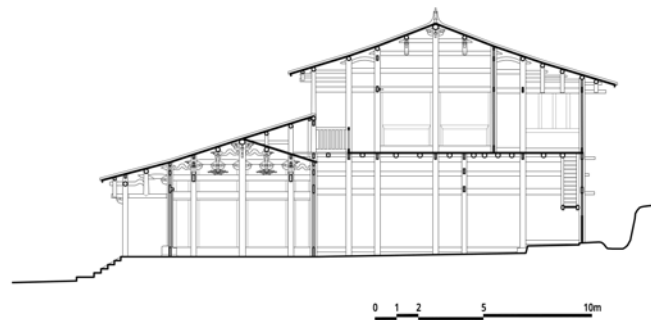


Figure 4: Section of Chens’ Ancestral House in Shangshuyang Village, Youxi County (Source: Author).

## 5. FUNERAL RITUALS AND THE FRONT-REAR HALL TRADITION IN MIN REGION

### 5.1. Ritual Circulation and Spatial Mediation in Zucuo

The spatial separation of “red” (auspicious) and “white” (funerary) rituals within *zucuo* architecture demonstrates how hybrid forms accommodate multiple ceremonial systems. The front hall and courtyard serve for communal celebrations, theatrical performances, and lineage assemblies—activities associated with life, prosperity, and social integration. The rear hall and upper floors, conversely, maintain exclusive

associations with death, ancestral spirits, and cosmological transition. In many communities, coffins awaiting burial are stored in the rear hall (a practice still observed in Guifeng), while the screen wall (*shouping* or *taishi bi*) separating front and rear halls symbolically divides yang (bright, living, public) from yin (dark, dead, private) realms.

The architectural mediation between these binary realms takes particularly sophisticated form in the “double corridor” (*shuangmian lang*) system of mature *zucuo* buildings. A central wall divides the wing galleries into inner and outer corridors: the inner corridor connects courtyard spaces for ceremonial circulation, while the outer corridor links to specialized funeral entrances (*bianmen*) on the gable ends. This dual-circuit system ensures that funeral processions—entering through side doors, proceeding along outer corridors to the rear hall for coffin preparation, then exiting without penetrating the central courtyard—never intersect with the ritual paths of living celebrants. The structural wall thus materializes a ritual boundary as fundamental as the screen wall’s cosmological division but operationalized through movement rather than static symbolism.

In Min dialect cultural circles, the coffin has always maintained a metaphorical duality with the yang dwelling (residence for the living), and the custom of storing ancestral coffins within the family house awaiting burial has ancient origins. In central Fujian’s mountainous region, coffins were mostly kept in houses left by ancestors; these communal buildings gradually became venues for domestic ancestral sacrifice. Such buildings—originally used for hosting funerals and later evolving into structures for worshipping the founding ancestor and various branch ancestors—are called “*zucuo*” in Min dialect. As Zheng Zhenman observes, “in the initial stages of immigrant settlement, with neither ancestral halls nor ancestral tombs available, domestic sacrifice centered on the *zucuo* was the only possible form of ancestral worship. Therefore, in the developmental process of immigrant lineage organization, the *zucuo* held particularly significant importance.”

## 5.2. The Powerful Front-Rear Hall Tradition

In terms of spatial usage, vernacular architecture in central Fujian’s mountainous region exhibits characteristics markedly different from nearly all other Chinese dialect regions: the space for temporary coffin storage and funeral rites is located strictly in the rear hall (*houting*) of the central bay, carefully avoiding the front hall space. Almost all dwellings, large and small, feature rear halls adhering to this plan configuration, a practice preserved even in contemporary vernacular houses. In Hakka and Huizhou regions, by contrast, temporary coffin spaces are located in the main hall, entrance hall, or side wing chambers. For instance, in eastern Guangdong Hakka architecture, “the ridge purlin becomes the dividing line of the upper hall space, separating front and rear sections; coffin placement cannot cross this line into the rear portion,” while in She County’s Lidong Township, folk funerals place coffins in the entrance hall and side filiality chambers—both

markedly different from the Min dialect region. These divergent funeral customs impose different requirements on architectural layout. Ordinary Min dialect region dwellings feature substantially sized rear halls for temporary coffin storage, nearly equivalent in scale to front halls, evident in the extended “rear drag” (*houtuo*) design of *chuandong* (穿斗) column-and-tie frameworks. The screen wall (*shouping*, also called *jinping*, *taishi bi*, or *tianzi bi*) separates the front hall’s sacrificial space from the rear hall’s coffin storage space, symbolizing the dualistic concept of front-yang/rear-yin, both worlds sheltered beneath the same dual-pitch roof of the “big house” (*dacuo*) (Figure 5). This contrasts sharply with Gan, Hui, Hakka, and Cantonese traditions, where the space behind the main hall’s shrine or screen door is often extremely narrow, sometimes lacking even decorative screen doors.

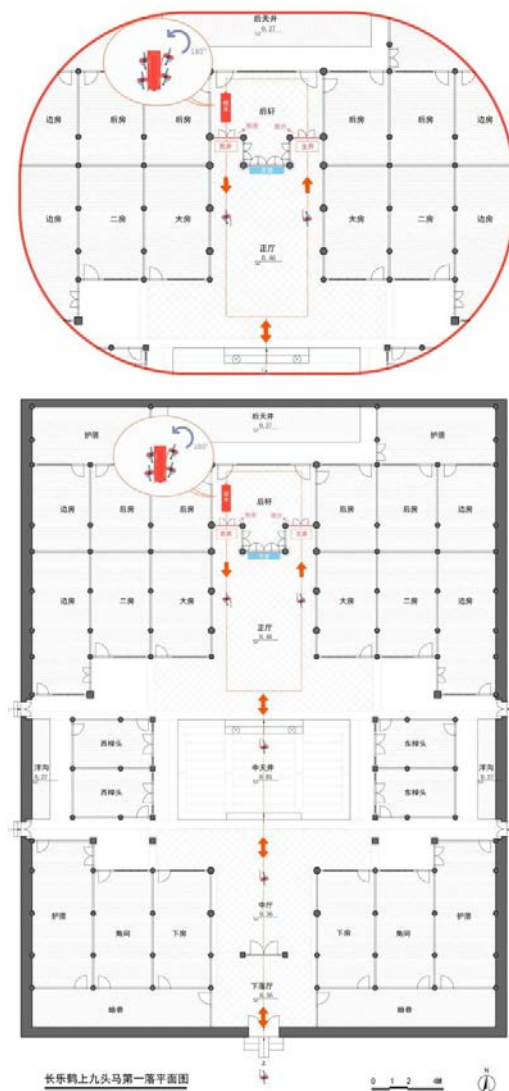


Figure 5: Routes of funeral ceremony in East Fujian vernacular dwellings (Source: Zheng Xiongkai, 2025).

### 5.3. Comparative Perspective: The Yin-Yang Dualistic Structure of Vernacular Architecture Across Eastern Asia

The binary spatial logic of Fujian *zhuo*—dividing buildings into front/living and rear/ancestral zones—resonates with architectural patterns across a broad East Asian and Southeast Asian arc. In the Lao Song Dam ethnic group's architecture of Laos, dwellings are similarly divided longitudinally into front portions for daily living and rear portions for storing ancestral remains (Figure 6). Following funeral ceremonies, portions of the deceased's bones are retrieved and deposited in the rear ancestral space, establishing permanent physical connection between the living household and its dead members. The rear zone's association with death, spiritual power, and cosmic transition parallels Fujian's rear-hall functions. This parallel suggests that the front/rear binary represents a deep structural principle of Austronesian and Austroasiatic spatial culture, predating the Chinese imperial state's ritual interventions. The principle's persistence in Fujian—incorporated within Chinese architectural forms yet maintaining distinct functions—demonstrates how indigenous Southeast Asian concepts survived within Sinicized building types, revealing the yin-yang dualistic hall structure as a fundamental substrate beneath historical morphological stratification. Even decorative screen doors.

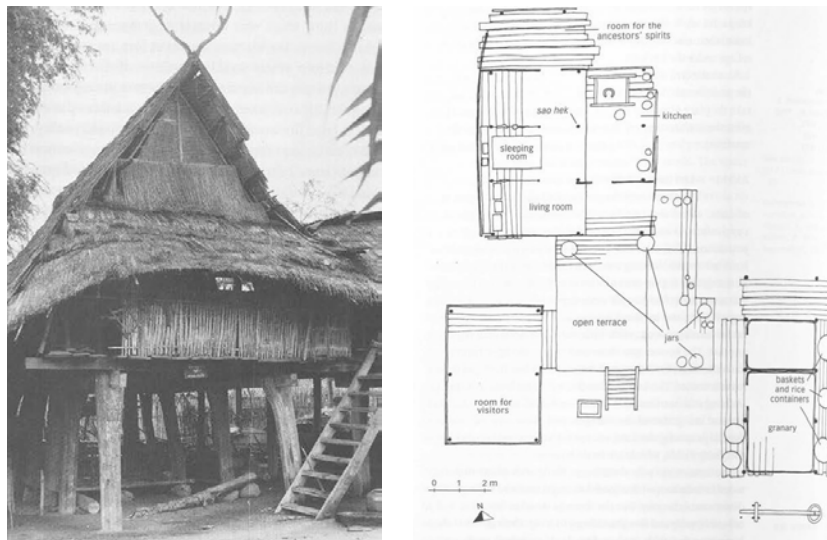


Figure 6: Figure and plan of Lao Song Dam vernacular dwellings (Source: Paul Oliver, 1997).

Within China, the powerful front-rear hall layout of central Fujian's mountainous region contrasts sharply with Gan, Hui, Hakka, and Cantonese traditions, where post-funerary spaces are typically minimal or located in side halls rather than the main building's rear. These differences reflect varying historical layering of Confucian ritual reform: regions where imperial orthodoxy penetrated earlier and more thoroughly tended to suppress indigenous rear-hall practices in favor of standardized ceremonial layouts. Fujian's mountainous

topography and relative administrative marginality, conversely, permitted longer preservation of indigenous forms alongside gradual incorporation of new elements. The comparative perspective further clarifies that the distinction between ground-floor and upper-floor halls in *zucuo* cannot be reduced to simple “public/private” or “secular/sacred” binaries. In official-style ancestral halls throughout China, the single ground-floor hall accommodates all ceremonial functions within unified space; the Fujian hybrid, by contrast, distributes these functions across vertically separated zones. The “double-hall” (*chongting*) phenomenon—two halls vertically superimposed—thus emerges as a specifically Fujian solution to accommodating expanded ritual requirements without abandoning inherited spiritual practices, its appearance in the mid-Qing period correlating precisely with the aftermath of the “Great Rites Controversy” when commoner lineages first gained permission to worship founding ancestors. This inversion demonstrates how vernacular builders actively reinterpreted rather than passively received official architectural models.

## 6. CONCLUSION

The *zucuo* cases examined in this study challenge conventional understandings of vernacular architecture in several fundamental respects. First, they demonstrate that “tradition” itself is historically produced through the fusion of multiple source traditions, rather than representing the unbroken continuity of a single origin. The buildings we observe today in Fujian’s central mountains are not survivals of ancient forms, but products of specific Ming-Qing transformations that merged indigenous longhouse traditions with imported Confucian ceremonial architecture. When different spatial traditions encounter one another, architectural forms hybridize through selective incorporation and adaptation—neither Hobsbawm’s “invention of tradition” nor wholesale replacement of one form by another.

Second, the study reveals building types as fundamentally multivalent rather than categorically fixed. The *zucuo* occupies an ambiguous position between “dwelling” (居 *ju*) and “shrine” (祠 *ci*), simultaneously preserving residential morphological features and acquiring ceremonial characteristics. This ambiguity is not a temporary transitional state, but a stable, productive condition that has persisted for centuries. The terminological confusion surrounding *zucuo*—variously called “ancestral house” (祖厝 *zucuo*), “ancestral hall” (祖厅 *zuting*), “branch temple” (支祠 *zhici*), “ancestral temple” (祖庙 *zumiao*), or even “lineage temple” (宗祠 *zongci*) in different documents—reflects different aspects of the building’s multivalent identity: local spoken Min dialect preserves indigenous identity, while written documents increasingly adopt Confucian vocabulary as lineages seek to enhance their ceremonial status.

Third, imperial ritual regulations did not simply “diffuse” from elite centers to commoner peripheries, replacing indigenous forms in the process. Rather, they were selectively appropriated, actively reinterpreted, and materially hybridized with existing traditions. The concept of “typological collage” better captures this process than conventional diffusion models: builders combined available formal elements according to local requirements, technical capabilities, and cultural priorities, creating novel solutions to unprecedented ritual challenges. This perspective has immediate relevance for contemporary heritage practice: as rural China undergoes rapid transformation, *zhuo* buildings face threats from demolition and functional abandonment. Understanding their historical complexity—as layered products of multiple traditions rather than simple expressions of single origins—provides stronger grounds for preservation. A building that embodies centuries of social and ritual history merits protection not merely as “traditional architecture” but as a material document of historical process.

Ultimately, vernacular buildings are never merely passive products of social structure or cultural tradition. They are active participants in historical process, their forms encoding decisions, negotiations, and transformations that constitute the lived experience of communities across time. The *zhuo* of Fujian’s central mountains—simultaneously dwelling and shrine, indigenous and imported, static and dynamic—exemplify this historical agency. They remind us that tradition is not the opposite of change, but its accumulated record; not the rejection of the new, but its integration with the old; not the preservation of purity, but the creative fusion of difference. In an era of rapid rural transformation, such understanding provides essential foundation for both scholarly analysis and preservation practice, enabling us to value vernacular heritage not despite its complexity, but precisely because of it.

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## **Traditional Dwellings and Settlements**

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### **SPATIAL TRANSFORMATION OF BULANG STILT HOUSES IN JINGMAI MOUNTAIN UNDER THE INFLUENCE OF HERITAGE TOURISM**

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*Boyu Pan, Ying Peng, Jie Liu*

## SPATIAL TRANSFORMATION OF BULANG STILT HOUSES IN JINGMAI MOUNTAIN UNDER THE INFLUENCE OF HERITAGE TOURISM



*Abstract: The Cultural Landscape of Old Tea Forests of Jinmao Mountain in Pu'er was inscribed on the UNESCO World Heritage List in 2023, bringing a mountain dwelling system composed of old tea forests, traditional villages, ethnic communities, and religious practices into a global context of heritage protection and tourism development. Focusing on Bulang stilt houses, this paper examines the spatial transformation of traditional domestic space under heritage tourism through architectural anthropology, cultural landscape studies, and theories of spatial production. Based on fieldwork, semi-structured interviews, spatial observation, image documentation, and documentary analysis, it argues that the raised ground floor of Bulang stilt houses has gradually shifted from livestock keeping, storage, and production support to tea rooms, shops, visitor reception, and cultural display. Hearths have been differentiated among everyday use, fire-safety regulation, and tourism display, while public spaces such as village centers and Buddhist temples have been incorporated into systems of heritage interpretation and tourist consumption. These changes are not a simple replacement of tradition by commerce, but an adaptive negotiation by Bulang communities among heritage regulation, tourism markets, and the continuity of everyday life.*

*Keywords: spatial transformation; Bulang ethnic group; stilt houses; Jingmai Mountain; heritage tourism; tea cultural landscape; architectural anthropology*

### 1. INTRODUCTION

In 2023, the Cultural Landscape of Old Tea Forests of Jingmai Mountain in Pu'er was inscribed on the UNESCO World Heritage List, becoming China's first World Heritage cultural landscape centered on tea culture.<sup>1</sup> Unlike heritage sites defined primarily by monumental buildings, urban ruins, or single relics, the value of Jingmai Mountain does not lie in one building or one archaeological site. It lies instead in a composite system formed by old tea forests, traditional villages, ethnic communities, religious beliefs, modes of production, and everyday life.<sup>2</sup> It is both a tea-forest ecosystem that has developed over centuries and a lived landscape continually managed, inhabited, and interpreted by local communities.<sup>3</sup>

Within this cultural landscape, the Bulang people constitute an important local subject. As one of the early groups to settle in Jingmai Mountain and domesticate tea trees, the Bulang have connected tea cultivation, village construction, religious belief, and family life, forming a dwelling environment with distinctive mountain-ethnic characteristics.<sup>4</sup> Stilt houses are among the most representative architectural types in this environment. Their raised lower level, timber structural system, pitched roof, hearth space, and drying platform respond to the humid climate, mountain terrain, tea production, and domestic life. In this sense, Bulang stilt houses are not merely a "vernacular dwelling form," but a spatial result of long-term interaction between local society and the natural environment.

The acquisition of World Heritage status has also brought Jingmai Mountain into a more institutionalized system of protection, display, and tourism development. Nomination preparation, style control, environmental improvement, fire management, road upgrading, homestay operation, and tea sales have together reshaped the use of village space. Traditional houses are no longer only places for domestic life and production; they increasingly serve tea sales, visitor reception, ethnic-cultural display, and heritage narration. This change is especially visible on the raised ground floor of Bulang stilt houses. Spaces once used for livestock, storage, and production support have been converted into tea rooms, shops, visitor reception areas, and cultural display spaces. At the same time, key spaces such as hearths, village centers, and Buddhist temples have been reinterpreted under the pressures of heritage protection and tourist viewing.

This paper asks two questions. How has heritage tourism changed Bulang stilt houses and related public spaces in Jingmai Mountain? How should these changes be understood: as the replacement of traditional space by modern commercial functions, or as community adaptation among institutions, markets, and everyday life? The paper argues that the spatial transformation of Bulang stilt houses in Jingmai Mountain is not a one-directional disappearance of tradition, but a process of selective adaptation and recreation. Its central mechanisms include the transformation of productive space into consumptive space, domestic space into display space, and communal ritual space into a hybrid heritage place.

The paper adopts architectural anthropology as its main perspective. Architectural anthropology is concerned not only with form, material, and structure, but also with how space organizes life, relationships, rituals, and meanings. In Jingmai Mountain, stilt houses, hearths, village centers, Buddhist temples, sacred trees, and tea forests form a spatial network of Bulang social life. The paper also draws on cultural landscape theory to understand Jingmai Mountain as a long-term product of interaction between people and nature;<sup>5</sup> and on theories of spatial production to interpret spatial transformation as a social process shaped by policy, market forces, local communities, and visitors.<sup>6</sup> Low's discussion of the social production and construction of public space is useful for understanding how village centers, temples, and tea rooms are shaped by both institutional forces and everyday practices.<sup>7</sup> Geertz's idea of culture as webs of meaning helps explain how hearths, village centers, and tea-cultural symbols are reinterpreted in tourism;<sup>8</sup> Malinowski's functionalist perspective helps analyze how architectural spaces satisfy practical needs while also carrying cultural order.<sup>9</sup>

The paper is based primarily on fieldwork conducted in several villages within the Jingmai Mountain heritage area in 2023. The survey covered five Bulang villages: Mangjing Shangzhai, Mangjing Xiazhai, Manghong, Wengji, and Wengwa. It also included observation in Dai villages such as Jingmai Dazhai and Nuogang Old Village as comparative contexts. The research recorded architectural forms, spatial functions, hearth use, public spaces, and tourism activities, and gathered villagers' explanations of spatial change through interviews.

On this basis, the paper discusses the Bulang settlement and tea-cultural landscape of Jingmai Mountain, the traditional spatial structure of Bulang stilt houses, the reorganization of domestic space under heritage tourism, public space and selective authenticity, and finally the question of spatial transformation as community negotiation.

## **2. THE BULANG SETTLEMENT LANDSCAPE OF JINGMAI MOUNTAIN**

### **2.1. Mountain Tea Forests and the Multiethnic Settlement Pattern**

Jingmai Mountain is located in Lancang Lahu Autonomous County, Pu'er City, Yunnan Province, between the southern Hengduan Mountains and the Lancang River basin. Its humid mountain climate, undulating topography, and layered vegetation provide the basic conditions for the growth of old tea forests and the formation of local settlements. The tea forests here are not modern plantations organized in neat rows, but mountain agro-ecological systems formed through long-term cultivation, maintenance, and natural succession. Tea trees, forest vegetation, villages, roads, Buddhist temples, and farmland constitute a continuous living environment. Jingmai Mountain is identified as a cultural landscape precisely because it embodies a long and complex interaction between human production and the natural environment.<sup>10</sup>

Spatially, Jingmai Mountain is not a point-based heritage site composed of a single village or isolated heritage units. It is a continuous cultural landscape made up of traditional villages, old tea-forest areas, religious spaces, production paths, and ethnic settlements. The nominated property contains fourteen traditional villages. Different ethnic villages are distributed according to mountain terrain and tea-forest resources, forming adjacent but distinctive settlement patterns. Today, the Bulang are mainly distributed in Mangjing Administrative Village, including Mangjing Shangzhai, Mangjing Xiazhai, Manghong, Wengji, and Wengwa. These Bulang settlements border Dai villages to the north and the Hani village of Nanai to the south. Bulang villages are not only spatial carriers of everyday life, tea production, and religious practice; they are also important nodes that connect ethnic groups, ecological environments, and heritage narratives within the Jingmai Mountain tea-cultural landscape (Figure 1).

This pattern of multiethnic adjacency gives the Jingmai Mountain cultural landscape a composite character. Different ethnic villages have their own architectural forms, religious spaces, and everyday practices, yet they depend on shared tea-forest resources and are connected through roads, tea trade, festivals, and kinship relations. Bulang villages are therefore not isolated ethnic-cultural units within the heritage area. Their characteristics are formed in spatial relation to neighboring Dai, Hani, and other settlements. Any discussion

of Bulang stilt houses must therefore return them to the wider mountain tea-forest system and multiethnic settlement pattern of Jingmai Mountain.

