

Pathways for Regional Cultural Expression in Courtyards of Rural Homestays in Hainan

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Abstract: Against the backdrop of rural revitalization and the integrated development of culture and tourism, the courtyards of rural homestays in Hainan function as vital carriers of regional cultural identity, rendering systematic research on their cultural expression pathways of considerable practical significance. Grounded in theories of cultural geography and place-making, this study examines the mechanisms of regional cultural expression in rural homestay courtyards in Hainan from four interrelated dimensions: spatial layout, materials and construction techniques, plant configuration, and lived scenarios. At the spatial level, the extension and reinterpretation of traditional settlement patterns strengthen the continuity of local spatial logic while responding to contemporary hospitality requirements. In terms of materials and construction, the adaptive transformation of indigenous resources and vernacular techniques facilitates a contextual translation of locality, enhancing both authenticity and environmental performance. Ecological plant configuration further reinforces regional characteristics by integrating native species, seasonal variation, and microclimatic regulation into courtyard design. Meanwhile, the creation of dynamic lived scenarios-through everyday activities, cultural practices, and interactive experiences-enables courtyards to evolve from static physical settings into vibrant cultural spaces that support emotional attachment and experiential engagement. The findings suggest that effective cultural expression must transcend superficial symbolic accumulation and instead achieve an organic integration of traditional cultural elements with modern functional demands through spatial continuity, material localization, ecological design strategies, and scenario-based activation. This pathway not only provides theoretical support for the planning and construction of rural homestays in Hainan but also offers a replicable practical paradigm for the preservation, adaptive transformation, and sustainable development of rural cultural landscapes.

Keywords: rural homestays; courtyard design; regional cultural expression; place-making; cultural geography; sustainable development

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1. Extending Regional Logic in Spatial Layout

1.1. Contemporary Translation of Climate-Responsive Spatial Patterns

The spatial configurations of traditional dwellings in Hainan, such as the "front courtyard, rear garden" layout and the sanheyuan courtyard typology, embody adaptive design paradigms shaped by long-term interaction between human settlement and a tropical monsoon climate. Courtyards are typically oriented toward the south or southeast to optimize daylight access and natural ventilation, while deep and extended eaves mitigate intense solar radiation and heavy seasonal rainfall. Open interior spaces simultaneously accommodate agricultural processing, household activities, and neighborhood interaction, forming a spatial system that integrates environmental adaptation with daily life [1].

In contemporary rural homestay design, this spatial logic should not be mechanically replicated but thoughtfully translated. Designers may generate microclimatic gradients

through subtle topographical adjustments, such as stepped platforms, terraced courtyards, and sunken gathering areas that encourage airflow circulation and thermal comfort. Adjustable semi-open pergola systems-constructed with bamboo or timber lattice structures-can provide flexible shading, filtered light, and cross-ventilation, enabling courtyards to respond dynamically to changing weather conditions [2]. At the same time, retaining the original homestead boundaries, lane alignments, and plot proportions helps preserve the spatial memory embedded in the site, reinforcing a sense of continuity and belonging.

For example, a rural homestay project in Sanya maintained the traditional alignment of village lanes and carefully utilized the natural slope of the terrain to create a three-tiered courtyard sequence [3]. This configuration not only satisfied contemporary expectations for privacy, comfort, and functional zoning but also rearticulated the traditional spatial progression of "lane-courtyard-skywell" in a renewed architectural language. Through this process, cultural expression becomes embedded in environmental structure and spatial order, rather than reduced to decorative symbolism, allowing the courtyard to function as a living medium of regional identity.

1.2. Dynamic Creation of Multifunctional Spaces

The essential character of a traditional rural courtyard in Hainan lies in its identity as a lived space rather than a purely aesthetic composition. Historically, such courtyards integrated production, social interaction, and leisure within a single spatial framework [4]. Temporary kitchen extensions accommodated food preparation and processing; shaded corners became informal play areas for children; and open grounds served as venues for seasonal gatherings and communal celebrations. These overlapping functions generated a dynamic spatial rhythm in which daily life unfolded organically.

If contemporary homestay courtyards are designed solely as visual landscapes intended for photography or passive appreciation, their cultural foundations risk being diluted [5]. Meaningful cultural expression requires the reconstruction of functional multiplicity, enabling space to support participation and interaction. This may involve incorporating experiential zones within the courtyard, such as areas for traditional cooking demonstrations, handicraft workshops, or small-scale agricultural activities. By transforming customary living scenes into interactive platforms, designers can translate intangible practices into tangible spatial experiences.