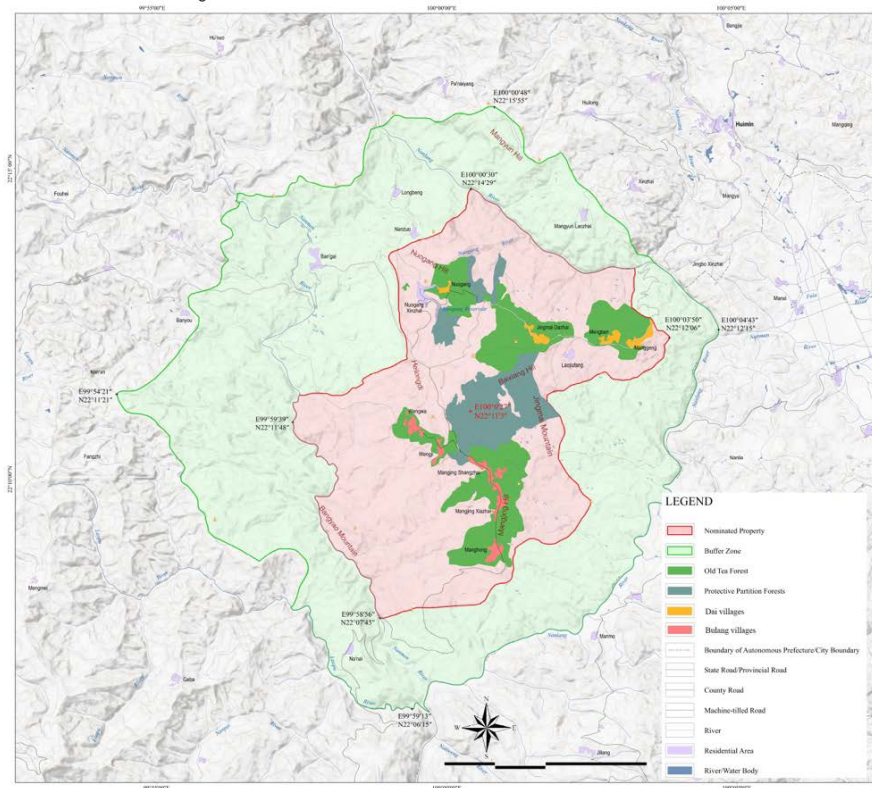


Figure 1: Heritage map of the Cultural Landscape of Old Tea Forests of Jingmai Mountain and village distribution based on GIS.

## 2.2. Tea Forests, Ancestral Narratives, and Village Spatial Order

The relationship between the Bulang people and tea forests is historically deep. Local legends, songs, and oral traditions repeatedly connect ancestors, tea trees, and migration. The Bulang saying that “wherever they migrated, they planted tea” suggests that tea trees were not only economic plants but also markers of settlement and ethnic memory.<sup>11</sup> Planting tea meant claiming land, adapting to the mountain environment, and establishing village order. Through local narratives such as the Song of Aileng, ancestral songs, the legend of Aileng, and legends of the thousand-year-old tea forests, tea is endowed with memories of ancestors, moral order, and ethnic identity. The tea forest is therefore not only a productive space, but also an important medium through which the Bulang understand their history and sense of place.

Bulang villages are usually built in response to mountain terrain. Houses extend along slopes and roads, forming settlement fabrics adapted to topography. Unlike the rectilinear pattern of many lowland villages, their spatial order reflects adjustments to slope, water sources, tea forests, and religious nodes. Within the

village, key spaces often include the village center, Buddhist temple, sacred trees, and communal activity areas. The village center is both a spiritual center and a node of collective activity. Buddhist temples are often located on relatively higher ground and serve religious ritual, ethical education, and community cohesion. Banyan, cypress, or other sacred trees near village boundaries also help define a protective spatial system. Together, these spaces shape Bulang understandings of boundary, center, and sacred order (Figure 3).

Within this larger structure, the stilt house is not an isolated residential object. It is a basic unit embedded in tea forests, roads, Buddhist temples, village centers, and household production networks. Each stilt house connects the internal order of family life with tea picking, drying, processing, trade, and hospitality. It addresses family members as well as neighbors, kin, monks, tourists, and tea merchants. With the development of heritage tourism, the openness of the stilt house has increased further: entrances, raised ground-floor spaces, drying platforms, and hearth spaces have all become interfaces where everyday life meets external viewing (Figure 4).



Figure 2: Temple mural depicting the legend of the Bulang people and tea.



Figure 3: Layout of Wengji Village and the distribution of Buddhist temples based on GIS.

For this reason, Bulang stilt houses in Jingmai Mountain cannot be understood only through architectural form. They are not static artifacts of an “ethnic style,” but spatial devices operating within the tea-cultural landscape. They respond to the natural environment through vertical organization, maintain domestic order through the hearth, connect production through the lower level, and participate in village society through street-facing interfaces and public spaces. The stilt house is therefore a key entry point for observing spatial transformation in Jingmai Mountain under heritage tourism.



Figure 4: Traditional dwelling in Wengji Village (Source: Author).

### 3. THE TRADITIONAL SPATIAL STRUCTURE OF BULANG STILT HOUSES

#### 3.1. The Raised Form and Adaptation to Mountain Climate

The Bulang stilt house is first of all an environmentally adaptive dwelling form. Jingmai Mountain has a humid climate, a long rainy season, and variable mountain slopes. If timber buildings are placed directly on the ground, they are easily affected by moisture, insects, and surface runoff. By raising the main living space on timber posts, the stilt house creates a semi-open lower level. Studies of dwellings in Southwest China also identify elevation, ventilation, and slope adaptation as important spatial features of mountain dwellings.<sup>12</sup> This raised form facilitates ventilation, reduces moisture and insects, and responds to changes in terrain. The building is not simply “placed on the ground;” rather, the structure keeps a certain distance from the terrain, forming a spatial section suited to mountain life (Figure 4).

This raised form also provides spatial flexibility. Because the lower level connects directly to terrain, roads, and yards, it can absorb changes in elevation and accommodate various production and storage activities. For Bulang households long dependent on tea forests, mountain farming, and household sideline work, the ground floor is not a passive “empty space,” but a buffer zone within the household production system. It separates the humid ground from the upper living space while connecting domestic activities with the wider village environment.

### 3.2. Production and Domestic Life in Vertical Organization

The spatial organization of traditional stilt houses is clearly vertical. The ground floor is usually not a formal living area, but a supporting space for production and storage. It may be used for livestock and poultry, firewood, tools, bamboo baskets, tea-processing utensils, or temporary work and storage. Because it is closely connected to village roads and yards, it mediates between the household production system and the external environment. The upper floor is the core of domestic life, including living space, bedrooms, reception areas, the hearth, and the drying platform. Daily family activities, visits by relatives and friends, tea drinking, and some ritual activities are mainly organized around the upper floor.

Before the 1980s, Bulang dwellings were mostly built with bamboo and timber and covered with thatch, giving them a relatively light structure (Figure 5). The house was usually raised by three or four steps. The lower level was low in height and mainly used for storage and poultry. The upper floor was the main living area. The hearth was placed near the sacred post in the central part of the interior, filled with earth, and fitted with a tripod. Because the hearth was almost flush with the floor, it served cooking, heating, and lighting, and naturally became the center around which family members sat, talked, and worked. A simple drying platform was often attached to one side of the corridor, built with bamboo strips or simple timber boards, and used for drying, washing, and everyday chores.<sup>13</sup>

From the 1980s to the early twenty-first century, Bulang dwellings underwent a series of material and functional changes. Thatched roofs were gradually replaced by tile roofs. The height of the lower level increased, and some houses added kitchens, drying platforms, front corridors, and toilets. Timber-processing tools shifted from traditional machetes to chainsaws, making components more regular. At the same time, reinforced concrete, brick masonry, and modern decorative materials entered the villages. Some new houses began to depart from traditional stilt houses in scale, number of stories, and façade form, producing a mixed village appearance. These changes show that the stilt house has never been a fixed traditional form; it has continued to change with material technology, living needs, and external regulations.

Such changes do not necessarily indicate a break in traditional architectural logic. Rather, they show that stilt houses have always been adaptive. Changes in roofing material, lower-level height, kitchen position, sanitation facilities, and processing tools reflect shifts in villagers' living conditions, technical means, and hygiene concepts. Before the intervention of heritage tourism, however, these changes were mainly oriented toward domestic life and production efficiency. After the development of heritage tourism, spatial adjustments increasingly addressed external viewing, visitor reception, and commercial operation. This distinction provides the basis for the following analysis.

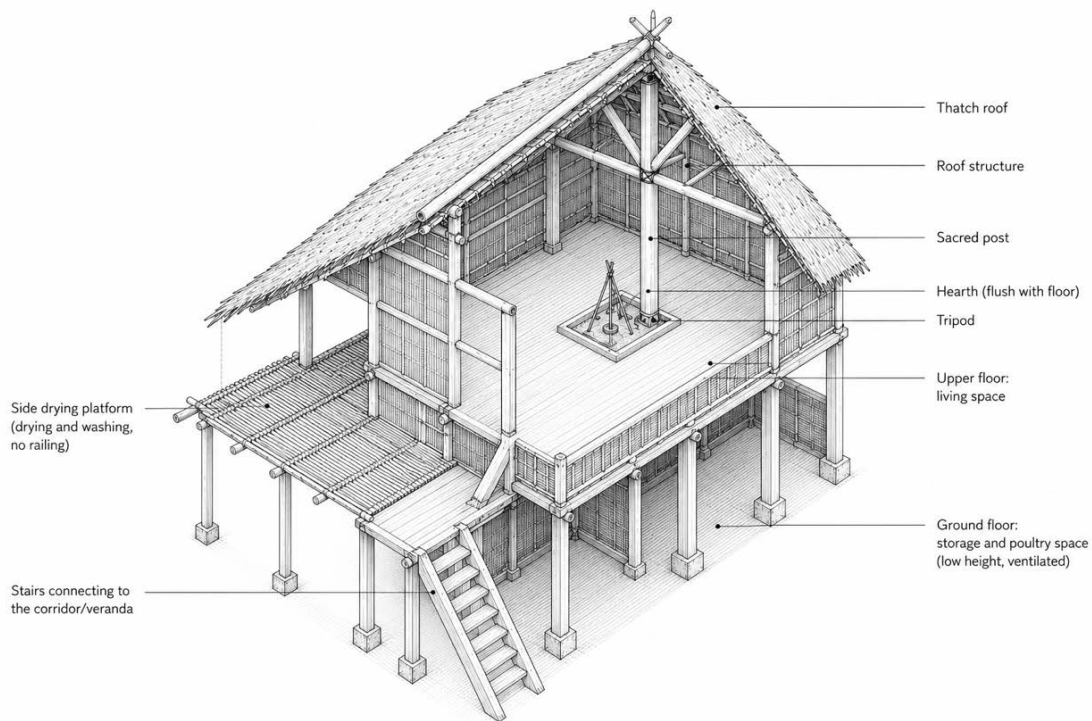


Figure 5: Raised floor, hearth, and drying platform in a traditional Bulang stilt house (Source: Drawing by the author with AI assistance).

### 3.3. Hearth and Domestic Spatial Order

In Bulang stilt houses, the hearth is the most important spatial element. It has clear practical functions: cooking, heating, boiling water, making tea, drinking tea, smoking food, storing seeds, and keeping the interior dry during humid seasons. In timber stilt houses, smoke from the hearth also helps repel insects and dry timber components, contributing to the maintenance of the building fabric. In light of Semper's discussion of the hearth as one of the fundamental elements of architecture, the hearth is not merely a facility, but a core around which domestic life and architectural space take form (Figure 6).<sup>14</sup>

The hearth also has cultural meaning. Family members form relatively stable seating orders around it, and the positions of elders, guests, and household members are continually confirmed through everyday use. Seats near the hearth often relate to respect for elders, hospitality, and domestic ethics. Fire itself is also associated with the continuity and stability of the family. Domestic interior space is not only a matter of functional division; it often carries ethical and symbolic order. Bourdieu's analysis of the Berber house, for example, shows how orientation, interior organization, and everyday behavior form a symbolic structure.<sup>15</sup> For Bulang households, the hearth is likewise the spatial center through which family relations and rhythms of life are organized.



Figure 6: Traditional Bulang hearth and tripod (Source: Author).

From the perspective of architectural anthropology, the hearth should not be reduced to a functionalist explanation. It certainly serves cooking, heating, and drying, but more importantly it gives domestic space a center and an order. Activities around the hearth connect eating, tea making, conversation, hospitality, and the care of elders and children. Geertz's "webs of meaning" are not abstract here; they are woven through seating positions, speech, utensils, smoke, fire, and tea. When the hearth is restricted by heritage protection and fire-safety management, what is affected is not merely a device, but a way of life organized around it.

There is also continuity between the stilt house and village public space. The household hearth organizes a small-scale internal order, while the village center and Buddhist temple organize public order at the village scale. Tea forests connect production, temples connect belief, village centers connect communal life, and stilt houses connect households with these external spaces. Traditional Bulang space is therefore not composed of isolated buildings, but of a network linking life, production, and belief. The spatial transformations discussed below take place within this network, not merely inside individual houses.

#### **4. REORGANIZING DOMESTIC SPACE UNDER HERITAGE TOURISM**

##### **4.1. From Raised Ground Level to Tea Room: Commercialization of the Lower Floor**

The World Heritage nomination and tourism development of Jingmai Mountain are not external background events; they have entered directly into the organizational logic of domestic space. To meet the requirements

of World Heritage protection, village environmental improvement, traditional style control, fire safety, and visitor reception, the functions of Bulang stilt houses have been continuously adjusted. The most visible change occurs on the raised ground floor. This area, formerly used for household production and storage, has gradually been converted into a space of consumption and display for visitors.

Traditionally, the raised ground floor was used for livestock, firewood, tools, and tea-production support. It was practical and relatively internal, although it connected to roads and yards. With the progress of the Jingmai Mountain nomination process, village sanitation, environmental image, and traditional appearance became important concerns of governance. Livestock pens were increasingly seen as factors affecting village environment and tourism image, and were gradually required to be cleaned, altered, or removed. According to an interview with a tea-house operator in Wengji Village, the disappearance of ground-floor livestock pens was closely related to the standardized management of village environments before and after the World Heritage nomination. For villagers, this change was both a result of external policy and a practical choice after the transformation of household economies.

The disappearance of livestock pens opened new possibilities for the lower level. Many households converted the former raised ground floor into tea rooms, shops, visitor reception areas, or tea-cultural display spaces. Tea tables, display cabinets, tea packaging, ethnic decorations, and seats entered spaces once occupied by animals, firewood, and tools. The lower level of the house thus shifted from a production-support space to a commercial interface. When tourists enter the village, what they first encounter is often no longer a domestic threshold in the traditional sense, but a tea space in which they can stop, consume, and look (Figure 7).

This transformation may be understood as both “de-production” and commercialization of the lower level. De-production does not mean that tea production has entirely left the house. Rather, functions such as livestock keeping, tools, and storage that were closely tied to household livelihood have been compressed or moved elsewhere. Commercialization means that the lower level increasingly faces visitors and markets, becoming a place for tea sales, cultural display, and income generation. The raised ground floor is therefore no longer only a technical space for climate and slope adaptation; it has become an operational space within the heritage-tourism economy.

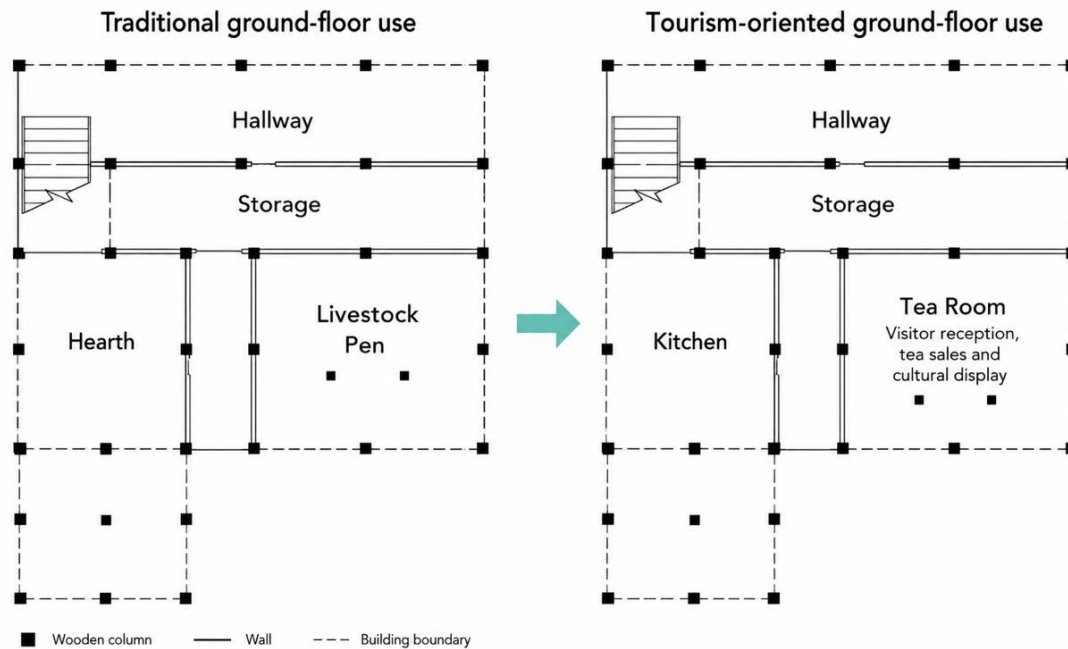


Figure 7: Diagram of the transformation of a traditional Bulang dwelling.

This change should not be understood simply as the disappearance of traditional function. For many households, the conversion of the lower level is first a response to livelihood needs. As tea becomes more commodified and visitors enter the village, spaces once tied to mixed agriculture and household sideline production are reorganized for tea sales and visitor reception. The tea room is not a purely commercial space imposed from outside. It usually remains closely connected with family life. When visitors sit on the lower level to drink tea, listen to stories, and buy tea, they are entering a household space that has been selectively reopened.

#### 4.2. Opened House Fronts and the Reorganization of Domestic Space

The transformation of the street-facing house front is also significant. In traditional villages, the entrance mainly served family members, visits by relatives and friends, and neighborhood interaction. With tourism development, the entrance space has been rearranged to attract visitors, encourage them to stay, and support consumption. Tea tables are placed near the road, display cabinets open toward the exterior, and some households hang signs or add ethnic-style decorations at the doorway. The house shifts from a relatively inward domestic space to a semi-open operating space. It remains a “home,” but it is also a “shop,” a “tea room,” and a “display space.”

This spatial reorganization changes domestic labor division and daily rhythms. Some family members receive visitors, make tea, narrate tea culture, and sell products. Some spaces are given over to tourist experience,

while family life is compressed into more private upper or rear areas. The previously continuous domestic space is divided into a front stage for visitors and a backstage for everyday life. MacCannell's discussion of "front regions" and "back regions" in tourist settings helps explain this selective opening of domestic space.<sup>16</sup> New spatial boundaries thus emerge within the house: which places can be seen by visitors and which remain part of family life; which traditions can be narrated and which practices remain within everyday domestic routines.

The distinction between "front stage" and "backstage" is not fixed. Different people enter the house to different depths: acquaintances, relatives, tourists, and tea merchants do not have the same access. Ordinary tourists may remain in the ground-floor tea room or street-facing space; familiar tea merchants may enter deeper domestic areas; relatives and neighbors may still enter the upper living space according to existing social relations. Heritage tourism has not simply opened all family space. Instead, it has produced a more complex hierarchy of access. Family members adjust the degree of spatial openness according to visitors' identities, consumption relations, and social ties.

Under heritage tourism, Bulang stilt houses have also developed a condition of "traditionalized exterior and modernized interior." Style controls in the heritage area usually encourage or require buildings to maintain traditional exterior features such as timber structure, pitched roofs, balconies, railings, and ethnic decoration, in order to preserve the overall village landscape. To meet the needs of homestays, tea rooms, visitor reception, and modern living, however, interiors are often modernized with toilets, kitchens, electrical appliances, lighting, partitions, floor materials, and commercial display facilities. The exterior presents a traditional image, while the interior increasingly incorporates modern life and tourism consumption.

This condition is not necessarily negative. For villagers, it improves living conditions, increases operating income, and gives traditional buildings new opportunities for use. Without new economic functions, some stilt houses might be abandoned or replaced because of high maintenance costs and inconvenient living conditions. Yet when traditional buildings are protected mainly as visible façades, while internal living logics are continually reorganized by commercial functions, their meaning as carriers of domestic life may be weakened.

#### **4.3. Regulation, Continuity, and Display of the Hearth**

Changes to the hearth more directly reveal the tension among heritage protection, fire safety, and the continuity of everyday life. In some households, the hearth is still used for cooking, heating, tea making, smoking food, and family gatherings. Especially in areas with lower levels of tourism development or outside the core display zones, the hearth retains strong domestic functions. In villages such as Wengji and Nuogang,

where heritage protection and tourism display are more prominent, the use of open fire is subject to stricter fire-safety and heritage-conservation restrictions. For timber stilt houses, fire risk is a real issue. For residents, however, the hearth is not only a source of fire; it is also an important facility for domestic life, building dryness, and cultural order.

The hearth has therefore undergone functional differentiation. One type is the living hearth, which still serves everyday domestic activities. Another is the regulated hearth, whose use is restricted or even replaced in protected heritage areas. A third is the display hearth, installed in tea rooms, homestays, or visitor-experience spaces as a visible symbol of Bulang culture. This display hearth does not necessarily perform the full range of domestic functions, but it conveys an image of “traditional life” to visitors. It preserves the form of the hearth while potentially weakening its role in organizing family relationships and everyday order.

From the perspective of spatial production, the transformation of the hearth is not simply a matter of preservation or disappearance, but a process in which its meanings are reproduced. Government and management agencies focus on fire safety and the protection of heritage buildings; tourists see ethnic culture and domestic scenes; villagers seek a balance among safety, income, and living habits. The hearth thus becomes a node where multiple forces converge. It is a living facility and a risk object, a cultural symbol and a tourism resource, something regulated and something displayed.

This contradiction deserves attention. For heritage management, open-fire control is necessary, especially in villages densely composed of timber stilt houses, where fire would threaten resident safety and heritage integrity. Yet if the hearth is understood only as a source of risk, its role in domestic life and building maintenance is easily overlooked. The smoke environment produced by traditional hearths helps dry timber components, repel insects, and support everyday maintenance. More importantly, conversation, tea drinking, hospitality, and family gathering around the hearth form the domestic core of Bulang houses. Regulating the hearth is therefore not only a technical management issue, but also a question of how to protect ways of life and cultural meanings.

The reorganization of domestic space in Bulang stilt houses is therefore double-sided. On the one hand, villagers gain new economic opportunities by converting the lower level, operating tea rooms and homestays, and displaying the hearth and tea culture. Bulang culture also becomes more visible. On the other hand, traditional spaces are re-coded as spaces of tourist consumption; everyday practices are translated into display content; and domestic space is to some extent reorganized by the gaze of tourists and the logic of markets. Heritage tourism neither simply destroys tradition nor completely preserves it. It changes the use of tradition through selection, transformation, and negotiation.

## 5. PUBLIC SPACE, RITUAL PRACTICE, AND SELECTIVE AUTHENTICITY

### 5.1. From Community Cores to Heritage Nodes

If the transformation of domestic space mainly occurs between family life and the tourism economy, changes to public spaces such as village centers, Buddhist temples, sacred trees, and tea-ancestor temples reveal more directly the effects of heritage tourism on village social space. In Bulang villages, public spaces have long carried religious, ethical, assembly, and community-identity functions. They are not attachments outside the house, but core nodes through which village society is maintained.

The village center, or *zhaixin*, is one of the most important spiritual centers in Bulang villages. Determining its position during village establishment marks the formation of village order. It is understood as a symbol of village stability, ancestral protection, and community continuity. In everyday life, it is a node of social interaction and public activity; during festivals and rituals, it becomes a place where collective action and religious meaning gather. For outside visitors, the *zhaixin* often appears as an ethnic landscape node (Figure 8). For villagers, however, it is first a spatial center of internal social relations.



Figure 8: Village center in Wengji Village (Source: Author).

Buddhist temples also have multiple functions. In Bulang villages, temples are usually located on higher ground, giving them both visual prominence and religious sacredness. They are not only places for worship, offerings, and festival participation, but also spaces of ethical education, cultural transmission, and community cohesion. During field observation at Aileng Buddhist Temple during the Closing-Door Festival,

the temple was not a static heritage attraction. It was a place where villagers gathered again, confirmed social relationships, and continued religious practice. Walking, offerings, conversation, staying, and collective participation made the temple a center of community life during festival time (Figure 9).



Figure 9: Participation in the Closing-Door Festival at Aileng Buddhist Temple.

With the development of heritage tourism, public spaces such as village centers, Buddhist temples, sacred trees, and tea-ancestor temples have begun to take on more display and reception functions. Visitors take photographs, listen to explanations, watch rituals, and experience tea culture in these spaces. Some villages also provide cultural display, sales points, or tea-cultural activities in public areas. Public spaces that once primarily served villagers have gradually become hybrid places shared by residents and visitors. They retain religious and community functions while also being incorporated into heritage display and tourist consumption.

This change is not merely an accumulation of functions. It is a reorganization of spatial meaning. For residents, village centers, temples, and tea-ancestor temples still carry sacredness and communal significance. From the tourist perspective, however, they are also transformed into visible nodes for understanding Bulang culture and the Jingmai Mountain tea-cultural landscape. As the users of space change, the modes of interpretation also change. Rodman's discussion of multilocality and multivocality reminds us that the meaning of place comes not only from external researchers or managers, but also from the practices and narratives of residents, visitors, and different social groups.<sup>17</sup>

## 5.2. Visible Traditions and the Marginalization of Everyday Practices

This transformation can be understood as a form of selective reinforcement. Heritage tourism tends to strengthen traditional symbols that are easy to see, explain, and consume. For example, the village center can be explained as the spiritual center of the village; the Buddhist temple as an ethnic religious space; sacred trees as remnants of nature worship; the tea-ancestor temple as the origin of tea culture; and the hearth as the core of family life. These symbols have high visibility and narrative value, making them suitable for guided tours, performances, photography, and cultural consumption.

By contrast, more everyday, hidden, or less displayable practices may be weakened. Livestock keeping, internal seating orders, real tea labor, neighborhood mutual aid, everyday conversations around the hearth, and the rhythms of elders and children are not always suitable for tourist viewing, nor can they always be translated into clear heritage narratives. They form the deeper layers of traditional life, yet may become less visible in heritage display. This paper describes the phenomenon as “selective authenticity”: heritage tourism does not present the entirety of traditional life, but selectively reinforces traditional elements with greater visibility, interpretability, and consumption value. Wang’s discussion of authenticity in tourism shows that authenticity concerns not only objects themselves, but also tourist experience and social construction.<sup>18</sup>

Selective authenticity does not mean that all display is false. On the contrary, many displayed symbols do come from real Bulang life and historical memory. The issue is that when certain symbols are repeatedly emphasized, the complexity of tradition may be compressed into images and stories that are easy for visitors to understand. The village center is no longer only an internal spiritual center, but also a photographic and interpretive node. The Buddhist temple is no longer only a religious space, but also a cultural attraction. The hearth is no longer only the core of family life, but also an exhibit of ethnic custom. Tradition has not disappeared, but the ways in which it is viewed and explained have changed.

In this process, the Bulang community is not a passive recipient of external forces. Many villagers actively use houses and public spaces to sell tea, receive visitors, tell local legends, and present hearths and festival activities. Community members continually adjust spatial use among policy requirements, market opportunities, and cultural identity. They accept certain regulations, such as cleaning livestock pens, improving the environment, and controlling open fire, while also reinterpreting tradition in their own ways, for example by treating the hearth as cultural display or the tea room as a place to narrate Bulang history and tea culture. Spatial transformation is therefore not only the result of external governance, but also a process through which local communities participate in the production of heritage.

This community agency is especially visible in tea-cultural narration. Tea sales are not only an economic activity; they also become a medium through which villagers explain their culture to visitors. When visitors drink tea, purchase tea, and listen to stories in a ground-floor tea room, they enter a reorganized domestic space. Through tea, hearths, murals, clothing, photographs, and narration, villagers turn household space into a space of cultural exchange. This transformation may risk symbolizing tradition, but it may also strengthen the community's capacity to interpret its own culture.

The tensions generated by heritage tourism therefore become clear: protection requires risk control, while life requires flexibility; display requires clear symbols, while traditional life is often complex and ambiguous; tourists expect to see "tradition," while residents need to improve living conditions and increase income; religious spaces are sacred, but they are also drawn into tourist viewing. The spatial transformation of Bulang villages in Jingmai Mountain continues to occur within these tensions.

### **5.3. Conclusion: Spatial Transformation as Community Negotiation**

This paper has examined the transformation of traditional houses and village public spaces under heritage tourism, focusing on Bulang stilt houses in Jingmai Mountain, Pu'er. The study shows that changes to Bulang stilt houses are not isolated architectural alterations, but part of a broader spatial reorganization among World Heritage protection, tourism demand, tea-industry development, and the continuity of everyday life. The main changes include the shift of the raised ground floor from livestock, storage, and production support to tea rooms, shops, visitor reception, and cultural display; the transformation of the hearth from domestic core into a composite space of everyday continuity, fire-safety regulation, and tourism display; and the transformation of village centers, Buddhist temples, sacred trees, and tea-ancestor temples from internal ritual places into heritage places interweaving religion, display, commerce, and visitor experience.

This spatial transformation should not be understood simply as the disappearance of tradition. More precisely, it is the result of selective adaptation by the Bulang community between external institutions and internal needs. Facing post-nomination environmental improvement, style control, and fire management, villagers adjusted the use of lower-level spaces and hearths. Facing tourists and markets, they transformed house entrances, tea rooms, hearths, and public spaces into interfaces of cultural display and economic operation. Traditional spaces have not stopped functioning; they have been reinterpreted and reused under new social conditions.

The transformation also raises problems that require caution. First, the everyday authenticity of traditional space may be weakened. When architectural exteriors are maintained as heritage appearance while interior living functions are repeatedly reorganized for tourism consumption, the meaning of buildings as carriers of

domestic life may be compressed. Second, some traditional symbols may be over-landscaped or performed. Village centers, Buddhist temples, hearths, and tea-cultural rituals are emphasized because they are easy to see and explain, while deeper practices such as domestic order, production labor, neighborhood relations, and everyday rhythms may be marginalized in heritage display. Third, if real living facilities such as the hearth are understood only as fire risks, and their roles in domestic life, building maintenance, and cultural order are ignored, new tensions may emerge between conservation practice and resident life.

At the same time, the Jingmai Mountain case also shows positive aspects of heritage tourism. Spatial transformation has improved parts of the village environment, increased villagers' income, and encouraged community members to explain their own traditions more actively. Through tea-room operation, homestay renovation, festival participation, and cultural narration, Bulang residents are not passive recipients of heritage tourism. They reorganize living space and cultural narratives within a new heritage context.

For the conservation of ethnic-minority cultural landscapes, maintaining architectural appearance and village style is therefore insufficient. Conservation should also attend to the continuity of traditional space as a carrier of everyday life, a production space, a religious place, and a network of social relations. Heritage management should not ask only whether buildings "look traditional." It should also ask who continues to use these spaces, which living practices continue, which traditions are displayed, which traditions are obscured, and whether the community has the right to interpret and adjust its own space.

The spatial transformation of Bulang stilt houses in Jingmai Mountain shows that cultural landscape conservation is not about freezing tradition at a single historical moment. Further research should examine more deeply the relationship between the tea industry and village space. As the core economic driver of Jingmai Mountain, tea not only affects household income and tourism operation, but also continuously reshapes domestic space, public space, and village social relations. Examining tea industry, heritage tourism, and everyday life together remains an important direction for understanding the contemporary transformation of the Jingmai Mountain cultural landscape.

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## **Traditional Dwellings and Settlements**

Working Paper Series

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### **TWO MODES OF DEPLOYING TRADITION: DISCURSIVE AND PRACTICAL CONSCIOUSNESS IN THE MODERNIZATION OF DAI DWELLINGS**

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*Jiayue Hao, Hiroyuki Shinohara*

## TWO MODES OF DEPLOYING TRADITION: DISCURSIVE AND PRACTICAL CONSCIOUSNESS IN THE MODERNIZATION OF DAI DWELLINGS



*This study examines how two traditional elements of Dai dwellings in Xishuangbanna, China—the open ground-floor space and the two-tiered pitched roof—were deployed through different mechanisms amid modernization. Through field surveys and applying Giddens’ distinction between discursive and practical consciousness, the study demonstrates that tradition is not a single category but operates at different levels of consciousness. The roof, explicitly recognized as a Dai identity marker, was sustained through discursive consciousness. The open ground-floor space, though vital to communal life, operated as unarticulated practical consciousness and proved vulnerable to displacement. Disruption forced residents to articulate its significance, converting practical into discursive consciousness and enabling firm retention. The findings suggest that preservation efforts should focus not only on explicitly articulated traditions but also on those rooted in everyday use.*

### 1. INTRODUCTION

Traditionally defined as a response to specific cultural and environmental needs of the past,<sup>1</sup> vernacular architecture has long been mischaracterized as a static legacy that must be preserved in its pristine condition.<sup>2</sup> Yet as an embodiment of tradition, vernacular architecture is not a relic of the past but a dynamic process of re-interpretation in light of an ever-changing present.<sup>3</sup> In the context of rapid modernization, vernacular dwellings are evolving entities where inherited vernacular wisdom and modern knowledge are continually negotiated.

The Dai vernacular dwelling of Xishuangbanna, Yunnan, China offers a case study of deploying tradition in the contemporary era. Traditionally raised on pilotis, these houses feature an open ground level for communal gathering within the community, an enclosed upper floor for family living, sleeping, and cooking, and capped by a two-tiered pitched roof.<sup>4</sup> Dai dwellings have undergone several generational shifts in construction. The earliest houses were built entirely of bamboo, later replaced by timber-structured and timber-brick hybrid dwellings that retained the same raised spatial configuration. This spatial configuration was closely tied to the Dai community’s patterns of domestic and social life. The floor plan of a timber-structured house, representative of the traditional spatial configuration, is shown in Figure 1. Since the 1990s, the introduction of modern materials and non-local builders has brought brick-concrete and concrete-frame constructions.<sup>5</sup> The evolutionary process is shown in Table 1.

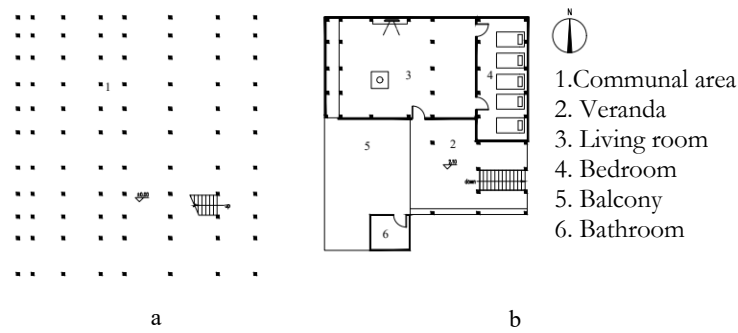


Figure 1: Floor plan. (a) ground floor (b) upper floor (Source: The authors).

| Stage            | Bamboo-structure houses                                                           | Timber-structure houses                                                           | Timber-brick hybrid houses                                                        | Brick-concrete houses                                                               | Concrete-frame houses                                                               |
|------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Period           | Pre-1950                                                                          | Since the 1950s                                                                   | Since the 1980s                                                                   | Since the early 1990s                                                               | Since the late 1990s                                                                |
| Figure           |  |  |  |  |  |
| Primary material | Bamboo                                                                            | Timber                                                                            | Timber, brick                                                                     | Brick, concrete                                                                     | Brick, concrete                                                                     |
| Structure        | Frame                                                                             | Frame                                                                             | Frame                                                                             | Masonry                                                                             | Frame                                                                               |

Table 1. Evolution of bamboo houses amid modernization (Source: Bamboo-structure houses from sina.cn;<sup>6</sup> other figures by the authors).

Existing studies have predominantly focused on the typological description of appearance, layouts, and craftsmanship of traditional dwellings. Meng recorded the construction techniques of load-bearing and enclosure systems of the now-vanished first-generation bamboo-structured houses through learning and interviews with local craftsmen.<sup>7</sup> Wang conducted a field survey to provide detailed documentation of the entire construction process of a timber-structured house, from site preparation and foundation work to the assembly of columns, beams, purlins, floorboards, roof, and wall structures, as well as the final ritual ceremony, aiming to translate traditional craftsmanship into inheritable tectonic knowledge.<sup>8</sup> Wang focused on the spatial analysis of timber-structured houses, using five typical spaces—living room, bedroom, veranda, balcony and hearth, to analyze their hierarchical order, daily use, family structure, and ritual practices.<sup>9</sup> Guo investigated the cultural connotations of specific timber components through linguistic analysis, uncovering the symbolic meaning embedded in construction terms.<sup>10</sup> Zhu provided a comprehensive record of the dimensions, materials, appearance, spatial usage, and rituals of traditional bamboo and timber dwellings, and briefly noted the emergence of new materials and structures since the 1980s without in-depth investigation.<sup>11</sup>

These studies have provided valuable insights into traditional aspects of Dai dwellings. Yet there remains a gap in how tradition is deployed when traditional housing types are replaced by modern construction. Since the 1990s, economic growth has stimulated new housing demand, while improved transport networks enabled non-local Han builders to enter the region, becoming primary builders.<sup>12</sup> During this period, brick–concrete houses with fully enclosed ground floors appeared, departing from the traditional stilt form. Subsequently, concrete-frame houses emerged in which the ground floor was left largely open. Throughout both phases, the traditional roof was consistently retained. This research aims to identify how two defining traditional elements of Dai dwellings have been deployed during modernization. Research questions are:

- (1) What impact did the enclosure of the ground floor in brick-concrete dwellings have on established spatial practices of the Dai community?
- (2) How did the open ground-floor space re-emerge in subsequent construction after its disruption?
- (3) How was the traditional two-tiered pitched roof maintained across successive construction phases?

This study draws on Giddens’ distinction between discursive and practical consciousness as an analytical lens for understanding the different deployment trajectories of these two traditional elements.<sup>13</sup> By applying this distinction, the study examines what mechanisms operated behind the continuous retention of the traditional roof and the disruption-then-recovery of the open ground-floor space.

## **2. METHODOLOGY**

The field survey emphasizes in-depth engagement with site-specific settings, serving as an active research tool that enables researchers to gain deeper insights into cultural phenomena.<sup>14</sup> In this study, we employed a field survey in Manjing, Manlie, Manmai, Manguanglong, and Jingmenglun villages (Figure 2), where the majority of dwellings have been modernized rather than maintaining the traditional state, making them well-suited sites for examining how tradition is deployed during modernization. The field survey comprised architectural documentation, semi-structured interviews, and participant observation. With permission from village chiefs and local residents, we conducted architectural documentation of five brick-concrete and five concrete-frame houses, recording their spatial layouts, materials, and construction technologies. This documentation established which traditional elements persist and which have been changed across the two modern housing types.

We conducted semi-structured interviews with 25 Dai households, with topics including the housing transformation process, residents’ spatial experience and everyday use of the dwelling, their decisions regarding the retention of traditional elements, and their perception of current dwellings as inherited or not.

Furthermore, we interviewed government officials about their perspectives on how the Dai community deploys tradition amid modernization. These qualitative data were coded using thematic analysis.<sup>15</sup> We also employed participant observation within residents' houses, capturing spatial use and daily routines that embody tradition but that residents may not articulate in interviews, thus providing an independent layer of data to complement and corroborate the self-reported narratives. Together, these three methods allowed us



Figure 2: Geographical location of villages (Source: Authors).

### 3. FINDINGS

#### 3.1. The Brick-Concrete House: Enclosure and Remedy

The most visible transformation in the brick-concrete house was the enclosure of the ground floor. While the ground floor of traditional houses was entirely open, the brick-concrete house enclosed this space with walls. Living room, cooking, and dining functions that had previously occupied the upper floor were moved downstairs, leaving only sleeping above. In place of the single shared sleeping space, several individual bedrooms were introduced. The house photos and floor plans of the five documented brick-concrete houses are shown in Table 2.

Residents explained the decision to enclose was influenced by Han-style dwellings (Table 3, theme 2). As one resident recalled, “After decades of living in stilted houses, I wanted to experience what a Han-style enclosed house felt like.” A small proportion of residents cited that as economic conditions improved, households began to accumulate possessions, solid walls on the ground floor were seen as a way to deter theft. The shift was also facilitated by the presence of Han builders who possessed the construction expertise to realize this spatial arrangement.

However, once residents moved in, the enclosed ground floor proved problematic. The ground-floor living room had been designed to take the social functions previously held in the open space: communal gatherings,

banquets, and festivals, and residents had initially expected that moving these activities indoors would offer a better experience with modern finishes. In practice, many residents reported that neighbors were reluctant to enter the enclosed interior. Under the previous stilted house, the open ground floor had been visible and accessible from all directions—a passing neighbor could see activity, walk in without hesitation and join. Although the space belonged to individual households, its openness made it function more like a village shared communal space. During participant observation, it was common to see villagers gathering in the open ground-floor space of houses from other generations, even when the homeowner was not present. Entering the enclosed room, by contrast, required approaching a closed door, knocking, and stepping into a private interior. Residents felt the walls created a sense of separation that discouraged the casual, drop-in sociality of village life. The enclosure did not relocate communal gathering indoors, instead, it disrupted spatial conditions that had made such gathering happen.



Table 2. House photos and floor plans of brick-concrete houses (Source: Authors).

Those who did come inside encountered a series of practical discomforts: the enclosed space accumulated heat that the old open ground floor had dispersed through natural ventilation, conversations produced an uncomfortable echo off the interior surfaces, and banquets felt cramped compared to the previous open area. As some residents summarized, “It didn’t feel as good as the previous open space.” What residents complained about both socially and physically was that their communal life could not simply be moved indoors. This communal aspect is inseparable from the openness of the space in which it had always taken place.

In response, residents devised a practical remedy. Within a year of moving into the enclosed brick-concrete house, every household constructed a column-supported canopy adjoining the main house, to recreate an open space on the ground floor. This structure was built using either the traditional Dai two-tiered pitched roof form or a flat-roof form (Figure 3). Financially able households opted for the roof form despite its costing roughly ten times more than the flat one. Even where no cultural expectation strictly demanded it, residents chose to reproduce the traditional roof form at considerable personal expense.



Figure 3: Column-supported canopy of brick-concrete houses (a) Two-tiered pitched roof form (b) Flat-roof form (Source: Authors).

Residents acknowledged that the canopy was not as spacious as the fully open stilted ground floor, but it restored the possibility of communal life—gatherings resumed there. Although the enclosed house offered two full stories of interior space with around two or three hundred square meters, residents prefer to spend time staying under the canopy. As residents explained, “When we lived in the old house, we spent most of the day downstairs in the open space. Now it is the same, we still stay here” (Table 3, theme 4). In this sense, the canopy was a compensatory measure through which residents reconstituted the spatial practices and way of life that the traditional house had sustained.

Across the brick-concrete houses, one of the most visually distinctive features of Dai vernacular architecture, the two-tiered pitched roof, was continually constructed instead of adopting the Han flat roof. When asked

about this choice, residents responded in terms quite different from the sensory language they used to discuss the ground floor (Table 3, theme 3). They stated explicitly that this roof form was a symbol of the Dai people, and that every Dai village had always had roofs of this kind. A few respondents also cited practical benefits of rainwater drainage and thermal insulation, but every resident, without exception, invoked the roof's value as a marker of ethnic continuity.

| THEME 1                                         | CODING                                                                                                                                                                                                                                              | SOURCE |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Agency and process of housing transformation    | Houses self-designed by residents, no government prescription or guidance                                                                                                                                                                           | 9      |
|                                                 | Government approval of house plans since 2020 covers only land-use type, one-household-one-house policy, and construction legality. No design requirements are imposed (e.g. roof style, ground-floor openness).                                    | 2      |
|                                                 | House construction has transitioned from a Dai craftsman-led, village-assisted collective process to a Han builder-led process, where construction typically concludes at the flat reinforced-concrete slab, and Dai craftsmen start building roof. | 12     |
|                                                 | Dai craftsmen hired separately by residents to construct the pitched roof                                                                                                                                                                           | 8      |
|                                                 | Old houses have rain leakage, better ventilation but cold in winter                                                                                                                                                                                 | 5      |
|                                                 | New houses have improved comfort and security                                                                                                                                                                                                       | 11     |
|                                                 | Residents themselves see modernization as a right, not a loss. Old houses cannot last forever; they deserve improved living conditions                                                                                                              | 4      |
| THEME 2                                         | CODING                                                                                                                                                                                                                                              | SOURCE |
| Enclosure, canopy, and openness of ground floor | Enclosure of ground floor was influenced by Han housing model                                                                                                                                                                                       | 10     |
|                                                 | Some residents enclosed ground floor for security/ theft prevention                                                                                                                                                                                 | 4      |
|                                                 | Enclosure required knocking and felt like intruding into private space, making community members feel out of place compared to under the stilted house                                                                                              | 12     |
|                                                 | Enclosed ground floor proved uncomfortable: hot, acoustically poor (echo), spatially constrained, people refused to gather inside                                                                                                                   | 8      |
|                                                 | Canopy was added later to restore open communal space for gatherings and banquets                                                                                                                                                                   | 16     |
|                                                 | Canopy also served as shade and rain cover, similar to traditional eaves                                                                                                                                                                            | 4      |
|                                                 | In concrete-frame houses, open space on ground floor was a deliberate choice to avoid repeating the enclosed model and losing communal space                                                                                                        | 7      |
|                                                 | Residents actively requested an open ground floor in the concrete-frame house                                                                                                                                                                       | 10     |
|                                                 | Choosing concrete-frame houses because such a layout can continue traditional living pattern                                                                                                                                                        | 8      |
|                                                 | Enclosed houses do not represent Dai ethnic                                                                                                                                                                                                         | 9      |
|                                                 | Opened concrete-frame houses are still regarded as a continuation of Dai ethnic                                                                                                                                                                     | 8      |
| THEME 3                                         | CODING                                                                                                                                                                                                                                              | SOURCE |
| Two-tiered pitched roof and extended structure  | The roof was maintained because it is the marker of Dai ethnic identity                                                                                                                                                                             | 18     |
|                                                 | The roof was maintained because it has practical benefits: rainwater drainage, thermal insulation                                                                                                                                                   | 7      |
|                                                 | The two-tiered pitched roof form was preferred for extended structures despite costing significantly more, as it maintains consistency with Dai architectural identity                                                                              | 6      |
| THEME 4                                         | CODING                                                                                                                                                                                                                                              | SOURCE |
| Spatial utilization and way of life             | Frequent communal gatherings (festivals, banquets, daily socializing) make open space essential                                                                                                                                                     | 19     |
|                                                 | Clear spatial division between communal areas and private family spaces                                                                                                                                                                             | 10     |
|                                                 | Residents spend most of the day on the open space of ground floor                                                                                                                                                                                   | 8      |
|                                                 | Upper floor used primarily for sleeping                                                                                                                                                                                                             | 7      |

Note: Source counts reflect only those participants who addressed the relevant topic; not all participants commented on every issue.