For instance, a homestay project in Qionghai established a "kitchen hearth" zone in the southeast corner of its courtyard, furnished with traditional utensils such as pottery jars and bamboo sieves. Guests are invited to participate in preparing local dishes such as Bojifan, thereby engaging directly with regional culinary traditions [6]. In another example, a stone mill installation placed in a shaded corner allows visitors to experience the rice-grinding technique associated with local Li traditions, presenting cultural knowledge through embodied practice rather than abstract display.

Through such strategies, the courtyard evolves from a static backdrop into a dynamic stage for everyday life. Functional diversity not only enhances visitor engagement but also strengthens the continuity of regional practices by embedding them within spatial routines [7]. As a result, the rural homestay courtyard becomes a tangible and sustainable carrier of cultural inheritance, balancing experiential tourism needs with the preservation and revitalization of local living traditions.

2. Expression of Locality in Materials and Construction

As the most tangible physical carriers of regional culture, local building materials in Hainan-such as volcanic rock, coral stone, coconut shell, betel nut wood, and thatch-embodiment both ecological adaptability and cultural meaning shaped by long-term regional practice [8]. These materials respond effectively to the island's hot, humid climate while reflecting accumulated craftsmanship and everyday experience. The core of their contemporary application lies in a process of localized translation: rather than employing them

as decorative symbols, designers should integrate traditional material wisdom with present-day performance standards, safety requirements, and aesthetic expectations. Through this approach, material expression can evolve from superficial imitation to a substantive continuation of regional construction logic [9].

2.1. Deconstruction and Functional Reconstruction of Local Material Symbols

Volcanic rock, characterized by its porous texture and grey-black tone, has traditionally been used in wall construction and ground paving due to its durability, thermal mass, and availability. In contemporary courtyard design, this material can be reinterpreted as permeable paving, retaining walls, or sculptural landscape elements that improve drainage and regulate surface temperature [10]. By transforming its traditional structural role into an ecological infrastructure component, designers extend its functional relevance while preserving its visual identity.

Similarly, coconut shells—once regarded as everyday by-products—can be processed through environmentally responsible techniques into lighting fixtures, seating elements, or decorative panels. When treated to meet modern safety and durability standards, they retain their handcrafted character while fulfilling contemporary usage requirements. Thatch, historically used for roofing or pavilion coverings, conveys associations with regional vernacular dwellings and can be reintroduced in shaded resting structures, pergolas, or partial roof systems. Its layered texture and natural ventilation capacity reinforce climatic responsiveness while evoking cultural imagery.

The essential strategy is to deconstruct the symbolic associations of these materials and reconstruct their functional value within new contexts. For example, one homestay courtyard employs volcanic rock in a permeable paving system that enhances stormwater infiltration and reduces runoff during heavy rainfall, thereby extending traditional material logic into environmental management practice. Coconut shell lamps treated with protective coatings improve weather resistance and longevity, demonstrating how traditional materials can be revitalized through technological enhancement. This process of deconstruction and reconstruction elevates material usage from surface-level representation to a deeper translation of cultural function, ensuring that locality is expressed through performance as well as appearance.

2.2. Ecological Translation of Low-Tech Construction Wisdom

Traditional dwellings in Hainan exemplify a mode of construction that may be described as low-technology yet high-performance. Stilted structures elevate living spaces to reduce ground moisture; through-draft layouts enhance cross-ventilation; and deep overhanging eaves provide effective shading and rain protection. These strategies achieve environmental comfort with minimal mechanical intervention, reflecting a resource-efficient approach shaped by climate awareness and practical knowledge.

In contemporary rural homestay courtyard design, this ecological wisdom can be reactivated and translated into actionable design strategies. Adjustable bamboo blinds may be installed to provide flexible shading and airflow regulation throughout the day. Discarded pottery jars can be repurposed as components of rainwater collection and storage systems, supporting irrigation and reducing water waste. Permeable paving and gravel beds can mitigate surface runoff and enhance groundwater recharge, aligning environmental performance with traditional construction logic.

For instance, a homestay courtyard in Wanning uses bamboo-woven partitions to define functional zones while maintaining ventilation and visual permeability. These partitions simultaneously satisfy spatial organization needs and express craft aesthetics rooted in regional techniques. In another project in Lingshui, discarded fishing nets have been woven into landscape screens that filter light and create semi-enclosed resting areas. This design approach preserves the memory of local maritime production activities while promoting material recycling and environmental responsibility.

Through such practices, low-tech construction knowledge is not treated as a nostalgic artifact but as a dynamic source of ecological strategy. By integrating vernacular techniques with contemporary environmental design principles, rural homestay courtyards can express regional culture through measurable sustainable actions. Material locality thus becomes a living system of adaptation and innovation, reinforcing both cultural continuity and long-term environmental resilience.