Table 3. Thematic coding of the interviews (Source: the authors)

The construction process itself reinforced this conscious identification. Han builders, who were responsible for the brick-concrete structure, did not possess the skills to construct the Dai pitched roof. Their work therefore stopped at the flat concrete slab. Residents then hired Dai craftsmen specifically to build the pitched roof above it (Table 3, theme 1). The flat concrete slab alone would have been structurally complete

and waterproof. The pitched roof was not strictly necessary in functional terms, yet residents willingly bore the additional cost. The brick-concrete stage illustrates that the Dai community deployed tradition on their own terms amid modernization. The canopy as a remedy and roof continuity suggest that residents did not passively accept the enclosed model as a whole, they instead retained or compensated for elements they recognized as essential to daily social practice and ethnic identity.

### 3.2. The Concrete-Frame House: A Return to Openness

From the late 1990s, the concrete-frame houses appeared in the village and quickly became the dominant building type. During the field survey, this type was found to account for the majority of houses in Dai villages. Like the brick-concrete house, they were built by Han builders. This time, however, residents gave different instructions: they explicitly asked the builders to keep the open space on the ground floor. The resulting spatial arrangement reflects this priority. The ground floor was to be left largely open, with only a small portion enclosed for storage. Moreover, drawing on their experience with the brick-concrete house, most households added column-supported canopies to extend the open area further—even though the ground floor was already largely open (Figure 4). The upper floors accommodated a living room and bedrooms. Some houses included a kitchen on the upper floor, but only used occasionally. Residents chose to place their cooking facilities in the open ground-floor area, preparing and eating meals there. House photos and floor plans are shown in Table 4. Furthermore, the pitched roof continued in this phase.



Figure 4: Column-supported canopy of concrete-frame houses (a) Two-tiered pitched roof form (b) Flat-roof form (Source: Authors).

When explaining their spatial choices, residents consistently emphasized that Dai festivals are frequent and neighborly gatherings form an integral part of daily life (Figure 5), making open space on the ground floor essential and necessary (Table 3, theme 4). Some had visited neighbors' enclosed houses and experienced how the closed ground floor disrupted everyday gathering or had heard those residents' complaints or observed how the enclosure eroded the communal life they depended on. Thereby they had deliberately chosen to avoid repeating the enclosed arrangement. Residents described the concrete-frame house as a straightforward

continuation of how Dai people had always lived, with the upgraded materials providing greater durability and more comfortable living conditions. As one resident put it, “This house design is what our parents left us, passed down through generations. We think it is good because it suits our way of life.”

It is residents’ experiential understanding of open space as essential, rather than structural, climatic, or economic factors, that makes the recovery of open ground-floor space. The concrete-frame system, relying on columns rather than walls to carry structural loads, makes an open ground floor technically feasible. Yet the frame does not inherently lead to an open ground floor as the same system can accommodate infill walls to create fully enclosed spaces, as is common in many regions where this construction method is used. It was residents’ prior recognition of open space as essential that guided their selection of the system, and they relied on Han builders’ expertise to construct it. Similarly, while the tropical climate of Xishuangbanna means that natural ventilation is advantageous, climatic reasoning did not prevent residents from enclosing the ground floor in the brick-concrete phase. Residents emphasized that the enclosure made everyday gathering impractical, while heat and ventilation were mentioned only as incidental benefits rather than motivating concerns. Nor can cost explain the shift: the adoption of the concrete-frame structure was itself more costly than brick-concrete construction.

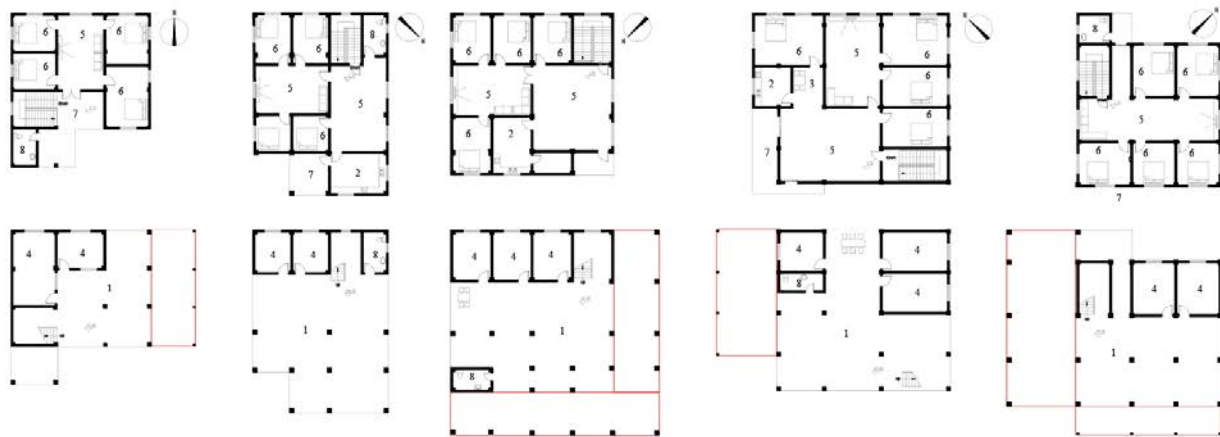


Figure 5: Scenes of communal gatherings and banquets held in different spatial settings (a) on the open ground-floor space of traditional timber-structured houses (b) under the canopies of brick-concrete houses (c) on the open ground-floor space of concrete-frame houses (d) under the canopies of concrete-frame houses (Source: Authors).

Interviews with officials from the Housing and Urban-Rural Development Bureau and the Rural Development Bureau confirmed that this process was entirely self-initiated by residents, with no professional guidance shaping the architectural outcomes. The Housing and Urban-Rural Development Bureau commissioned the Kunming Architectural Design Institute, regarded by the Bureau as an authoritative professional organization, to produce reference drawings for local residential construction in 2008 and 2024. However, officials from the Bureau themselves acknowledged that the designs produced by the Institute were less recognizably Dai in character than the houses residents had built on their own, and that the proposed layouts were not closely adapted to local patterns of everyday life.

Officials from the Rural Development Bureau reported that a requirement for residents to submit construction drawings for approval was only introduced in 2020. Even then, the scope of approval was

limited to confirming that the building site was designated for residential rather than agricultural use and that the construction ensured structural safety. Architectural form including whether the roof retained its traditional shape or whether the ground floor remained open fell entirely outside the Bureau's review. This suggests that traditional elements deployed were not the product of professional design or regulatory enforcement, but of residents' own practical judgement: the recovery of open ground-floor space was a response to its continued necessity in everyday life, and the retention of the parched roof was an assertion of ethnic identity.



1. Extended outdoor area 2. Kitchen 3. Dining area 4. Storage or guest bedroom 5. Living room 6. Bedroom 7. Balcony  
8. Bathroom

The extended structure shown in the floor plan       The open ground-floor space

Table 4. House photos and floor plans of concrete-frame houses (Source: Authors).

#### 4. DISCUSSION

The findings of this study reveal that both the roof form and the open ground-floor space have persisted as recognizable features of Dai dwellings, yet the nature of their continuity differs. The roof has been consistently maintained across successive phases. While the open ground-floor space was temporarily lost under the influence of Han buildings and recovered later. Both phenomena can be described as continuity, but they operate through different mechanisms that carry significant implications for how tradition is deployed in the context of modernization.

This study draws on Giddens' distinction between discursive consciousness and practical consciousness. In his structuration theory, Giddens proposes that human knowledgeability operates at different levels. Discursive consciousness refers to what agents are able to express in language about their intentions, reasons, and motivations for acting as they do. Practical consciousness, by contrast, is what agents tacitly know and routinely draw upon in the conduct of daily life, but cannot readily put into words—it is inherent in the capability to go on within the routines of social life. As Giddens argues, between discursive and practical consciousness there are only the differences between what can be said and what is characteristically done. The boundary between these two forms of consciousness is neither rigid nor impermeable, but can shift with socialization and experience.

In the context of Dai dwellings, the continuity of the roof form operates at the level of discursive consciousness. Residents can explicitly name the roof as a symbol of Dai identity, a defining marker that distinguishes their villages from those of other ethnic groups, thereby consciously insisting on its preservation. The willingness to bear disproportionate cost to reproduce the roof form, both on the main dwellings and column-supported canopies, confirms its importance to residents. This suggests that a tradition that has reached discursive consciousness can be deliberately invoked and maintained.

The open ground-floor space, by contrast, operated at the level of practical consciousness. In the traditional stilted house, residents used the open ground floor on a daily basis for communal gatherings, meals, banquets, and festivals. This functional requirement and spatial use were integrated and had never been separated from each other as an independent proposition. Residents could articulate the functional need itself: they knew they required a place to gather. What they could not articulate was the set of spatial conditions upon which these functions depended: openness, visibility, and barrier-free access. Without external influence, openness never requires identification or articulation. Residents continuously reproduced this spatial form through practical consciousness, knowledgeably but without discursive elaboration.

This gap between functional awareness and spatial understanding made the tradition vulnerable to external cultural influences, an unavoidable condition of modernization. Influenced by Han buildings' enclosure, residents assumed that relocating communal functions into an interior room would produce an even superior experience. The assumption that function could be detached from its spatial preconditions and transferred into an enclosed space indicates that the relationship between the two had not entered discursive consciousness.

The resulting problem compelled a process of reflection: what had previously been simply done and taken for granted now had to be reconsidered. Every household responded by constructing canopies to recover the lost open space, and this experience informed subsequent construction decisions, leading them to deliberately

avoid enclosure. They could now state the reason in terms that went beyond functional need: not merely “we need a place to gather,” but “gathering requires open space.” What had been tacit spatial knowledge was brought into discursive consciousness after experiencing the misfit. The trajectory from vulnerability to loss, to reflection, and ultimately to articulation suggests that practical consciousness can shift to discursive consciousness. It was this shift that transformed a vulnerable, undefended tradition into an expressible, resilient one, enabling residents to firmly deploy it in their later constructions.

This carries two practical implications for deploying tradition in vernacular architecture modernization. First, deploying tradition does not necessarily require professional mediation. Communities can achieve the redeployment of their own traditions through everyday practice, and practitioners should look for ways to support and empower such community-based processes rather than assume that professional intervention is always needed. Second, when top-down approaches are undertaken, interviews can only capture what residents explicitly identify as worth preserving — traditions already at the level of discursive consciousness. Yet practitioners also need to observe everyday spatial practices, patterns of use, and the way of life through which space is inhabited, since some of the most deeply embedded spatial traditions may reside at the level of practical consciousness, where they are enacted daily but never spoken of.

## 5. CONCLUSION

This study showed that two defining traditional elements of Dai dwellings, the open ground-floor space and the two-tiered pitched roof, were deployed through different mechanisms during modernization. By applying Giddens’ distinction between discursive and practical consciousness, this study demonstrates that tradition is not a monolithic category but is operated by different levels of consciousness, which in turn shape how it responds to modernization. Tradition sustained by discursive consciousness, as with the roof explicitly claimed as a marker of Dai identity, proves resistant to change through deliberate insistence. Tradition sustained by practical consciousness, as with the open ground-floor space embedded in everyday use, remains vulnerable because its significance goes unarticulated and thus undefended. Disruption forces what was tacit into explicit articulation and converts practical consciousness into discursive consciousness. In this sense, the loss of a tradition need not be terminal but serve as the catalyst through which tradition becomes deployable.

These findings carry implications beyond the Dai case. In contexts where vernacular architecture undergoes rapid modernization, preservation efforts tend to focus on the most visible and symbolically articulated elements, those already operating at the level of discursive consciousness. Yet traditions sustained through practical consciousness, precisely because they are unarticulated, may be overlooked. In this case, recovery was possible because residents retained agency over their own construction process; such conditions cannot

be assumed elsewhere. Recognizing this distinction could inform more nuanced approaches that identify traditions operating at both the level of discursive and practical consciousness prior to intervention, attending not only to what communities say about their traditions but also to what they silently practice.

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## **Traditional Dwellings and Settlements**

Working Paper Series

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### **LEARNING FROM LIVING HOUSING MODELS OF MOANANUI**

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*James P. Miller*

## LEARNING FROM LIVING HOUSING MODELS OF MOANANUI



*Housing within Indigenous communities of Oceania is more than shelter - it is an expression of land-based ethical frameworks that embody generational abundance, resilience, and continuity. Glen Coulthard and Leanne Simpson conceptualize this as “grounded normativity,” where dwelling reflects adaptive, reciprocal relationships with land, ocean, and more-than-human ecologies. This article situates housing as a central site of struggle and resurgence, foregrounding the experiences of Kānaka Maoli (Native Hawaiians) and Ri-Majol (Marshallese). Across these two Pacific contexts, housing is revealed as both vulnerable to colonial disruption and resilient in sustaining community life.*

*Through a critical Indigenous lens, the article examines the intersecting effects of U.S. colonialism, militarization, and imported planning frameworks that have severed Indigenous peoples from ancestral land and reshaped their built environments. In Hawai‘i, the transformation from the ahupua‘a system to private property regimes, and later to settler-controlled zoning and land management, has intensified Native Hawaiian dispossession and fueled a housing crisis that leaves tens of thousands in overcrowded, precarious, or houseless conditions. In the Republic of the Marshall Islands, a different colonial trajectory - from German and Japanese occupations to U.S. nuclear testing and ongoing military presence -- has radically altered settlement patterns, compressed traditional village forms into urban tracts, and created vulnerabilities to climate-induced displacement. These parallel yet distinct histories converge in Hawai‘i, where migration, relocation, and shared experiences of dispossession bring Marshallese and Hawaiian communities into relation.*

*At the center of this comparative inquiry are Indigenous housing frameworks, the kaubale and wāto. The kaubale, as a constellation of structures within the ahupua‘a, represents a relational architecture rooted in ecological stewardship, kinship, and knowledge transfer across generations. The wāto, extending from ocean to lagoon, embodies Marshallese land governance and spatial organization tied to matrilineal inheritance, thresholds, and resource sharing. Both models illustrate how land-based epistemologies embed social values: kinship, reciprocity, collective care. within physical form. These deep cultural patterns persist despite colonial interventions, adapting within diaspora, informal housing, and even westernized tract homes. Rather than being erased, Indigenous socio-spatial logics continue to shape how families occupy and reconfigure space.*

*By drawing on architectural history and ethnographic research, the article shows how kaubale and wāto articulate principles for decolonizing housing practice today. They provide counterpoints to settler-colonial systems of private property, exclusionary zoning, and commodified housing by emphasizing housing as relationship rather than commodity. In doing so, they inform both practical and imaginative pathways for addressing contemporary crises of affordability, displacement, and climate change. The analysis demonstrates that future housing policy and design in Hawai‘i and the RMI must move beyond standardized models to embrace cultural specificity and grounded relational ethics.*

*The article concludes with a call for Indigenous-led, community-based housing initiatives that align with traditional governance systems and ecological knowledge. Supporting local implementation of culturally supportive housing and recognizing housing as an ongoing process of becoming, in relation to land, kin, and future generations, are vital to just housing futures across Moananuiākea.*

### 1. INTRODUCTION

We are amid a global affordability crisis that is exacerbated by increasing impacts of climate change.

Increasing vulnerability to natural hazards and low housing supply exacerbate the situation, which is more acute in regions with settler-colonial private property regimes. The influence of John Locke and Thomas Hobbes seeded ideals of hyper individualism and the dismantling of subsidiarity and the web of relations that

supported resilient native institutions: family, kin, and tribe. Today, housing shortages threaten the cultural, economic, environmental, social, mental, and physical wellbeing of our Pacific communities.

I examine two Pacific contexts, Hawai'i and the Republic of the Marshall Islands (RMI), to explore different colonial legacies, their impacts on dwelling and their converging narratives and futures. Pacific comparative studies, by nature of genealogy and relationality, demonstrate strong commonalities that support approaches to community and environmental planning and design within and across Moananuiākea. Such commonalities are highlighted by archaeological literature demonstrating common practices such as transported landscapes.<sup>1</sup> In a pluriversal world, many realities exist as opposed to the predominant discourse that promotes universality - or one way of being in the world. Barcham argues that design provides a space to "build a decolonial imaginary in practice -- one that allows different ways of being...to come together in constructive, appropriate, and engaging ways for all involved."<sup>2</sup> Where gaps exist within architectural, planning, and design epistemes due to colonial legacies, shared knowledge across communities can support in filling the gaps.

The housing crisis in Hawai'i is particularly acute due to converging economic realities brought on by the U.S. usurpation and execution of the colonial matrix of power -- notably in the transformation of land relations. Kānaka Maoli (Native Hawaiian), Pacific Peoples, and other brown bodies are increasingly faced with a decision between economic displacement or make-do in overcrowded, under-resourced living conditions. Historically, the RMI has faced displacement and relocation due to U.S. militarization and nuclear legacy. It is within this colonial history of U.S. imperialism that the narrative of Ri-Majol (Marshallese) and Kānaka Maoli converges, as many Marshallese families were displaced and relocated in Hawai'i. Today, climate change has led to increased out-migration from the RMI to Hawai'i and the continental U.S., making the vulnerabilities within the built environment of both contexts increasingly urgent.

## **2. DEEP ADAPTIVE RELATIONS: INDIGENOUS HOUSING PRODUCTION AND GENERATIONAL ABUNDANCE**

To define dwelling as a land-based process, Leanne Simpson's "Land as Pedagogy" helps ground the meaning of land-based processes.<sup>3</sup> The story of Kwezen explains the socio-technical process that creates, shapes, and reflects relations between human and more-than-human worlds. Kwezen, nurtured within Nishnaabeg intelligence, observes and learns from the maple: "She learned both from the land and with the land."<sup>4</sup> Locating housing in relation to Land, family, community, and relation, the practice of housing within land-based epistemologies unbinds the restrictive borders placed on habitation patterns by colonialism. The architecture of the house - its materiality, mode of construction, orientation, and integration within the broader landscape - acts as a teacher. The symbolism of form and material, the naming of posts and beams,

and the connections joints and lashing all hold meaning. The winds that guide siting and orientation and the relation between the mountain, the river, the ocean and the house all carry lessons. As a living entity, the house teaches and guides the family.

In Hawai‘i, houseless Kanaka are not homeless -- they know their place and will always have a home because they remain on the land of their ancestors.<sup>5</sup> The idea of housing within the settler ontology of land is a colonized construct of dwelling. Responding to the narrative of settler colonial dispossession, I imagine housing practices through Indigenous spatial practices—how does grounded normativity inform contemporary housing practices?<sup>6</sup> What solutions to contemporary planning issues are demonstrated through Indigenous intelligence? Can these models lead to the transformation of settler colonial planning frameworks?

For diasporic Pacific Islander communities arriving in relation to host Indigenous lands, grounded normativity requires a companion concept: what I have theorized elsewhere as routed normativity.<sup>7</sup> Routed normativity reflects the deep Indigenous ancestral and ecological knowledge that traveled with our ancestors across Oceania, establishing networks of relation between islands and communities long before colonialism attempted to sever those connections. Where grounded normativity anchors housing within a specific land base, routed normativity demonstrates how land-based ethics travel with communities across diaspora, carried in spatial patterns, kinship networks, and building practices that maintain the integrity of the culture-environment relationship through displacement. For Ri-Majol families arriving in Hawai‘i through education, labor, and climate-driven displacement, their *wāto* knowledge does not dissolve in a new context; it arrives in relation, shaping how communities make space within a land already deeply marked by *ahupua‘a* geography. The convergence of these two frameworks - one grounded, one routed - is where this article's questions reside.

Housing provides a place in the world, and we create meaning through dwelling. Thus, housing is central to the process of becoming -- both in the becoming of the individual or family, the becoming of the physical material culture, and the becoming of place and the many meanings tied to that housing location.<sup>8</sup> Examining dwelling as a spatial practice intricately related to Land management, I illustrate distinctions between housing within settler colonial logics and Indigenous land-based ethical frameworks to provide a path toward decolonizing contemporary housing practices. Design systems present within Pacific architectures, like the *hale* (house) or the *emlapwoj* (big house), reflect socio-technical processes that create, shape, and reflect relations between worlds. Future vernaculars represent imaginaries. To address a housing crisis in Hawai‘i is to also recognize the presence of other Pacific Peoples that have landed on our shores due to the same colonial forces that have dispossessed Kānaka Maoli of Land, and to recognize our shared relations across Moananuiākea.

### 3. COLONIAL INTERVENTION

Coloniality explains how colonization has disconnected Indigenous Peoples from their knowledge, Land, and ways of life.<sup>9</sup> Colonial legacies have greatly impacted Hawai'i and the RMI and continue to shape their built environments. Both nations have shared experiences of U.S. occupation and militarization. When it comes to land use and urban development, the legacy of foreign urban development models and their coinciding laws and regulations cause further damage due to their lack of applicability within the specificity of place - in particular, continental models transported to high islands (Hawai'i) and atolls (RMI). Colonial influences have transformed land relations identifiable in the transformation of land in Hawai'i from *'āina* (that which feeds) to private property. In the Marshall Islands, the *wāto* system has remained intact; however, American development models and Euclidean zoning have transformed land relations, seeding hyper-individualism and desires for single-family housing.

#### 3.1. Ko Hawai'i Pae 'Āina

Through the influence of foreign advisors, the Māhele enacted by Kauikeaouli transformed land in Hawai'i from a system of abundance based on filial relation to a system of private land ownership. Prior to European interference, the *ahupua'a* system represented land governance. The Māhele and the subsequent Kuleana Act of 1850 introduced Western concepts of private property. While the Māhele was intended to secure native land rights, it led to the dispossession of native land by American businessmen, providing space for American interests to seize control of land, economy, and expansion of empire through militarization.

The United States usurped Hawai'i through the illegal overthrow of Queen Lili'uokalani and the Constitutional Government of the Kingdom of Hawai'i in 1893, followed by the 1898 annexation of Hawai'i as a U.S. territory.<sup>10</sup> In this process, 1.8 million acres of Crown lands transferred to the U.S. Government without compensation; the massive dispossession of land has had cascading effects on Kānaka Maoli. Prince Jonah Kūhiō Kalanian'ole championed the Hawaiian Homes Commission Act (HHCA) of 1921, setting aside approximately 200,000 acres for homesteading by Hawaiians of 50% or more blood quantum. While intended as redress, the HHCA was compromised by blood quantum divisions, poor quality land lacking infrastructure, and inadequate funding. Today over 28,000 Kānaka Maoli remain on the waitlists. When Hawai'i became a state in 1959, the Admission Act transferred management of ceded lands to the State of Hawai'i, to be held in trust - a *kuleana* the state has repeatedly failed to uphold.

While the HHCA and the Office of Hawaiian Affairs provided some recognition of Native Hawaiian redress, little has been accomplished to address dispossession and trauma. The HHCA only serves approximately 10% of the native population while the remaining 90% are left with little to no redress. Today's dismantling of

equal rights further exacerbates the situation with the cuts to all Federally funded programs for the support of Native Hawaiians. The settler colonial apparatus that privileged individual property rights over communal stewardship continues to structure housing policy and land use in ways that marginalize Indigenous relationships with ‘āina.<sup>11</sup> This historical context is essential for understanding why alternative approaches based on traditional *ahupua‘a* and *kanhale* systems represent not merely nostalgic returns to the past, but necessary decolonial interventions.

### **3.2. Aelon Kein Ad**

The Republic of the Marshall Islands consists of two island chains, the Ralik and the Ratak, with 29 atolls and 5 islands. Land governance in the Marshall Islands is shaped by the customary title, the *wāto*, passed down through matrilineal inheritance, providing access to all the resources that the atoll ecosystem provides - land connecting the ocean to the lagoon. Four phases of colonization have influenced the transformation of dwelling and settlement in the RMI: the introduction of market capitalism (1788–1885), German Protectorate (1885–1914), Christian missionary influence (1857–present), Japanese military imperialism (1914–1944), U.S. military imperialism including nuclear testing (1944–1983), and neocolonialism under COFA with ongoing U.S. military presence (1983–present).

The U.S. military occupation had the most drastic and lasting impacts on the built environment of the Marshall Islands, leading to socio-cultural changes in housing, the mass displacement of Marshallese communities from their ancestral lands, and the rapid urbanization of Majuro and Kwajalein atolls. Most notably, the nuclear legacy and U.S. militarization has led to converging stories between the RMI and Hawai‘i through population displacement and relocation. Under the Trust Territory, U.S. administrative headquarters on Uliga islet and an intercontinental missile range on Kwajalein drove rapid urbanization and out-migration from outer islands. Today Ebeye, the islet adjacent to USAG-KA, is the densest urban area in the Pacific. Development projects representing a Western agenda have heightened vulnerability within communities, raising serious questions about the ability of imported methods to mitigate climate risk and increase resilience. Ri-Majol knowledge systems are responding in two directions: adaptation to the built environment in Aelon Kein Ad and the formation of Ri-Majol settlements in the U.S.

### **3.3. Colonial Transformation of Land Epistemes**

Euclidean planning became the pervasive logic for land use zoning in twentieth-century United States. Following the 1926 Supreme Court decision *Euclid versus Ambler*, local governments determined highest and best use for geographic areas of cities, allowing exclusionary practices that dominated separate zones for single-family residential, commercial, industrial, and multi-family uses. This settler colonial logic for land use

was transported across the U.S. empire in the Pacific, instated in Hawai‘i and the RMI in the 1960s. While in Hawai‘i these systems became codified in state law, in the RMI, the authority of traditional matrilineal land governance has prevented its full-scale implementation. Following RMI independence and the departure of the U.S. administration in the 1990s, Marshallese families took control of ancestral lands and developed them according to their will—a bottom-up reconstitution of urban planning that, while imperfect, demonstrates the persistence of *wāto* land logic even within urbanized contexts.

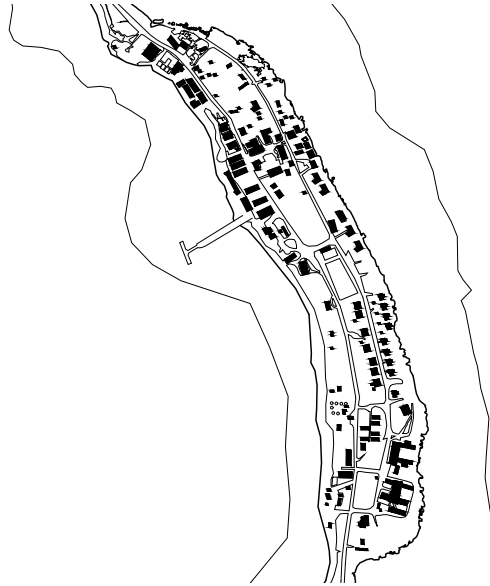


Figure 1: Figure-ground map of Uliga in 1967; the distinct residential pattern is apparent along the right side of the islet with a central commercial development pattern.

With Lockean ideals of private property and Euclidean planning came the transformation of relations to resource, resource use, and the web of Indigenous institutions. Land became property and dwelling became commodified. Colonial dispossessions and assimilation into Euro-American culture damaged Land relations among Indigenous communities, creating housing vulnerabilities.

### 3.4. Converging Histories, Shared Futures in Hawai‘i

The parallel colonial histories of Ko Hawai‘i Pae ‘Āina and Aelon Kein Ad are not merely analogous, they converge physically, in the bodies and communities that have landed on the shores of O‘ahu, Hawai‘i Island, and across the Pacific diaspora. Since at least the 1970s, Ri-Majol families have migrated to Hawai‘i through education, healthcare, labor, and climate-driven displacement, drawn along established kinship lines and facilitated by the Compact of Free Association (COFA). The same U.S. militarism that dispossessed Kānaka Maoli of their land and concentrated Marshallese families onto two urbanized atolls has also underwritten the pathways that bring these communities into proximity in Hawai‘i. Shared colonial forces produce converging

stories: both communities have experienced the transformation of ancestral lands through militarization (in particular the impacts of the nuclear legacy in the Marshall Islands and the resettlement of populations in the aftermath – including settlement in Hawai‘i), the introduction of imported building types and exclusionary zoning codes, and the growing pressures of climate displacement.

Tensions arise between Kanaka and Pacific Peoples, in particular Micronesians today. In places like Mayor Wright Homes in Kapālama, settler urbanism has created gray spaces where Kānaka Maoli and Micronesian communities are pitted against one another in competition for limited housing resources -- a direct effect of the same colonial apparatus that dispossessed both.<sup>12</sup> Dean Saranillio has described how settler colonialism in Hawai‘i repeatedly manipulates racialized communities into conflict with each other.<sup>13</sup> COFA communities, excluded from Medicaid and federal housing assistance under 1996 amendments, compete for the same limited public housing stock as Kānaka Maoli families facing wait-lists stretching decades. These are not natural conflicts; they are manufactured by a settler system designed to fragment Indigenous and diasporic solidarity.

Yet these same communities are also finding ways to build in relation. Ho‘oulu ‘Āina, the cultural land preserve of Kōkua Kalihi Valley in the *ahupua‘a* of Kalihi on O‘ahu, is the most developed site I have encountered for what this relation looks like in practice. Here, Kānaka Maoli, Chuukese, Marshallese, and Filipino communities practice land stewardship together through the organizing framework of *aloha ‘āina*. The Pilinahā framework, developed by Puni Jackson and colleagues from community stories in Kalihi, articulates four vital connections for wholeness: place, community, past and future, and one's better self.<sup>14</sup> This framework, grounded in Hawaiian epistemology, has proven highly complementary to the land-based practices of Chuukese, Marshallese, and Samoan families who connect to ancestors and traditional healing practices through shared land-based programming.<sup>15</sup> Chuukese families and Marshallese youth are not guests at Ho‘oulu ‘Āina, they are participants in its relational life. As I have argued elsewhere, this is not cultural pluralism managed by a settler state; it is a native-to-native relational structure operating on Kanaka terms.<sup>16</sup>

The most spatially significant convergence I have documented takes place in Ocean View on Hawai‘i Island. Among the Ri-Majol communities I have studied across the United States, Ocean View is the only context where self-produced housing and settlement patterns actively reflect the *wāto* in spatial organization.<sup>17</sup> Ri-Majol families from Eniwetok have reconfigured adjacent one-acre suburban agricultural lots of Hawaii Ocean View Estates (a 1960s subdivision bulldozed into former lava fields along the southern slope of Mauna Loa in the district of Ka‘u, Hawai‘i Island with minimal regulatory oversight) into village compounds organized through kinship, complete with a community church, covered gathering areas, productive gardens, water catchment, and the um (earth oven) that anchors *juon kijeek*.<sup>18</sup> In redefining these suburban parcels as

*wāto*, the Ocean View community is practicing *wāto* spatial logic on Kanaka land, raising questions of protocol, reciprocity, and what it means to arrive in relation to a host Indigenous community. Tensions with Marshallese and other Micronesian communities immigrating to Hawai'i are consistently raised by the Native Hawaiian community, but at the same time there is a realization that we need to help those who are unable to access basic necessities like shelter. These questions do not resolve neatly, but they point toward an active, living encounter between two Indigenous spatial frameworks that each carry resources the other can learn from.

#### 4. INDIGENOUS INTELLIGENCE | SPATIAL PRACTICE: WĀTO & KAUAHALE

He Ali'i ka 'Āina; he Kauwā ke Kanaka (the land is a chief, human its servant)

'Olelo No'eau #531<sup>19</sup>

Indigenous intelligence in the production of the built environment is reflective of land-based ethical frameworks; these systems provide an alternate framework for solving our contemporary housing crisis. Yet settler colonial planning hinders the expansion of Indigenous intelligence in the built environment to meet the needs of low-to-middle income families. How can we transform regulatory roadblocks of the settler colonial state (financing, construction processes, and building equity) through Indigenous intelligence?

##### 4.1. Wāto

The *wāto* is at the center of my previous published research on Ri-Majol settlement and spatial practice. In work spanning nearly a decade, I have documented how the six deep cultural patterns embedded in the *wāto*: land as abundance, land as identity, *ippan doon* (togetherness), *juon kijeek* (one fire), *emlapwoj* (the multigenerational household model), and *kumit* (collective construction), persist through dramatic shifts in built form, from outer-atoll villages to the urbanized atolls of Majuro, and from there into the growing Ri-Majol diaspora in Hawai'i, Oregon, and Arkansas.<sup>20</sup> These patterns demonstrate not the fragility of Indigenous spatial knowledge under colonial pressure, but its generativity: the *wāto* is not a fixed type but a set of relational principles that produce different forms in different environments while maintaining their underlying logic. This is routed normativity in spatial practice -- the transportation of land-based ethics across routes without losing their grounding.<sup>21</sup>

In the RMI, matrilineal inheritance governs land distribution. Each atoll is divided into slices extending from the lagoon to the ocean shoreline; these slices are known as *wāto*. The *wāto* provides necessary resources for an extended family to thrive, providing access to reefs, pelagic fish, fresh water, and rich agroforestry. Within the

*wāto* system, housing is developed primarily on the lagoon shoreline and elevated to account for king tides. The spatial organization dictates access and socio-cultural norms embedded in a close relationship to managing natural resources and maintaining cultural norms. Spatial relationships are mediated by in-betweenness, thresholds that govern how to approach the built environment and landscape, distinguished by intentionally placed objects, landscape, and built form. As the *wāto* and its built forms are transported across Ri-Majol diaspora, similar spatial distinctions carry forward, along with the development of housing that supports extended family and their connection to land management.<sup>22</sup>

My research in the Marshall Islands noted the compaction of rural village patterns into the imported western tract homes of Majuro. More extensive spatial relations of land management and housing became consolidated in smaller tracts of land and within the domestic interior and exterior spaces of American tract homes. Observing shifts in housing typologies and socio-spatial patterns helps illustrate how cultural patterns are not erased or assimilated by the western-style home but rather made their own. While it is unlikely the expansive space of rural village life will be available in urban centers, architectural design can find ways to model compact housing developments from the generative nature of these deep-cultural patterns.

#### 4.2. Kauhale

For centuries, Kānaka Maoli (Native Hawaiians) resided in *ahupua'a*, self-sustaining land units encompassing broad plains near the sea, running up valley ridges to the mountains. These ecologies contributed to meaning-making inherent to the *mo'okū'auhau* (genealogy) of *bonua* (place) and *'ohana* (extended family). Knowledge was born of place and passed down from generation to generation; the land shaped knowledge and the people shaped the land.

*Kauhale* (housing compounds) are in relation to *ahupua'a* ecologies. Kānaka relied on their familiarity with the *'āina* and the landscape's natural features to determine site selection for complexes to accommodate several generations of *'ohana* related by marriage, blood, or adoption. Low linear and retaining walls, stone terraces, and cleared level spaces marked the physical boundaries of each *kauhale*. These structures were arranged with careful attention to prevailing winds, solar orientation, privacy, and functional relationships. Siting was conducted by the *kubikubi pu'uone*. In Ka'u and some places in Puna, dwellings were intentionally built on old lava beds, preserving good tillable soil for crops, reflecting a sophisticated understanding of environmental conservation.<sup>23</sup> Notably, Marshallese families living in Ka'u continue this practice today.

The physical boundaries of *kauhale*, and by extension *ahupua'a* and *moku* (large district), are *palena* (place-boundaries) created through memories and shared knowledge expressed in *mo'olelo*, *mele* (songs), *oli* (chants), and *ka'ao* (legends). Beamer explains how "*palena* create spaces of attachment and access to both the

metaphysical and physical worlds. They delineated the resource access of *maka'āinana* and *ali'i* on the ground, literally connecting to the material and spiritual resources of these places."<sup>24</sup> The *kaubale* system provided a living architecture supporting knowledge transfer, informing construction practices that build community and reinforcing the lessons of sustainable land-based practices.

The spatial organization of *kaubale* reflected social behaviors informed by cosmogony and cultural practices, such as kapu (restrictions; chiefly legal pronouncement) that regulated Hawaiian life. Kapu reflected what Noelani Arista describes as "the rhythms of island life," a mechanism to ensure social cohesion.<sup>25</sup> It identified separate physical spaces for labor, eating, and religious activities; acknowledged the ecological continuities of landscapes, seascapes, and skylines in ways that marked time; and facilitated familial relations and reinforced individual and collective responsibilities within *'ohana*.

The abandonment of kapu in 1819, along with increased colonial encounters and the infusion of Christian beliefs into Hawaiian society, facilitated the architectural transition from many buildings and discrete activities in a *kaubale* to many rooms in a single structure. Patrick Kirch's fieldwork at Anahulu Valley, O'ahu determined that the influence of Western private property ideas and European architectural styles fundamentally transformed the relationship between household clusters and the land on which they reside.<sup>26</sup> Hawaiian dwellings were not simply shelters but manifestations of Hawaiian cosmogony.<sup>27</sup> Within *kaubale* spaces, the permeability between structures facilitated different groupings of people for different activities, allowing the extended family to reconfigure throughout the day. This spatial flexibility supported deep knowledge of ecological systems in relation to everyday life, knowledge transfer, social infrastructure, and collective work - all foundational to Hawaiian socio-ecological resilience.

Similar to the evolution of relations between human-environment and more-than-human worlds present within the urban *wato* of the RMI, the socio-spatial patterns and ontological connection to land are maintained in the Hawaiian *kaubale*. Today, these patterns continue to be identified across Kānaka Maoli families. My family in Kalihi, O'ahu, developed a compound over time by renting half the units in a six-plex apartment, maintaining active garden and maker spaces, and extending *'ohana* beyond bloodlines to other residents. During field work in Puna addressing housing issues from the 2018 lava flows, one resident remarked: "I always envisioned my dream house to be...village style living...I never wanted a big giant house. I just want small little dwellings where we all have a communal space."

## 5. PATTERNS OF INDIGENOUS INTELLIGENCE

Deep cultural patterns provide examples of physical manifestations embedded within the culture-environment relationship of dwelling as a land-based practice. They contribute to the reproduction of Indigenous habitus. These deep-cultural patterns are generative: culture evolves, and so do the physical manifestations of each pattern. For simplicity, I compare cultural patterns published by Manulani Aluli Meyer on Housing in Hawai'i and those I published on the built environment in the Marshall Islands and identified earlier.<sup>28, 29</sup>

Six patterns are identified with similar but varied manifestations in built form across both contexts. They are: (1) abundance of the *wāto*, (2) kinship of the *wāto*, (3) *ippan doon* (togetherness), (4) *juon kijeek* (one fire), (5) *emlapwoj* (multigenerational habitation model), (6) *kumit* (collective action). These patterns reflect intelligence within Indigenous planning frameworks and cannot be seen in isolation as they are all fundamentally connected within the cultural system of the Marshall Islands. The abundance of the *wāto* reflects the Marshallese ontological connection to land and resources. *Ippan doon* manifests in the clustering of housing. *Juon kijeek* embodies the Marshallese proverb *enra bwe jen lala rara* (recognizing need and sharing resources). The *emlapwoj* symbolizes the Marshallese institution of the family and a center of learning for children. *Kumit* represents the commitment of community to one another in everyday life, including the collective action of creating housing.

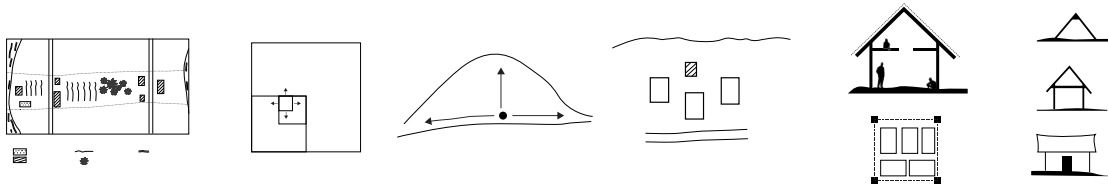


Figure 2: From left to right: (1) abundance of the *wāto*, (2) kinship of the *wāto*, (3) *ippan doon*, (4) *juon kijeek*, (5) *emlapwoj*, (6) *kumit* (Illustration by author).

Manulani Aluli Meyer provides complementary land-based frameworks for Kānaka Maoli housing practices:

- (1) *Nohana Hawai'i* (living a Hawaiian way),
- (2) *'Ike kupuna* (enduring knowledge practices),
- (3) *Hoopono* (truth-telling practices),
- (4) *Kokua aku, kokua mai* (help and be helped),
- (5) *Auamo kuleana* (collective transformation through individual excellence),
- (6) *'Ike 'āina* (cultural agroforestry and food security),
- (7) *Kaunahale* (housing with shared purpose),
- (8) *Aloha 'āina* (love of land).

The process of hale building is reflective of Meyer's framework. Uncle Scotty, a caretaker at Ho'oulu 'Āina, describes the collective actions that go into the construction of the hale on Ouaua ili, Kalihi. The pili grass comes from two locations on O'ahu, stones from networks across the island. The process—bundling pili grass, gathering *lauhau* for wall plates, and more, required 10,000 hands. The collective actions that take place within the construction process not only build relations within community, but also across communities from the various locations where materials are resourced and with the natural world from which these materials come. The hale itself becomes a layered and living artifact that embodies these relationships and transforms those who are a part of it. Could you imagine this process enriching and emboldening community today? Where the Lāhui can go from here...Imua!

| Broad Patterns              | Hawai'i                     | Ri-Majol                                |
|-----------------------------|-----------------------------|-----------------------------------------|
| Land as wealth (abundance)  | <i>'Ike 'āina</i>           | Abundance and kinship of the Wāto       |
| Land as identity            | <i>Aloha 'āina</i>          |                                         |
| Togetherness                | <i>Kokua aku, kokua mai</i> | <i>Ippan Dron</i>                       |
| Resource sharing            | <i>Hoopono</i>              | <i>Juon Kijeek / Enra bwe lale rara</i> |
| Multi-generational dwelling | <i>Kauhale</i>              | <i>Emlapwoj</i>                         |
| Collective processes        | <i>Aumo kuleana</i>         | <i>Jemjem Meel/ Kunit</i>               |

Table 1: Patterns of Indigenous Intelligence.

## 6. DISCUSSION

Miller and Moses' "Living in Relation," emphasizes approaches to cultural revival through traditional settlement systems, namely the kauhale.<sup>30</sup> Their policy and planning approach promotes the same reciprocal relation between people and 'āina that this article theorizes. The social practice After Oceanic, of Sean Connelly, demonstrates a contemporary take on the hale as a renewal of the 'obana–'āina relation. In the summer of 2024, After Oceanic Built Environments Lab and Leong Leong Architecture built Hale Pi'o -- a movement in the resurgence of Kānaka Maoli architectural innovation, weaving together contemporary materials with ancestral knowledge in lashing, orientation, and connection to the environment. The project brought together students, hale builders, cultural practitioners, architects, and artists, incorporating reciprocal framing methods with connections made in traditional hale lashing. Weaving together the systems design of After Oceanic with the planning framework of Miller and Moses holds promise for reimagining and reviving

a living housing system for Hawai'i.

Lilikalā Kame'eiehiwa proposed one such radical approach to housing initiatives for Kānaka. Her framework centers on leveraging the land base of existing *'āina* organizations (nonprofits and grassroots coalitions with established land holdings) to negotiate for low-impact development within state lands in exchange for residents' participation in forest management. This arrangement simultaneously empowers Kānaka Maoli self-determination, challenges settler colonial actions of alienation, addresses both housing and environmental needs, and creates opportunities for cultural practice and knowledge transmission. Mary Tuti Baker speaks to these spaces as kipuka aloha *'āina*, which are generative centers for the revival of Native Hawaiian culture, practice, and lifeways.<sup>31</sup> Ho'oulu 'Āina (HĀ), a program of Kōkua Kalihi Valley, demonstrates *'āina*-based cultural practices including agriculture, hale building, *wa'a* building, and wellness programs, representing aloha *'āina* as political praxis, exalting the land in which there is genealogical connection.<sup>32</sup>

Metaamo Studio's design for The Rise Up Marshall Islands house utilizes locally abundant wood, such as coconut, combined with rock foundations. The design maximizes passive ventilation and daylighting. Separating 'wet' spaces from the main house simplifies water catchment and composting toilets. Surrounding the structures are garden beds, water catchment, and other resources the family will utilize. The idea is to replicate the social relationship with the land in the *kaubale* system while providing the modern comforts of contemporary homes.