3. Plant Configuration and Creation of Ecological Imagery

Plant configuration serves as one of the most flexible and expressive media for cultural articulation within rural courtyards. In Hainan, native plant systems—including coconut palms, betel nut palms, bougainvillea, frangipani, and other tropical species—embody a composite logic that integrates ecological adaptation, symbolic association, and everyday practice. These plants have evolved in response to local climatic conditions characterized by high temperature, abundant rainfall, and strong sunlight, while also participating in long-standing patterns of production and daily life. Therefore, courtyard planting strategies should move beyond ornamental beautification and instead construct an integrated imagery system that unites production, ecology, and culture into a coherent spatial narrative.

3.1. Constructing a Cultural Symbol System with Native Plants

Many native plants in Hainan carry layered cultural meanings formed through local customs and social interaction. The coconut palm is often associated with vitality and abundance due to its evergreen form and diverse practical uses. The betel nut palm has long been embedded in patterns of hospitality and social exchange, symbolizing respect and cordiality. Frangipani, with its fragrant blossoms and seasonal rhythm, is frequently connected to commemorative and ceremonial contexts in local life.

In courtyard design, these symbolic associations can be spatially activated. Tall coconut palms may be planted along a central axis to create a strong vertical focal point, reinforcing both climatic shading and visual identity. Betel nut palms can be arranged near entrances or transitional zones, combined with locally inspired paving patterns or stone elements to suggest cultural continuity. Frangipani trees may be positioned in relatively quiet or enclosed corners, forming contemplative spaces characterized by filtered light and subtle fragrance.

At the same time, traditional planting logic related to daily life should be retained. Fruit-bearing trees such as mango or papaya can be located near entrances or along circulation routes, emphasizing both hospitality and productivity. Aromatic and medicinal herbs, including lemongrass or mint, may be planted in peripheral corners where they serve practical purposes such as pest deterrence, culinary use, or herbal preparation. Through this layered configuration, plants transcend their role as decorative components and form a readable system of cultural symbols. The courtyard thereby gains a legible cultural narrative expressed through seasonal change, growth cycles, and everyday interaction.

3.2. Creating Sustainable Imagery through Ecological Configuration

Beyond symbolic expression, plant configuration in Hainan's rural homestay courtyards should establish a small-scale yet functional ecological system. Rather than relying on monoculture lawns that require intensive maintenance and irrigation, designers can adopt diversified and adaptive planting models. Edible landscaping offers one viable approach: dedicating a herb corner where mint, basil, or other culinary plants are available for guests to harvest and use in beverages or meals, thereby linking landscape aesthetics with participatory experience.

Drought-tolerant and heat-resistant species, such as *Dracaena* and *Hibiscus*, can be incorporated to reduce irrigation demand while maintaining vibrant color and structural

diversity. Rain gardens planted with native moisture-tolerant species can collect and filter runoff during heavy rainfall, enhancing stormwater management and reinforcing ecological cycles within the courtyard. Introducing flowering plants that attract local insects and pollinators further strengthens biodiversity and supports a balanced micro-ecosystem.

For example, a homestay courtyard in Sanya utilizes native wild ferns to cover shaded walls, lowering maintenance requirements while evoking a landscape character closely aligned with the surrounding natural environment. In another project in Haikou, bougainvillea is not only cultivated for its vivid ornamental value but also selectively used in edible applications such as floral infusions, transforming a primarily decorative species into a productive landscape resource.

Through these strategies, plant configuration evolves from surface-level decoration into a concrete expression of ecological philosophy. The courtyard becomes a breathing and interactive space shaped by growth, harvest, seasonal transition, and environmental feedback. By integrating symbolic meaning with ecological performance and everyday utility, rural homestay courtyards in Hainan can achieve a sustainable imagery that embodies cultural continuity while supporting long-term environmental resilience.

As shown in Table 1, native plants in Hainan courtyards embody an integrated framework that links symbolic meaning, spatial organization, and ecological performance.

Table 1. Native Plant Configuration Logic in Hainan Rural Homestay Courtyards.

Plant Species	Cultural Connotation	Spatial Configuration Strategy	Ecological Function
Coconut Palm	Vitality, abundance, continuity	Planted along main axis as vertical visual focal point	Shade provision, wind buffering, microclimate control
Betel Nut Palm	Hospitality, social connection	Arranged near entrance or transitional zones	Vertical layering, ventilation enhancement
Frangipani	Commemoration, ritual atmosphere	Positioned in quiet ceremonial or enclosed corners	Fragrance diffusion, seasonal imagery
Mango / Papaya	Productivity, welcoming symbolism	Planted near entrance or along circulation paths	Edible production, seasonal shading
Lemongrass / Mint	Daily utility, health-related associations	Located in peripheral or corner herb zones	Pest deterrence, culinary and medicinal use
Dracaena / Hibiscus	Tropical landscape identity	Used in layered planting beds and boundary edges	Drought tolerance, low maintenance landscaping
Native Ferns	Natural ecological continuity	Applied on shaded walls or moist zones	Humidity regulation, reduced maintenance cost
Bougainvillea	Festive color imagery	Trellised along walls or pergolas	Heat tolerance, ornamental and potential edible use
Native Pollinator Plants	Ecological harmony	Integrated in rain gardens or mixed planting clusters	Biodiversity support, stormwater filtration