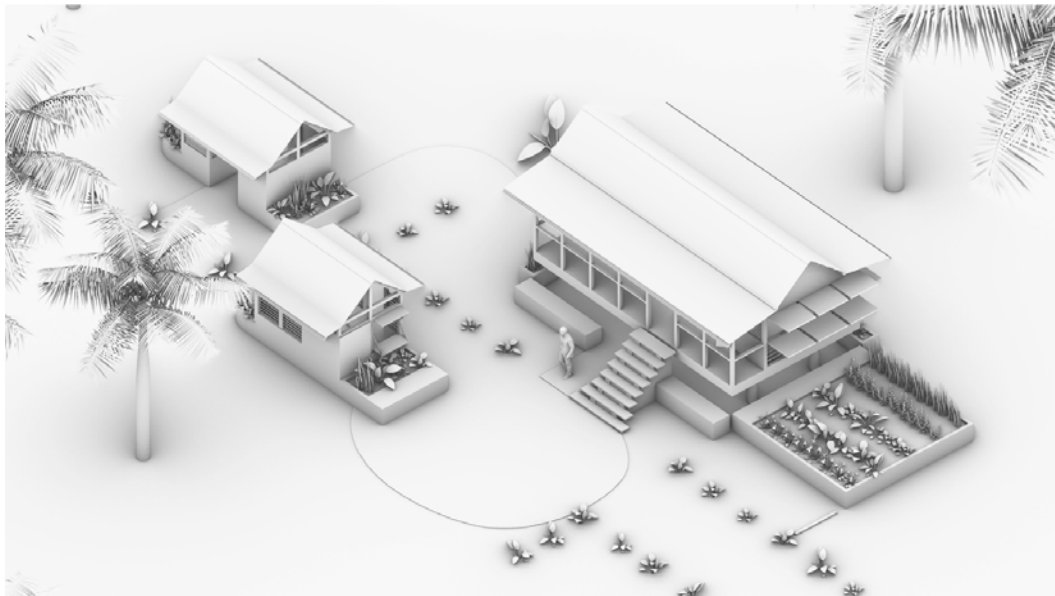


Figure 3. Metaamo design for RiseUp RMI House.

## 6.1. Toward Indigenous Housing Futures: Three Scales of Practice

Weaving together these examples, from the design theory of After Oceanic and the planning framework of Miller and Moses, to the community land practices of Ho‘oulu ‘Āina and the design work of Metaamo Studio, suggests a possible architecture for Indigenous-led housing across three complementary scales: the land-based community model, the urban Indigenous infrastructure model, and the diaspora community model. Together, they begin to articulate what culturally specific housing programs look like when grounded in Indigenous spatial ethics rather than borrowed from settler planning typologies.

At the broadest scale, Kame‘eleihiwa's proposal for leveraging ‘āina organizations represents the most architecturally ambitious vision: negotiating low-impact development within state lands in exchange for participation in forest management, embedding housing within the living governance of *abupua‘a* systems. Organizations practicing their Native Hawaiian Traditional and Customary Rights would become the planning and development agents of their own communities, challenging settler-colonial alienation while addressing both housing need and ecological stewardship simultaneously.

At the urban scale, Ho‘oulu ‘Āina and the Pili nahā framework offer a model already operational and demonstrably extending Hawaiian principles across Pacific communities in Kalihi. The integration of land-based practice, healthcare, food production, and cultural programming within the *abupua‘a* of Kalihi demonstrates what it means to treat housing as part of an ecological and social system rather than as a discrete unit of shelter. The Pili nahā framework's four vital connections: place, community, past and future, and one's better self, provide a planning logic grounded in Hawaiian epistemology while extending outward to include diasporic Pacific communities without dissolving either.<sup>33</sup> Mary Tuti Baker's framing of Ho‘oulu ‘Āina as *kipuka aloha ‘āina* points toward what an Indigenous housing infrastructure could look like when embedded in ongoing land relations rather than constructed as a standalone program.

In the diaspora, two models demonstrate what community-based nonprofits can accomplish when they operate from within Indigenous spatial frameworks. The Marshallese Education Initiative (MEI) in Springdale, Arkansas, which is home to the largest Ri-Majol population outside of Aelon Kein Ad, grew from a small oral history project into a primary advocate for Marshallese housing, education, and cultural programming. Through partnership with the Jones Center Trust, MEI is creating spaces that reflect the *emlapwoj*: spaces for *bwebwenato* (storytelling as oral history), elder-youth knowledge transmission, and the collective practice of *manit* (cultural life) within a receiving community.<sup>34</sup> In Oregon, the Micronesian Community of Oregon's Voyager Village development represents a further step: a community-led housing project designed to reflect the spatial logics of Pacific Islander extended families, incorporating shared outdoor gathering spaces, multigenerational living arrangements, and design elements that honor the relational frameworks embedded in Oceanic housing traditions. Voyager Village demonstrates that diaspora

communities need not accommodate themselves to Western housing typologies—they can design from within their own spatial ethics, producing built forms that make *wāto* and *kaunahale* logic visible in receiving communities. Together, MEI and Voyager Village illustrate how community-based nonprofits can serve not only as service providers but as planning and design agents of diasporic Indigenous futures.

## 6.2. Housing as Relationship, Not Commodity

Perhaps the most fundamental shift required is from understanding housing as a commodity to seeing it as a relationship. Traditional Kānaka Maoli housing practices were grounded in an understanding of *‘ōhana* that extended beyond nuclear families to encompass broader networks of interdependence and care. As scholars demonstrate, there is a significant misfit between the standardized western house and the culture and land-based ethical frameworks of Indigenous communities.<sup>35</sup> While the expansive space of rural village life cannot easily be transposed into urban centers, architectural design can find ways to model compact housing developments from the generative nature of these deep-cultural patterns.

Drawing on Goeman's investigation of Land within Indigenous frameworks as a living, evolving entity: "Land is a meaning making process rather than a claimed object...Placemaking is moving toward cultural and intellectual sovereignty."<sup>36</sup> The relational understanding of housing challenges the market-driven approach that has made Hawai'i's housing among the least affordable in the United States. Solutions must go beyond simply increasing housing supply to address the quality of relationships that housing either enables or disrupts—relationships with *‘āina*, with ancestors, with community, and with future generations. Learning from Kānaka Maoli processes in hale production, we see that locating housing in relation to land dissolves the restrictive borders placed on habitation patterns by colonialism. Paul Memmott, Carol Go-Sam, and Timothy O'Rourke have discussed similar housing patterns of Aboriginal peoples in Australia, and the historical misinterpretation of settlement due to the constraint of colonial apparatuses.

*He po'i nā kai uli, kai ko'o, 'a'obe hina puko'a*  
Though the sea is deep and rough, the coral rock remains standing

Like the coral that withstands the rough seas, Indigenous knowledge has persisted despite centuries of colonial disruption. By rekindling these practices and adapting them to contemporary contexts, we can create housing futures that are pono, in right relationship with the land, with each other, and with generations yet to come.

## 7. CONCLUSION: HOUSING AS BECOMING ACROSS MOANANUIĀKEA

The convergence of Kānaka Maoli and Ri-Majol housing frameworks examined in this article points toward something larger than a comparison of two colonial histories or two spatial typologies. It demonstrates that Indigenous housing is not a problem to be solved through better policy imports from elsewhere; it is an ongoing practice of becoming that has been interrupted, constrained, and actively disrupted by settler colonialism, and that is now, in the *ahupua'a* of Kalihi, in the lava fields of Ocean View, in the nonprofit offices of Springdale and Portland, actively being revived.

The *kaubale* embodies grounded normativity: housing as relation to land, kin, and cosmos, rooted in *ahupua'a* ecology and passed forward through *mo'okū'auhau* across generations. The *wāto* transplanted in Hawai'i Ocean View Estates demonstrates routed normativity: housing as a practice that travels with communities across the ocean, maintaining land-based ethics through transformation, displacement, and resettlement. Neither framework is static or nostalgic. Both are generative, adaptive, and alive. And in Hawai'i, where these two frameworks increasingly share the same land, they are in active conversation -- sometimes in tension, as in the gray spaces manufactured by settler competition, and sometimes in genuine relation, as at Ho'oulu 'Āina, where Kanaka and Marshallese families practice land stewardship together within the *ahupua'a* of Kalihi.

Future housing policy and design in Hawai'i and the RMI must move in two directions simultaneously. The first is cultural specificity: designing for the *kaubale* and the *wāto* rather than the Western nuclear family unit, reconceiving zoning, financing, and construction processes around extended kinship, ecological stewardship, and collective action. The exclusionary zoning and single-family residential codes that restrict multigenerational living, outdoor kitchens, and shared gathering spaces are not neutral planning tools; they are instruments of assimilation that operate against the spatial logics of Indigenous and Pacific Islander communities. The second direction is relational ethics: understanding housing not as an end product but as a process that sustains relationships between generations, between communities, and between people and land over time. Supporting Indigenous-led, community-based housing initiatives, *'āina* organizations, diaspora nonprofits like MEI and the Micronesian Community of Oregon, design studios like Metaamo, land-based programs like Ho'oulu 'Āina, means recognizing the governance systems and ecological knowledge that already exist and creating the regulatory and financial conditions for those systems to function.

Moananuiākea has always been more than a geographic region. It is a relational space, *vā moana*, a sea of connections, in which communities have navigated toward each other across deep time, establishing responsibilities and reciprocities that persist through colonialism and climate change alike. The architecture of just housing futures across our sea of islands will not come from continental planning models or imported building technologies. It will come from the living intelligence already present in place, in the hands of the

*mahi'ai* and the *alap*, in the practices of communities who continue to care for land, kin, and future generations in the face of everything that has tried to sever those connections. Like the coral in rough seas, these practices remain standing.

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## **Traditional Dwellings and Settlements**

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### **THE GRADUAL DEVELOPMENT OF COMMUNITY CULTURE AND URBAN DYNAMICS BY RESIDENTS: A CASE STUDY OF KOJOJI NEW TOWN, A JAPANESE SUBURBAN HOUSING COMPLEX**

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*Yura Kim*

# THE GRADUAL DEVELOPMENT OF COMMUNITY CULTURE AND URBAN DYNAMICS BY RESIDENTS: A CASE STUDY OF KOZOJI NEW TOWN, A JAPANESE SUBURBAN HOUSING COMPLEX



*This study examines the historical trajectory, present challenges, and future prospects of Kōzōji New Town, a large-scale housing complex developed during Japan's period of high economic growth. By constructing a multi-layered chronological timeline from the 1960s to the 2020s, this study analyzes the interrelations among demographic change, social and regional dynamics, resident activities, and policy responses. The study reveals that Kōzōji New Town experienced rapid population growth and urban development in its early decades, followed by stabilization, maturation, and more recently, significant population decline and aging. These demographic shifts have generated complex challenges, including an increase in vacant housing, deterioration of infrastructure, and a shortage of community activity leaders. In response, a variety of initiatives—such as community events, administrative collaborations, and regeneration projects—have been implemented, culminating in the formulation of the Kōzōji Re-New Town Plan, which aims to promote sustainable community development through multi-generational exchange, asset utilization, and wide-area collaboration. The findings highlight the importance of adaptive governance and stakeholder collaboration in addressing the evolving needs of aging new towns. This case study offers insights and implications for the regeneration of similar planned communities across Japan.*

## 1. INTRODUCTION

### 1.1. Research Background

Around 1955, Japan entered a period of high economic growth, transitioning into a prosperous society marked by rapid economic development. In major metropolitan areas, a sudden influx of population led to severe housing shortages and an over-concentration of resources in a single hub, both of which became pressing social issues. In response, large-scale housing complex developments were undertaken across the country from the 1960s onward to meet the growing demand for housing. In addition to these complexes, a wide range of residential facilities, including collective housing, were developed and maintained. As a result, the over-concentration in metropolitan areas gradually improved, and suburban housing estates were established on the outskirts of various urban areas.

However, housing complexes today face a situation in which the functions they were designed to provide at the time of development no longer meet the needs of current residents, due to the worsening problems of population decline and aging. Compounding this, the deterioration of facilities continues, and an increasing number of complexes are now planning and undertaking redevelopment projects.

## **1.2. Research Issues**

The challenges facing housing complexes do not arise in isolation; rather, they have emerged and evolved through the mutual influence of demographic changes, policy developments, and residents' practical activities. However, opportunities to chronologically visualize these interrelationships remain limited. Previous research on housing complexes has predominantly focused on individual themes such as population decline, aging, and housing policy. By contrast, studies that comprehensively examine long-term changes from the planning stage to the present—in relation to social background, regional dynamics, resident activities, and research trends—are not necessarily abundant.

This study systematically organizes the historical transitions, challenges, and response processes of a specific housing complex from a long-term perspective. This is an important task for the future regeneration of housing complexes.

## **1.3. Research Objectives**

The purpose of this study is to examine Kōzoji New Town as a case study of a housing complex developed during Japan's period of high economic growth, with the aim of organizing and analyzing its transitions from the planning stage to the present. Specifically, the study covers the period from the 1960s to the 2020s. By constructing a chronological timeline from multiple perspectives, the study seeks to clarify the interrelationships among demographic changes, the emergence of regional challenges, and the policies and activities implemented in response. Through this approach, the study aims to understand the stages through which Kōzoji New Town has evolved to its current state and how it is being restructured and renewed, thereby deriving implications for future new town regeneration and community development.

## **1.4. Research Methodology**

This study conducts a systematic review of literature related to Kōzoji New Town—including academic research papers, books, and public relations materials—and draws on administrative documents that compile relevant activities and initiatives. From these sources, the activities of administrative bodies, citizen-led organizations, and entities such as corporations and universities are organized and visualized chronologically, enabling an analysis of the challenges and issues of each period from a community-based perspective.

## **1.5. Structure of the Thesis**

The thesis is structured as follows. Chapter 2 draws on the “Kōzoji New Town Plan”—the foundational planning document for the complex—to outline its planning overview and formation process. Chapter 3

builds on this foundation to examine the historical trajectory of Kōzoji New Town up to the present, organizing the town's changes across multiple axes including demographic shifts, local challenges, and resident activities. Chapter 4 focuses on the “Kōzoji Re-New Town Plan,” launched in 2021, examining its establishment, content, and evaluation of outcomes. Finally, Chapter 5 synthesizes the findings of the preceding chapters, identifies future challenges, and presents conclusions.

## **2. THE KŌZOJI NEW TOWN PLAN**

This chapter draws on the Kōzoji New Town Plan<sup>1</sup>—edited by Eika Takayama, former professor at the University of Tokyo, and compiled by the Kōzoji New Town Master Plan Team—to outline the planning intentions and development process of Kōzoji New Town.

### **2.1. Overview of the “Kōzoji New Town Plan”**

#### **2.1.1. The Origins of Kōzoji New Town**

Around 1960, Japan experienced rapid urbanization driven by high economic growth. Under Prime Minister Ikeda's Income Doubling Plan, the concentration of population and industry in urban areas accelerated significantly. In Aichi Prefecture, industrialization and population growth were particularly pronounced, making it increasingly difficult to meet housing demand through existing supply frameworks. Conventional housing complex development was limited to approximately 50 hectares and 5,000 units, with most daily amenities dependent on surrounding areas, a limitation that called for an entirely new approach. Inspired by the precedent set by Senri New Town, the Japan Housing Corporation (JHC)<sup>2</sup> adopted a new policy of new town construction. The Kōzoji district, with its favorable land conditions and transport accessibility, emerged as the leading candidate site. In October 1960, the Kōzoji New Town Plan was formally approved by the JHC board, and full-scale planning work commenced.

#### **2.1.2. Developing the Guide Plan**

The Kōzoji district was a hilly area independent from the urban center of Nagoya, covering approximately 870 hectares with a well-defined terrain extending roughly 4 kilometers in both north-south and east-west directions. In terms of transport, the planned doubletracking and electrification of the Chūō Main Line was considered key to improving commuting convenience. The guide plan established a basic spatial framework—greenways along ridgelines, arterial roads along valleys, and residential areas on slopes—while exploring various options including mixed planned and private housing zones, and the introduction of high-rise point blocks.

### **2.1.3. The First Master Plan (Three Major Residential Districts)**

Formally commissioned to the Takayama Laboratory in 1961, the master plan aimed to develop an independent satellite city with a projected population of approximately 80,000. The overall urban structure was organized into three major residential districts, following a single-center approach that concentrated commercial and cultural facilities in a central hub. Roads were systematically tiered according to function, separating vehicular from pedestrian circulation. Living facilities, including 22 elementary schools and 4 junior high schools, were distributed across residential unit clusters.

### **2.1.4. The Second Master Plan (Open Community)**

The second master plan involved a comprehensive revision of the road network. Ridgelines were preserved as open spaces incorporating parks and schools, with residential areas arranged on either side. Pedestrian decks were introduced to strengthen walking routes and access to the town center, and a density gradient—with higher densities closer to the center—was clearly defined.

### **2.1.5. Remaining Challenges**

Key challenges identified during the planning process included the failure to concretize broad-area functional distribution and the relationship between residence and workplace, the heavy fiscal burden borne by Kasugai City, reduced planning flexibility resulting from the land readjustment method, and insufficient citizen participation. Nevertheless, the collaborative effort between the university research laboratory and the JHC made a meaningful contribution to establishing the role of planners in Japanese urban planning. The planning ideals established through this process, including the pedestrian deck system, the single-center approach, and the greenway network, form the baseline against which the subsequent trajectory and regeneration efforts examined in Chapters 3 and 4 are assessed.

## **2.2. Urban Design Methodology**

The design of Kōzōji New Town was grounded in a design theory that sought to give physical form to the values and intentions of its designers. The urban design process followed five stages: vision formation, systematization, land adaptation, spatial articulation, and spatial convergence. This process was underpinned by three core urban components: a spatial matrix, functional centers, and circulation systems. Through the integrated reconfiguration of these elements, the city was conceived as a coherent and enduring space with a clear structure and meaning.

### **2.3. Transportation Plan**

The transportation plan abandoned the idea of constructing a new railway line within the new town due to financial viability concerns, instead adopting a framework based on the existing Chūō Main Line and private automobile use. Car ownership was estimated at one vehicle per two households. Bus services were planned on a loop route circulating through residential areas, ensuring efficient access to Kōzoji Station and the town center. A comprehensive, multi-modal transportation system integrating rail, bus, and private vehicles was established, forming the basis for detailed road design, station plaza planning, and parking layout.

### **2.4. Kōzoji New Town as Built (Shortly After Move-In)**

The most distinctive feature of the completed Kōzoji New Town was the introduction of pedestrian decks, which physically separated pedestrian and vehicular circulation across multiple levels. The initial residents were predominantly white-collar nuclear families in their twenties and thirties. The urban structure radiated outward from a central town center, with green spaces and parks accounting for approximately 20% of the built-up area. By combining bus services with rail connections at Kōzoji Station, residents could reach Nagoya in approximately 30 minutes, establishing Kōzoji New Town as a satellite residential city within the Nagoya metropolitan area.

## **3. THE TRAJECTORY OF KŌZOJI NEW TOWN**

This chapter organizes and analyzes the development and transformation of Kōzoji New Town from the post-planning stage through to the 2020s. Section 3.1 outlines the major events of each era, focusing on social and institutional developments. Section 3.2 analyzes population trends using a data-centered approach. Section 3.3 examines the problems and challenges that emerged as a result of demographic changes, and Section 3.4 organizes the activities and projects implemented in response, categorized by type. Finally, Section 3.5 synthesizes the chapter as a whole based on the chronological analysis. This study covers the period from the 1960s to the 2020s, and a multi-layered chronological timeline has been constructed, organizing events related to Kōzoji New Town along multiple axes: “social background,” “regional context,” “internal developments within Kōzoji New Town,” “research and academic papers,” and “resident and community activities.” By adopting this multi-layered timeline structure, it becomes possible to understand the changes within the new town not as isolated events, but in relation to shifts in social institutions, research trends, and resident practices.

### **3.1. Major Events by Era**

This section uses the chronological timeline to organize the trajectory of Kōzoji New Town by era. The focus is on the social and institutional background of each period and the major events within the new town. A detailed analysis of population trends and resident activities is presented in Sections 3.2 and 3.4, respectively.

#### **3.1.1. Development Phase (Late 1960s–1970s)**

The period from the late 1960s through the 1970s corresponds to the development phase, during which the construction and initial occupancy of Kōzoji New Town began in earnest. In parallel with housing supply, public and quasi-public facilities—including schools, post offices, and commercial facilities (San Marché)—were systematically established, reflecting the planning ideals of the time. This period also coincided with a nationwide transition in urban planning systems, including the enforcement of the new City Planning Act in 1970. Developed within this institutional framework, Kōzoji New Town rapidly attracted a concentrated influx of population, laying the foundation for its growth as a planned city.

#### **3.1.2. Maturation Phase (1980s–1990s)**

From the late 1980s through the 1990s, the physical development of the new town reached completion, and it entered a phase of maturation. During this stage, research began to emerge focusing on the transformation and emerging challenges of Kōzoji New Town. In 1989, studies addressing the town’s transformation and ethnographic analyses were published, shifting attention beyond the “planned city” dimension toward the everyday lives and social relationships of its residents. Throughout the 1990s, studies focusing on the organic emergence of local facilities, the transformation of community organizations, and the analysis of residential histories increased. The chronological timeline indicates that this period marked a transition in research themes—from “planning” to “everyday life” and “social structure.”

#### **3.1.3. Phase of Seeking Regeneration (2000s–2010s)**

From the 2000s onward, Kōzoji New Town entered a period in which various challenges associated with demographic change began to surface. These included population aging, deterioration of the housing stock, an increase in vacant units, and the expansion of areas with limited transport access. In response, a sustained body of research was conducted across multiple fields, including collective housing regeneration, relocation intention surveys, traffic volume analysis, and environmental impact assessment. A review of the chronological timeline indicates that research outcomes, resident activities, and administrative measures proceeded in parallel during this period—a defining characteristic of this phase.

### **3.1.4. Phase of Restructuring and Transition (2020s)**

Upon entering the 2020s, the impact of the COVID-19 pandemic prompted a fundamental reexamination of community activities and urban functions. During this period, new initiatives increased, including pilot programs for autonomous mobility, the repurposing of closed school facilities, information dissemination via social media, and research aimed at smart city development. In this phase, Kōzoji New Town has come to be positioned as an “old new town” subject to restructuring and renewal, and the chronological timeline clearly illustrates this transition.

### **3.2. Population Trends**

Kōzoji New Town experienced a rapid and concentrated population increase in the late 1960s through the 1970s, driven by large-scale development and the commencement of move-ins. This was a stage in which planned housing supply—centered on public housing corporation units—was actively pursued, and an urban structure premised on the influx of young and child-rearing households was formed. The simultaneous development of schools, commercial facilities, parks, and other daily living infrastructure further reflects the character of a “growth-phase new town” built on the assumption of continued population increase.

From the 1980s through the 1990s, the population stabilized, and the new town transitioned from a phase of quantitative expansion to one of settlement. While the influx of new residents gradually declined, those who had moved in during the same period became long-term residents, and the life stages of households began to shift simultaneously. The chronological timeline shows an increase in research focusing on the formation of local communities and living culture, indicating a shift in interest from the “quantity” of population to its “quality” and “composition.”

From the 2000s onward, the aging of the initial resident generation accelerated, and population decline, along with an imbalance in age composition, became increasingly apparent. A particularly notable feature of Kōzoji New Town’s demographic trajectory is the rapid and concentrated progression of aging, driven by the structural characteristic of having attracted residents of the same generation within a short period. This shift in population structure has led to an increase in elderly single-person and elderly couple households, directly affecting daily life convenience and the nature of community support.

Furthermore, the progression of population decline and aging is closely linked to the increase in vacant housing units and the shortage of individuals available to lead community activities. A cross-sectional review of the chronological timeline confirms that demographic change is not merely a statistical phenomenon, but

has become a foundational condition shaping the emergence of local challenges and determining the direction of resident activities and administrative measures.

As outlined above, the population trajectory of Kōzoji New Town has followed a staged process of change: (1) rapid population growth, (2) stabilization and settlement, and (3) aging and population decline.

Understanding the characteristics of this demographic dynamic is indispensable for evaluating the local challenges discussed in the following section and the activities and projects addressed in subsequent sections.

### **3.3. Problems and Challenges**

In parallel with population trends, a range of challenges has progressively surfaced in Kōzoji New Town. In the chronological timeline from the 2000s onward, issues such as aging, deterioration of the housing stock, an increase in vacant units, and the expansion of areas with limited transport access appear with increasing frequency.

The rise in elderly single-person households—a phenomenon not fully anticipated at the planning stage—has brought to the fore a range of daily living challenges, including difficulties with mobility, shopping, and care. In addition, the aging of collective housing has heightened the need for building renewal and regeneration, while also giving rise to challenges related to the difficulty of achieving consensus among residents.

With respect to research trends, a notable feature of this period is the increase in empirical studies oriented toward problem-solving, including traffic volume analysis, relocation intention surveys, and environmental impact assessment. The chronological timeline clearly illustrates the process by which demographic change generates an awareness of challenges, which in turn emerges as a research theme.

In response, administrative bodies, institutions, and residents have each developed a variety of activities and projects from their respective positions, these are detailed in the following section.

### **3.4. Activities and Projects**

In response to the challenges outlined in Section 3.3, three types of activities have been developed in Kōzoji New Town: community association activities, administrative and institutional collaboration projects, and empirical initiatives led by private organizations and universities.

Community association activities include events such as the “Takamoridai Festival,” the “Iwanaridai Sparkling Festival,” and the “Oshizawadai Strolling Festival.” These events have been planned and operated by community associations in each area, playing an important role in fostering resident interaction and

maintaining community ties. However, as the population ages, the shortage of community association officers and the increasing burden of operations have become pressing issues, making it increasingly difficult for existing associations to sustain activities independently.

Administrative and institutional collaboration projects include the “Community Partnership Residency Support Grant” scheme, introduced through a partnership between the UR Urban Renaissance Agency and Chubu University. This scheme aims to attract young people, including university students, to the new town and encourage their participation in community activities, functioning as a mechanism to supplement the human resource base for community association activities. Through this initiative, opportunities have been created for younger generations to become involved in community association activities, contributing to the smooth operation of local events such as festivals.

Empirical initiatives led by private organizations and universities include resident-led activities such as green clean-up projects, mobile sales services, and local events, as well as newer initiatives that have expanded since the 2020s, including autonomous mobility pilot programs, the repurposing of closed school facilities, and research aimed at smart city development.

The chronological timeline enables the simultaneous identification of emerging challenges such as aging and the institutional and practical responses developed in the same period, revealing that new operational models are being explored through collaboration with external stakeholders in response to demographic change.

### **3.5. Summary**

The analysis presented above reveals that research and activities in Kōzoji New Town have followed a staged process: (1) development, (2) maturation, (3) awareness of challenges, (4) pursuit of regeneration, and (5) restructuring. Each stage has not simply been the product of the passage of time but has been shaped by the mutual interaction of demographic change, shifts in social institutions, transitions in research trends, and the accumulation of resident practices.

In particular, the multilayered analysis of the chronological timeline has made visible the process by which the challenges facing the new town have evolved in close interconnection with the social context, research trends, and resident activities. The significance of chronological organization lies precisely in its capacity to visualize the staged nature of the town’s trajectory. This understanding also serves as an important foundation for comprehending the background and direction of the Kōzoji Re-New Town Plan, which is addressed in the following chapter.

## **4. THE KŌZOJI RE-NEW TOWN PLAN: ESTABLISHMENT, CONTENT, AND EVALUATION**

This chapter organizes and analyzes the Kōzoji Re-New Town Plan, established in 2016, covering its background, founding principles, specific initiatives, and outcomes. Section 4.1 provides an overview of the plan and its background, and Section 4.2 outlines the process leading to its establishment. Section 4.3 presents the plan's fundamental principles, and Section 4.4 analyzes the specific initiatives implemented under the plan and their evaluation. Finally, Section 4.5 offers a concluding summary that synthesizes the chapter as a whole.

### **4.1. Overview of the Kōzoji Re-New Town Plan**

The Kōzoji Re-New Town Plan was formulated against the backdrop of Kōzoji New Town—developed during Japan's period of high economic growth—having reached more than 50 years since its establishment. As Japan transitions into a society of population decline, there is a growing need to address challenges such as declining birthrates and population aging, an increase in vacant housing, and the enhancement of welfare and medical services. In Kōzoji New Town, these challenges have emerged earlier than in other districts within the city.

Against this backdrop, the plan was established in March 2016 as a forward-looking framework projecting 10 to 20 years into the future, with the aim of enabling Kōzoji New Town to develop as a sustainable community over the long term. Based on the plan, a range of projects and measures have been developed in collaboration with citizens and related organizations, including the creation of “Gruppo Fujito,” a multi-generational exchange hub established through the renovation of a former elementary school.

Five years after the plan's establishment, while the effects of various initiatives have begun to emerge, the need for new approaches to community development in response to changing social conditions has grown. Accordingly, a plan revision looking ahead to the next ten years was undertaken, resulting in the formulation of the “Kōzoji Re-New Town Plan 2021–2030.”

### **4.2. Background to the Establishment of the Kōzoji Re-New Town Plan**

#### **4.2.1. Initiatives by Kasugai City**

The catalyst for full-scale efforts toward comprehensive community development in Kōzoji New Town was the consolidation of elementary schools carried out in the Fujiyamada district in 2013. Following this, the city appointed a municipal advisor dedicated exclusively to Kōzoji New Town and began holding resident-participatory “Community Story Salons.” In addition, a memorandum of understanding was concluded

between the city and the Chubu branch of the Urban Renaissance Agency, and a range of measures was developed, including a public–private partnership project to promote the circulation of vacant housing and the “Green Clean Project,” a resident-participatory infrastructure maintenance initiative. Against this backdrop, the community-oriented Fujiyamada Elementary School opened in 2016, and in the same year, the “Kōzoji Re-New Town Plan” was established as a comprehensive guideline for community development in Kōzoji New Town.

#### **4.2.2. Initiatives by Related Organizations and Groups**

By the time the Kōzoji Re-New Town Plan was established, Kōzoji New Town had accumulated over 45 years of history since the commencement of move-ins, during which a diverse range of activities by local organizations, civic groups, and private enterprises had built up a rich foundation of social capital—encompassing social networks and the norms and trust that arise from them. The Kōzoji New Town Center Development Corporation, which manages and operates the center district, launched a circulating bus service within the new town in 2006, providing essential local transport used by approximately 150,000 people annually. From 2009 onward, it has also operated the “Kōzoji Kitemin Festival” as a community-wide event.

Furthermore, Chubu University has been engaged in revitalization efforts since 2013 through student residency and community exchange, while the Urban Renaissance Agency has sought to provide housing tailored to diverse residential needs. Mobile sales services, numerous civic group activities, and a community association membership rate of 83.9% have collectively built a deeply rooted foundation for community collaboration.

#### **4.3. Fundamental Principles of the Kōzoji Re-New Town Plan**

Kasugai City proposed seven fundamental principles to guide community development under the Re-New Town initiative.

(1) Succession of Mature Assets: The plan advances community development that inherits and draws on the appeal of mature assets, including systematically developed infrastructure, the rich natural environment and greenery cultivated by the community, a diverse and abundant housing stock, and the active engagement of local residents.

(2) Consolidation of Public and Daily Service Facilities and Network Development: The plan establishes appropriately located hubs capable of delivering essential daily services, consolidates public and convenience facilities, and builds an interconnected network linking these facilities.

(3) Securing Diversity in Living and Work: The plan provides spaces for residence and activity that enable people of diverse ages and backgrounds to live together (social mix), interact, and collaborate. At the same time, it promotes the development of environments that support diverse working styles—including remote work, senior entrepreneurship, and community business—beyond commuting to major cities, and that can generate local employment.

(4) Promoting Collaboration Among Residents, Businesses, and the City: Based on the principle that every resident is an agent of community development, community organizations, civic groups, local businesses, and the city each clarify their respective roles and responsibilities and contribute collectively to the advancement of community development.

(5) Building a Sustainable Urban Management Structure: By ensuring that existing assets such as housing circulate appropriately in the market so that new residents continue to move in, and that the functional renewal of the community proceeds on an ongoing basis, the plan aims to create an economic cycle within the community and secure financial resources for community development.

(6) Strengthening Collaboration with Surrounding and Wider Areas, with Kōzoji New Town as the Core: By extending the services generated through community development to surrounding areas beyond Kōzoji New Town itself, the plan ensures sustainable quality and scale. It also enhances recognition as an attractive residential area by connecting and promoting the appeal of adjacent residential districts across administrative boundaries.

(7) Creating and Communicating a New Brand Identity for the Community: The plan promotes the creation and communication of the community's appeal—drawing on its mature assets and advancing the renewal of functions and design—so that “Kōzoji New Town” becomes widely recognized as a brand for an attractive residential area, thereby encouraging the influx of new residents.

#### **4.4. Initiatives and Evaluation Based on the Kōzoji Re-New Town Plan**

Kasugai City has pursued a wide range of initiatives through leading projects and key measures aligned with the challenges identified, in order to achieve the performance targets set out in the Kōzoji Re-New Town Plan. The following sections clarify the outcomes and remaining challenges based on the evaluation and verification results of the “Kōzoji Re-New Town Promotion Council” and interviews conducted with staff of the New Town Creation Division, Community Development Promotion Department, Kasugai City Hall<sup>3</sup>.

#### 4.4.1. Population and Household Target Achievement

A comparison of the targets set for 2025 with actual results (Table 1) reveals that the population of Kōzoji New Town has been on a declining trend year by year, and it is difficult to say that the various measures implemented to date have yielded sufficient results. The proportion of child-rearing households has continued to decline and has not reached the target figure of 25.0% set in the plan.

While efforts toward attractive community development, such as improving the residential environment and promoting multigenerational exchange, are ongoing, clear results have not necessarily emerged in terms of improving population composition or encouraging long-term settlement. In the face of the structural challenge of population decline, there is a growing need to review existing measures and develop responses grounded in new perspectives.

|                                                  | TARGET FOR<br>2025 | 2015  | 2020  | 2025  |
|--------------------------------------------------|--------------------|-------|-------|-------|
| Population (unit: people)                        | 48000              | 45217 | 42205 | 41384 |
| Percentage of Households with Children (unit: %) | 25.0               | 19.7  | 16.5  | 15.0  |

Table 1: Population and households of Kozoji New Town.

#### 4.4.2. Performance Indicators by Field

The performance indicators by field are summarized as follows (Table 2).

**Housing Circulation:** The vacancy rate for detached housing decreased by 0.6% in 2020, toward the 2025 target. The 2017 figure of 2.9% also reflects continuous improvement since 2014, indicating year-on-year progress.

**Transport:** The coverage rate of public transport showed a temporary increase following the completion of one new bus stop in 2019, but ultimately declined, indicating that the effects of the initiative have not been sufficiently realized.

**Community-Based Integrated Care:** The certification rate for long-term care needs stood at a baseline of 12.2% in fiscal year 2015 and continued to increase thereafter, reaching 15.2% in fiscal year 2020. The actual certification rate in 2025 was approximately 20.7%, achieving the target of 21% or below, although it continues to rise alongside the increasing rate of aging.

**Utilization of Existing Assets:** The number of parks for which longevity measures have been implemented reached 22 in 2024, significantly exceeding the 2025 target of 15 parks.

Wide-Area Collaboration: The average daily passenger count at Kōzoji Station reached 51,935 in fiscal year 2019, exceeding the 2025 target of 51,000, but declined to 48,088 in fiscal year 2024. However, this represents an increase of 1,263 from the previous fiscal year, suggesting that the target may be within reach.

Information Dissemination: Annual website access figures reached 165,935 in fiscal year 2019, far exceeding the 2025 target of 30,000, and have continued to surpass the target since 2017. In addition, Instagram and other social media platforms have been utilized since 2019, with the number of followers reaching 3,476 in fiscal year 2025—an increase of 940 from the previous year—demonstrating a sustained upward trend in community information dissemination.

|                                                                                  | YEAR 2014 | YEAR 2020 | THE YEAR 2025 TARGET |
|----------------------------------------------------------------------------------|-----------|-----------|----------------------|
| Housing Circulation: The vacancy rate for detached housing                       | 3.2%      | 2.6%      | 3.2% or less         |
| Transport: The coverage rate of public transport                                 | 76.2%     | 77.3%     | 85%                  |
| Community-Based Integrated Care: The certification rate for long-term care       | 12.2%     | 15.2%     | 21% or less          |
| Utilization of Existing Assets: The number of parks for which longevity measures | 7         | 15        | 15                   |
| Wide-Area Collaboration: The average daily passenger count at Kōzoji Station     | 50033     | 51935     | 51000                |
| Information Dissemination: Annual website access                                 | 6851      | 165935    | 30000                |

Table 2: The performance indicators.

#### 4.4.3. Leading Priority Projects

The leading priority projects are as follows (Table 3).

- (1) Development of a Multi-Generational Exchange Hub: The facilities of the former Fujiyamadaito Elementary School are being utilized to develop a hub for multi-generational exchange involving children, child-rearing households, elderly residents, and others.
- (2) Takamori-dai Smart Wellness Development: Using the Takamori-dai district as a model, community development aimed at smart wellness is being promoted throughout Kōzoji New Town in collaboration with the Urban Renaissance Agency's housing complex regeneration initiatives.

(3) Kōzoji Gateway Development: An attractive gateway is being developed for Kōzoji New Town and its surrounding districts. Efforts include redevelopment of the area around the station's north exit and improvements to the south exit area and underground spaces to enhance the sense of integration between the north and south sides of the station.

(4) West Sub-Center Development: Utilizing the facilities of the former Nishitoyamadai Elementary School, the plan promotes the attraction and development of commercial, dining, educational, medical, and welfare convenience facilities serving surrounding districts, through the introduction of private sector vitality.

| CATEGORY                   | PROJECT NAME                                                                                                                                 | OVERVIEW                                                                                                                                                                                                                                                                                                     | 2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (Former) Preceding Project | Development of a Multi-Generational Exchange Hub Utilizing Former Elementary School Facilities (Former Fujiyamada Higashi Elementary School) | Utilize the facilities of the former Fujiyamada Higashi Elementary School to establish a hub where children, child-rearing generations, the elderly, and other generations can interact.                                                                                                                     | Continued operation of “Gruppo Fujito”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Same as the previous year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Preceding Project          | Model Housing Development through Urban Regeneration: Takamori-dai Smart Wellness Development                                                | Using the Takamori-dai area as a model and in collaboration with the Urban Renaissance Agency's (UR) housing regeneration, promote town development aiming for smart wellness throughout the Kōzoji New Town, with a focus on the area including UR rental housing, Takamori Mountain, and prefectural land. | <p>&lt;UR&gt;</p> <ul style="list-style-type: none"> <li>- Continuation of Takamori-dai housing complex regeneration project (target: 30 out of 48 buildings, 1,112 out of 1,853 units)</li> <li>- Ongoing consideration of utilization plans for development sites in blocks 2 and 4</li> <li>- Commencement of building removal in blocks 2 and 4 development sites</li> </ul> <p>&lt;UR &amp; City&gt;</p> <ul style="list-style-type: none"> <li>- Ongoing study to establish a smart wellness hub in the Takamori-dai area</li> <li>- Outdoor events at Takamori-dai complex subcenter (“Takamori-dai Summer Festival,” “Takamori-dai Christmas Market,” Yorimichi Café, PINE DINER)</li> </ul> <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>- Implementation design for the renovation of Takamori-yama Park &lt;Kōzoji Town Development Co., Ltd.&gt;</li> <li>- Forest Support Department (total of 6 sessions from November to March, ongoing)</li> </ul> <p>&lt;Prefecture&gt;</p> <ul style="list-style-type: none"> <li>- Market sounding for the utilization of unused prefectural land, etc.</li> </ul> | <p>&lt;UR&gt;</p> <ul style="list-style-type: none"> <li>- Continuation of Takamori-dai housing complex regeneration project (target: 30 out of 48 buildings, 1,112 out of 1,853 units)</li> <li>- Ongoing building removal in blocks 2 and 4 development sites</li> <li>- Scheduled public offering for blocks 2 and 4 development sites</li> </ul> <p>&lt;UR &amp; City&gt;</p> <ul style="list-style-type: none"> <li>- Ongoing study to establish a smart wellness hub in the Takamori-dai area</li> <li>- Outdoor events at Takamori-dai complex subcenter (“Takamori-dai Summer Festival,” ongoing)</li> </ul> <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>- Renovation of Takamori-yama Park</li> </ul> <p>&lt;Kōzoji Town Development Co., Ltd.&gt;</p> <ul style="list-style-type: none"> <li>- Forest Support Department (ongoing)</li> </ul> <p>&lt;Private Initiatives&gt;</p> <ul style="list-style-type: none"> <li>- In block 3-2 of the Takamori-dai complex, the private park “Takamori-dai Walkable Park ‘Frutto’” planned and managed by Honda Logistics Co., Ltd. will open in July</li> </ul> |

|  |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Creating a Face for the New Town: Kozoji Gateway Development                                                                          | Promote the creation of an appealing gateway for Kozoji New Town and the surrounding area. Efforts include reorganizing the north station exit area and improving the south station exit and the underground passage to enhance integration between the north and south sides of the station.                                                                 | <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>- Basic design for the north station square, etc.</li> <li>- Installation of temporary bicycle parking</li> <li>- Implementation design for removal of north station bicycle parking</li> </ul> <p>&lt;Kozoji Town Development Co., Ltd.&gt;</p> <ul style="list-style-type: none"> <li>- Management and cleaning based on the Urban Convenience Promotion Agreement (ongoing)</li> <li>- Permanent kitchen car and other vendor space “Itsudemo KOUZOUJI PLAT” (ongoing, average 16 openings per month)</li> </ul> <p>&lt;General Incorporated Association Tourism Convention Association&gt;</p> <ul style="list-style-type: none"> <li>- Installation of a street piano in the citizen's corner (ongoing)</li> </ul> <p>&lt;Private Initiatives&gt;</p> <ul style="list-style-type: none"> <li>- Night Platform events</li> </ul> | <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>- Implementation design for the north station square, etc.</li> <li>- Removal of north station bicycle parking</li> </ul> <p>&lt;Kozoji Town Development Co., Ltd.&gt;</p> <ul style="list-style-type: none"> <li>- Management and cleaning based on the Urban Convenience Promotion Agreement (ongoing)</li> <li>- Itsudemo KOUZOUJI PLAT (ongoing)</li> <li>- Plant management by the “Ekihiro Sodatebu” (ongoing)</li> </ul> <p>&lt;General Incorporated Association Tourism Convention Association&gt;</p> <ul style="list-style-type: none"> <li>- Installation of a street piano in the citizen's corner (ongoing)</li> </ul> <p>&lt;Private Initiatives&gt;</p> <ul style="list-style-type: none"> <li>- Night Platform events</li> </ul> |
|  | Attraction of Daily Convenience Facilities through Utilization of Former Elementary School Site: Development of the Western Subcenter | To enhance the residential appeal of Kozoji New Town, the former Nishi-Fujiyamada Elementary School site will be utilized. By introducing private sector initiatives, the city will promote the attraction and development of daily convenience facilities—including commercial, dining, educational, medical, and welfare services—for the surrounding area. | <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>- Facility opening</li> <li>- Opening ceremony</li> </ul> <p>&lt;Former Site Utilization Business Operator&gt;</p> <ul style="list-style-type: none"> <li>- Construction of private facilities</li> <li>- Opening of private facilities</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>- Operation of Nishi-Fujiyamada Sports Exchange Plaza (designated management by Social Welfare Corporation Machi Swing) (ongoing)</li> </ul> <p>&lt;Former Site Utilization Business Operator&gt;</p> <ul style="list-style-type: none"> <li>- Attraction of clinics (ongoing)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

Table 3: List of preceding projects.

#### 4.4.4. Rollout Projects and Information Dissemination Projects

Rollout projects include: (1) the construction of a comfortable mobility network, positioning JR Kōzōji Station and the center district as major transport hubs with two sub-transport hubs to the east and west; (2) the enhancement of commercial spaces in the center district and the enrichment of public services; and (3) the promotion of housing stock utilization in detached housing areas on the periphery of the new town (Table 4).

Information dissemination projects include new town promotion efforts to build a brand image as a community conducive to child-rearing, as well as the publication of a commemorative volume—Planning Assets of the New Town and Future Community Development (author: Atsushi Hattori)<sup>4</sup>—jointly published by the city, Kōzōji Machizukuri Co., Ltd., and the Urban Renaissance Agency to mark the 50th anniversary of the community’s establishment in 2018, communicating the value of systematically developed planning assets to a wider audience.

| CATEGORY            | PROJECT NAME                                                                                   | OVERVIEW                                                                                                                                                                                  | 2024                                                                                                                                                                                                                                                                                                     | 2025                                                                                                                                                                                                                                                                                                    |
|---------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Development Project | Building a Comfortable Mobility Network Connecting Transport Hubs                              | Position JR Kozoji Station and the Center District as major transport hubs, establish two sub-transport hubs (new sub-hubs) to the east and west, and build a seamless transport network. | <City & Nagoya University><br>Study on reducing driver burden in last-mile autonomous shuttle services (ongoing)<br>Kasugai-version MaaS web app “move! Kasugai”<br>Demonstration of MaaS app and mobility port<br>Initiatives utilizing taxis<br>Demonstration of ride-sharing taxis under a new scheme | <City & Nagoya University><br>Study on reducing driver burden in last-mile autonomous shuttle services (ongoing)<br>Verification of MaaS app utilization (ongoing)<br>Initiatives to promote taxi usage                                                                                                 |
|                     | Enhancing the Appeal of Commercial Spaces and Improving Public Services in the Center District | In the Center District, strengthen transport connectivity and enhance commercial and service functions.                                                                                   | None                                                                                                                                                                                                                                                                                                     | None                                                                                                                                                                                                                                                                                                    |
|                     | Utilization of Detached Housing Stock                                                          | In the detached housing areas located on the outskirts of the new town, establish a support system to promote the circulation and utilization of housing stock.                           | <Kozoji Town Development Co., Ltd. & City><br>-Implementation of shared parking for home medical care and nursing care providers (ongoing)<br>-Parking lot rental business                                                                                                                               | <Kozoji Town Development Co., Ltd. & City><br>-Consideration of utilization of vacant land and vacant houses (ongoing)<br><Kozoji Town Development Co., Ltd.><br>-Implementation of shared parking for home medical care and nursing care providers (ongoing)<br>-Parking lot rental business (ongoing) |

|                                   |                    |                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Information Dissemination Project | New Town Promotion | To build a brand image of a town that is easy to raise children in, various promotional activities are carried out. Existing assets such as well-planned residential complexes and infrastructure are preserved and utilized, and diverse initiatives are developed to establish and communicate the brand image of Kozoji as a “pioneering place for housing.” | <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>- Promotion of an active image and fostering unity using the “ReNEW KOZOJI” logo (ongoing)</li> <li>- Activities in collaboration with the Kinan Racing Team (ongoing)</li> <li>- Information dissemination through digital signage in the JR Kozoji Station underground passage (ongoing)</li> </ul> <p>&lt;City &amp; Kozoji Town Development Co., Ltd.&gt;</p> <ul style="list-style-type: none"> <li>- Operation of the “ReNEW Publicity Department” (ongoing)</li> <li>- Promotion of Kozoji New Town's appeal via SNS (ongoing)</li> </ul> <p>&lt;UR&gt;</p> <ul style="list-style-type: none"> <li>- Creation and distribution of “Rurubu Kozoji New Town”</li> </ul> <p>&lt;Private Initiatives&gt;</p> <ul style="list-style-type: none"> <li>- Launch of the “ReNEW Machitsuku-bu”</li> </ul> | <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>- Promotion of an active image and fostering unity using the “ReNEW KOZOJI” logo (ongoing)</li> <li>- Activities in collaboration with the Kinan Racing Team and Oriental Sports (ongoing)</li> <li>- Information dissemination through digital signage in the JR Kozoji Station underground passage (ongoing)</li> </ul> <p>&lt;City &amp; Kozoji Town Development Co., Ltd.&gt;</p> <ul style="list-style-type: none"> <li>- Promotion of Kozoji New Town's appeal via SNS (ongoing)</li> <li>- Operation of the “ReNEW Publicity Department” (ongoing)</li> </ul> <p>&lt;UR&gt;</p> <ul style="list-style-type: none"> <li>- Distribution of “Rurubu Kozoji New Town” (ongoing)</li> </ul> |
|-----------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Table 4: List of development projects and dissemination projects.

#### 4.4.5. Key Measures Aligned with Challenges

The key measures aligned with identified challenges are as follows (Table 5).

(1) Promotion of Housing and Land Circulation and Preservation of a Quality Residential Environment: To encourage young households, including child-rearing families, to choose Kōzoji New Town as their place of residence, measures are being implemented to promote the market circulation of housing and land, alongside measures to preserve the residential environment.

(2) Development of Accessible Shopping Environments and Securing Diverse Means of Transport: Measures to enable commercial and daily living services to be provided in accessible locations are being pursued in conjunction with measures to secure diverse means of transport.

(3) Multi-Generational Coexistence and Exchange, and Enhancement of Reassurance in Child-Rearing, Medical Care, and Welfare: To promote the formation of a mixed community in which multiple generations coexist, the plan enriches the child-rearing environment and educational provision to meet the needs of families with children, while building a community-based integrated care system to create an environment in which everyone can continue to live with peace of mind.

(4) Promotion of Diverse Activities Through Effective Utilization of Existing Assets (Stock): By making effective use of systematically developed existing assets through ingenuity and creativity, the plan promotes diverse activities by local residents and enhances the appeal of the community.

(5) Promotion of Wide-Area Community Development Beyond Kōzoji New Town: Rather than focusing on Kōzoji New Town alone, the plan promotes wide-area community development and enhanced recognition by leveraging the concentration of residential areas to the east of Nagoya and along the JR Chūō Main Line, through facility attraction and information dissemination.

|   | MEASURE NAME                                                                                    | OVERVIEW                                                                                                                                                                                                                                                                      | 2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ① | Promotion of Housing and Land Distribution and Preservation/Creation of a Favorable Environment | To encourage young generations such as child-rearing households to choose Kōzoji New Town as their place of residence, measures are implemented to promote the market circulation of housing and land, while also introducing initiatives to preserve the living environment. | <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>-Subsidies for community-beneficial vacant house utilization projects (ongoing)</li> <li>-Consultation with professional contractors (ongoing)</li> <li>-Subsidies for purchasing vacant houses, etc. (ongoing)</li> <li>-Subsidies for demolishing vacant houses (ongoing)</li> <li>-Subsidies for removal of leftover items in vacant houses (ongoing)</li> <li>-Subsidies for building condition surveys (inspections) (ongoing)</li> <li>-Publicity videos and advertisements for migration and settlement (ongoing)</li> </ul> <p>&lt;Kōzoji Town Development Co., Ltd.&gt;</p> <ul style="list-style-type: none"> <li>-Vacant house management service (ongoing)</li> <li>-Consideration of utilization of vacant land and houses (ongoing)</li> <li>-Housing consultation meetings (ongoing)</li> <li>-Parking lot rental business</li> <li>-Introduction service for residents to UR rental housing (ongoing)</li> </ul> <p>&lt;UR&gt;</p> <ul style="list-style-type: none"> <li>-Supply of renovated rental housing: MUJI×UR Plan+S</li> <li>-Supply of renovated units (MUJI×UR [Parts Room])</li> <li>-Supply of renovated units (CUSTOM UR)</li> <li>-Supply of DIY-allowed units in UR rental housing in Fujiyamada District (ongoing)</li> </ul> | <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>-Subsidies for community-beneficial vacant house utilization projects (ongoing)</li> <li>-Consultation with professional contractors (ongoing)</li> <li>-Vacant house/land bank (ongoing)</li> <li>-Subsidies for purchasing vacant houses, etc. (ongoing)</li> <li>-Subsidies for demolishing vacant houses (ongoing)</li> <li>-Subsidies for removal of leftover items in vacant houses (ongoing)</li> <li>-Subsidies for building condition surveys (inspections) (ongoing)</li> <li>-Publicity videos and advertisements for migration and settlement (ongoing)</li> </ul> <p>&lt;Kōzoji Town Development Co., Ltd.&gt;</p> <ul style="list-style-type: none"> <li>-Vacant house management service (ongoing)</li> <li>-Consideration of utilization of vacant land and houses (ongoing)</li> <li>-Housing consultation meetings (ongoing)</li> <li>-Parking lot rental business (ongoing)</li> <li>-Introduction service for residents to UR rental housing (ongoing)</li> </ul> <p>&lt;UR&gt;</p> <ul style="list-style-type: none"> <li>-Supply of renovated units (ongoing)</li> <li>-Implementation of new renovation projects appealing to younger generations</li> <li>-Supply of DIY-allowed units in UR rental housing in Fujiyamada District (ongoing)</li> </ul> |

|   |                                                                                         |                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| ② | Development of Local Shopping Environments and Securing Diverse Means of Transportation | Measures are implemented to provide commercial and daily life services in accessible locations, alongside initiatives to secure diverse transportation options. | <City & Nagoya University><br>-Study on reducing driver burden in last-mile autonomous shuttle services (ongoing)<br>-Kasugai-version MaaS web app "move! Kasugai"<br>-Demonstration of MaaS app and mobility port<br>-Initiatives utilizing taxis (joint taxi dispatch demonstration)<br>-Demonstration of ride-sharing taxis under a new scheme<br><City & General Incorporated Association Tourism Convention Association><br>-Mobile sales business (mobile supermarket Doufu-kun) (ongoing)<br><Kozoji Town Development Co., Ltd.><br>-Electric-assist bicycle rental business (ongoing) | <City & Nagoya University><br>-Study on reducing driver burden in last-mile autonomous shuttle services<br>-Verification of MaaS app utilization (ongoing)<br>-Initiatives to promote taxi usage<br><City & General Incorporated Association Tourism Convention Association><br>-Mobile sales business (mobile supermarket Doufu-kun) (ongoing)<br><Kozoji Town Development Co., Ltd.><br>-Electric-assist bicycle rental business (ongoing) |
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|---|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ③ | Coexistence and Exchange Across Generations, and Enhanced Security in Childcare, Medical Care, and Welfare | To foster the formation of mixed communities where multiple generations coexist, efforts are made to enhance the childcare and educational environment to meet the needs of families with children, and to build a community-based integrated care system so that everyone can continue living in the area with peace of mind. | <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>- Childcare support at various public facilities (ongoing)</li> <li>- Opening of Kozadai Nursery School and Fujiyamada Nursery School</li> <li>- Rebuilding of Iwanaridai Nursery School</li> <li>- Health seminars, baby food classes, and dental health classes at childcare support facilities (ongoing)</li> <li>- Operation of a regional cooperation council at Ishiodai Elementary School (ongoing)</li> <li>- Promotion of community-based integrated care centered on the Community Comprehensive Support Center (ongoing)</li> </ul> <p>&lt;UR&gt;</p> <ul style="list-style-type: none"> <li>- Supply of renovated rental housing: MUJI×UR Plan+S</li> <li>- Supply of renovated units (MUJI×UR)</li> <li>- Supply of renovated units (CUSTOM UR)</li> <li>- Supply of DIY-allowed units in UR rental housing in Fujiyamada District (ongoing)</li> <li>- “Chikyo-wari WIDE” (discount for nearby living, ongoing)</li> <li>- Initiatives for establishing community medical and welfare hubs (ongoing)</li> <li>- Supply of housing that supports healthy longevity (ongoing)</li> </ul> <p>&lt;City, Chubu University, UR&gt;</p> <ul style="list-style-type: none"> <li>- Operation of Chubu University regional collaboration housing system (ongoing)</li> </ul> | <p>&lt;City&gt;</p> <ul style="list-style-type: none"> <li>- Childcare support at various public facilities (ongoing)</li> <li>- Operation of school-community cooperation councils at Fujiyamada Junior High School district and Ishiodai Elementary School district (ongoing)</li> <li>- Promotion of community-based integrated care centered on the Community Comprehensive Support Center (ongoing)</li> <li>- Support for elderly activities by community welfare coordinators (ongoing)</li> </ul> <p>&lt;UR&gt;</p> <ul style="list-style-type: none"> <li>- Supply of renovated units (ongoing)</li> <li>- Implementation of new renovation projects appealing to younger generations</li> <li>- Supply of DIY-allowed units in UR rental housing in Fujiyamada District (ongoing)</li> <li>- “Chikyo-wari WIDE” (discount for nearby living, ongoing)</li> <li>- Initiatives for establishing community medical and welfare hubs (ongoing)</li> <li>- Supply of housing that supports healthy longevity (ongoing)</li> </ul> <p>&lt;City, Chubu University, UR&gt;</p> <ul style="list-style-type: none"> <li>- Operation of regional collaboration housing system (ongoing)</li> </ul> <p>&lt;Kozoji Town Development Co., Ltd.&gt;</p> <ul style="list-style-type: none"> <li>- Shared parking for home medical care and nursing care providers (ongoing)</li> <li>- Provision of residential support housing (in cooperation with Machi Swing Social Welfare Corporation)</li> </ul> |
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|---|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ④ | Promotion of Diverse Activities through Effective Utilization of Existing Assets (Stock) | The accumulation of well-planned existing assets (stock) is effectively utilized through wisdom and ingenuity, promoting various activities by local residents and enhancing the attractiveness of the town.                                                                                                                                | <City><br>- Administrative work related to setting up fixed-term business land lease contracts for the former Nishi-Fujiyamada Elementary School facility (ongoing)<br>- Subsidy program for community-beneficial vacant house utilization projects (ongoing)<br><UR><br>- Supply of renovated rental housing: MUJI×UR Plan+S<br>- Supply of renovated units (MUJI×UR [Parts Room])<br>- Supply of renovated units (CUSTOM UR)<br>- Supply of DIY-allowed units in UR rental housing in Fujiyamada District (ongoing)<br><Kozoji Town Development Co., Ltd.><br>- Shared parking for home medical care and nursing care providers (ongoing) | <City><br>- Subsidy program for community-beneficial vacant house utilization projects (ongoing)<br><UR><br>- Supply of renovated units (ongoing)<br>- Implementation of new renovation projects appealing to younger generations<br>- Supply of DIY-allowed units in UR rental housing in Fujiyamada District (ongoing)<br><Kozoji Town Development Co., Ltd.><br>- Shared parking for home medical care and nursing care providers (ongoing)<br>- Provision of residential support housing (in cooperation with Machi Swing Social Welfare Corporation) |
| ⑤ | Promotion of Broad-Area Town Development Beyond Kozoji New Town                          | Rather than focusing solely on Kozoji New Town, efforts are made to attract facilities and share information by leveraging the accumulation of residential areas east of Nagoya City and along the JR Chuo Main Line. These initiatives aim to utilize broad-area resources and enhance recognition through comprehensive town development. | <City><br>- PR of the convenience for commuting and school trips to Nagoya and Toyota using videos and information magazines (ongoing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <City><br>- PR of the convenience for commuting and school trips to Nagoya and Toyota using videos and information magazines (ongoing)                                                                                                                                                                                                                                                                                                                                                                                                                    |

Table 5: Main measures for each challenge.

#### 4.4.6. Structure for Plan Advancement and Review

The following structures have been established to ensure the ongoing advancement of the plan (Table 6).

(1) Formation of a Community Development Management Entity: A company is to be established to undertake area management aimed at maintaining and enhancing the quality and value of Kōzōji New Town's residential environment, including the management and operation of public facilities and the promotion of vacant property circulation.

(2) Promotion of Independent Initiatives and Mutual Collaboration Among Diverse Stakeholders: The “(Provisional) Kōzōji Re-New Town Promotion Council” is to be established to promote information

sharing and consensus-building necessary for community development, through the participation of a broad and diverse range of stakeholders, including community organizations, civic groups, businesses, various associations, universities, and the municipal government.

(3) Plan Advancement and Review Through the PDCA Cycle: The “Kōzoji Re-New Town Promotion Council,” comprising experts and other relevant parties, is established to evaluate and verify the implementation status of projects and measures based on the plan, as well as the achievement of performance targets, through the PDCA cycle, and to conduct timely reviews of the plan.

|   | MEASURE NAME                                                                    | OVERVIEW                                                                                                                                                                                                                                                                                                                                              | 2024                                                                                                                                                                          | 2025                                                                                                                                                                          |
|---|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ① | Formation of Town Management Entities                                           | To maintain and enhance the good environment and value of Kozoji New Town, a company will be established to manage public facilities, promote the circulation of vacant houses and other real estate, and undertake area management.                                                                                                                  | <Kozoji Town Development Co., Ltd.><br>-Designated management business (ongoing)<br>-Housing distribution promotion business (ongoing)<br>-Area management business (ongoing) | <Kozoji Town Development Co., Ltd.><br>-Designated management business (ongoing)<br>-Housing distribution promotion business (ongoing)<br>-Area management business (ongoing) |
| ② | Promotion of Proactive Initiatives and Mutual Collaboration by Diverse Entities | As an organization for sharing information and building consensus necessary for town development with the participation of a wide variety of entities such as neighborhood associations, citizen groups, businesses, various organizations, universities, and the government, a (tentative) Kozoji Re-New Town Promotion Council will be established. | None                                                                                                                                                                          | None                                                                                                                                                                          |
| ③ | Mechanism for Plan Promotion and Review                                         | A “Kozoji Re-New Town Promotion Conference” consisting of experts, etc., will be established to evaluate and verify the status of project and measure implementation and achievement of outcome goals based on this plan through the PDCA cycle, and to revise the plan as appropriate.                                                               | <City><br>-Kozoji Re-New Town Promotion Conference                                                                                                                            | <City, UR, Center Development><br>-Consideration of interim revision                                                                                                          |

Table 6: Promotion and review of the plan.

#### 4.5. Summary

This chapter has organized the Kōzoji Re-New Town Plan from its background of establishment through to its specific initiatives and evaluation. The plan was formulated in response to the structural challenges of population decline and aging, and in certain fields—such as information dissemination and the utilization of existing assets—outcomes that met or exceeded targets have been confirmed. However, sufficient results have not been achieved with regard to the core objectives of reversing population decline and attracting child-rearing households, indicating the need to review existing measures and explore new approaches.

These outcomes and challenges are not unique to Kōzoji New Town; rather, they reflect issues commonly faced by new towns developed during the same period across Japan. The following chapter synthesizes the analysis presented thus far through a chronological timeline spanning from the planning stage to the present and draws implications for the regeneration of Kōzoji New Town.

## **5. CONCLUSION**

### **5.1. Research Summary**

This study has examined Kōzoji New Town as a case study of a new town planned and developed during Japan's period of high economic growth, organizing and analyzing its trajectory from the planning stage to the present.

Covering the period from the 1960s to the 2020s, a multi-layered chronological timeline was constructed from multiple perspectives—including social background, regional context, internal developments within the new town, research trends, and resident and community activities—thereby making visible not only the physical transformation of the city but also the interrelationships among demographic change, local challenges, and the policies and activities implemented in response.

Chapter 2 examined the Kōzoji New Town Plan, clarifying the considerations underlying its planning and development, and how the plan was ultimately realized in practice.

Chapter 3 revealed that Kōzoji New Town has passed through a staged process comprising (1) a development phase, (2) a maturation phase, (3) a phase of seeking regeneration, and (4) a phase of restructuring and transition. The analysis of population trends confirmed a demographic dynamic characteristic of new towns: a rapid and concentrated population increase over a short period, followed by settlement and long-term residency, and subsequently population decline and an imbalance in age composition due to the aging of the initial resident generation. This shift in population structure emerged as a driving factor behind a complex set of challenges, including deterioration of the housing stock, an increase in vacant units, a shortage of individuals available to lead community activities, and declining transport convenience. Through an analysis of community association activities, local events, and collaborative projects with the Urban Renaissance Agency and universities, it was confirmed that responses to aging are progressing through resident-led initiatives and collaboration with external stakeholders. These efforts are positioned not merely as temporary responses to demographic change, but as movements aimed at fundamentally reconstructing the management of the new town and the nature of its community.

Chapter 4 organized the Kōzoji Re-New Town Plan, which charts a course for the ten years from 2021 onward, building on the activities and challenges identified to date. The chapter summarized the plan's overview, its formulation process, the effects and evaluation of its measures, and the results at the midpoint of fiscal year 2025. While outcomes that met or exceeded targets were confirmed in certain fields, such as information dissemination and the utilization of existing assets, sufficient results have not been achieved with respect to the core objectives of curbing population decline and attracting child-rearing households.

## **5.2. Synthesis: From Planning Ideals to Regeneration**

The chronological timeline constructed in this study visualizes the transformation of Kōzoji New Town across multiple axes: social background, regional context, internal events within the new town, research trends, and resident and community activities. Through a cross-chapter synthesis of the findings, the following overall trajectory becomes clear.

During the development phase (late 1960s–1970s), the planning ideals outlined in Chapter 2—including the pedestrian deck system, the single-center approach, and the integration of green spaces—were physically realized, and the population became concentrated within a short period. During the maturation phase (1980s–1990s), physical development reached completion, and research began to shift from planning to the everyday lives and social structures of residents. During the phase of seeking regeneration (2000s–2010s), the limitations of the original planning framework became apparent as challenges such as aging, physical deterioration, and increasing vacant housing surfaced; research, administrative measures, and resident activities developed in parallel in response. In the phase of restructuring and transition (2020s), the Kōzoji Re-New Town Plan examined in Chapter 4 represents a systematic attempt to address these accumulated challenges, with new initiatives—including autonomous mobility, smart city development, and the repurposing of closed school facilities—reflecting a fundamental reorientation of the town's development trajectory.

Through this chronological analysis, it is systematically confirmed that the challenges facing the new town do not arise in isolation but have been formed and transformed through the mutual interaction of shifts in social institutions, research trends, and resident practices.

## **5.3. Future Challenges and Prospects**

Under the Kōzoji Re-New Town Plan, a wide range of measures are being developed in Kōzoji New Town, including the promotion of housing and land circulation, the securing of diverse transport options, multi-

generational coexistence, the utilization of existing assets, and wide-area community development. At the same time, several challenges remain in enhancing the effectiveness of the plan.

First, there is a need to strengthen the long-term perspective in addressing demographic change. While measures promoting the influx of younger residents and multi-generational coexistence exist, in a context where population decline and aging are progressing simultaneously, it is essential to build structures capable of sustaining long-term settlement.

Second, challenges remain regarding the renewal and utilization of the existing housing stock. While regeneration and reconstruction are being considered in response to the aging of collective housing, the aging of residents themselves frequently makes decision-making difficult. Going forward, there is a need to explore not only physical renewal but also support systems for reconstruction and models for phased renewal.

Third, there is the challenge of securing leaders for community activities and ensuring continuity. While the participation of university students and external actors has shown a certain degree of effectiveness, how community associations and local organizations can maintain their autonomy and transmit their activities to future generations remains an important issue.

These challenges are not unique to Kōzoji New Town; they are commonly faced by new towns developed during the same period across Japan. The case of Kōzoji New Town not only represents a leading example of these challenges but also holds potential as a model for addressing them.

#### **5.4. Conclusion**

This study has established that Kōzoji New Town is not simply an “aging new town,” but a city undergoing restructuring and renewal in response to changing social conditions and demographic shifts. A key contribution of this research lies in the systematic organization—through chronological timeline analysis—of the process by which challenges have emerged and the research, policies, and resident activities responding to them have developed in mutual interrelation.

Furthermore, the analysis of activities and projects in Kōzoji New Town compiled in this study confirms a transition in how local challenges are addressed: from a stage in which responses were undertaken primarily by community associations and residents, to one premised on collaboration with external stakeholders. This underscores the importance of a governance structure in which government, the private sector, universities, and residents share roles and collaborate in future new town regeneration.

It is hoped that the knowledge generated through this study will serve as a reference point for considering the future regeneration of new towns and the revitalization of local communities across Japan.

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## DEPLOYING VERNACULAR TRADITIONS IN DOMESTIC AND COMMUNITY PRACTICES

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