As illustrated in Figure 1, the configuration of native plants in Hainan's rural homestay courtyards is not arbitrary visual ornamentation but constitutes a rigorous, composite relational framework. This multi-dimensional mapping diagram visually extracts the core characteristics of plant species across cultural, spatial, and ecological dimensions. The chart demonstrates that native species, such as coconut palms, betel nut palms, and frangipani, each follow a highly customized design logic: from bearing specific cultural imagery (e.g., vitality, hospitality, or ritual) to being positioned at precise spatial

nodes (e.g., main axes, entrances, or quiet corners), and ultimately fulfilling targeted ecological functions (e.g., microclimate regulation or stormwater management). This visualized synthesis clearly argues that courtyard landscape design should transcend mere beautification; through the medium of plants, it weaves daily production, environmental feedback, and local cultural continuity into a self-consistent sustainable system.

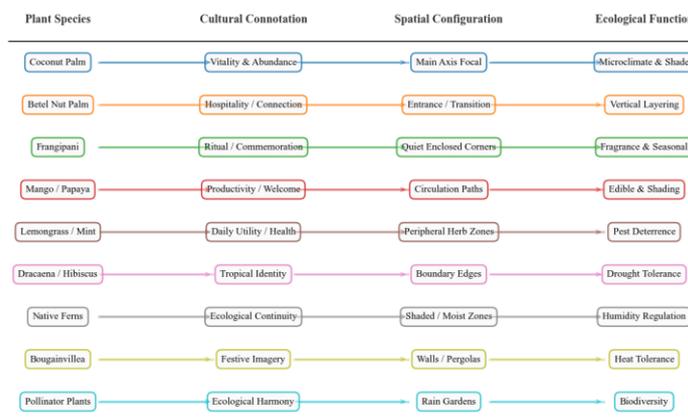


Figure 1. Integrated Framework of Native Plant Configuration in Hainan Courtyards.

4. Dynamic Mechanisms for Expressing Lived Scenarios

The enduring vitality of regional culture depends on its continuity within everyday life rather than on static preservation. For rural homestay courtyards in Hainan, cultural expression should therefore shift from fixed spatial representation to dynamic scenario construction. By recreating daily living scenes and activating seasonal rituals, the courtyard can evolve into a lived cultural stage where space, time, and human activity interact. Through this dynamic mechanism, culture is not merely displayed but experienced, practiced, and renewed within an ongoing process of participation.

4.1. Immersive Creation of Daily Life Scenes

To embody regional characteristics authentically, the courtyard should reconstruct the rhythms and textures of local village life, transforming visitors from passive observers into active participants. The essential strategy lies in designing participatory daily-life settings that integrate traditional objects, skills, and social practices into spatial arrangements. For example, a traditional kitchen hearth area may be established within the courtyard, displaying pottery jars, bamboo sieves, coconut scrapers, and other customary utensils. Guests can engage in preparing local foods such as Qingbuliang or Bojifan, thereby experiencing culinary traditions through hands-on involvement rather than visual appreciation alone.

Retaining old stone benches and wooden tables within shaded zones can recreate the atmosphere of communal tea drinking and informal conversation, reflecting patterns of neighborhood interaction that once structured daily life. In the evening, the subtle lighting of kerosene-style lamps combined with background audio of Qiong Opera can generate an immersive sensory environment that connects sound, light, and memory. These layered elements encourage emotional resonance while maintaining spatial authenticity.

For instance, a homestay in Wenchang has recreated a weaving scene in one corner of its courtyard, where demonstrations of traditional textile techniques are conducted. Guests are invited to practice basic weaving skills under guidance, fostering embodied understanding through manual engagement. Such designs embed cultural expression within routine activities, achieving a form of situated experience grounded in action and interaction rather than symbolic display. As a result, the courtyard becomes a living microcosm of regional life, where cultural meaning is continuously generated through everyday practice.

4.2. Localized Activation of Festive Rituals

In addition to daily life scenes, seasonal and festival-related activities provide another important temporal dimension for cultural expression. Many traditional celebrations in Hainan incorporate courtyard space as a gathering venue, performance site, or ritual setting. The effectiveness of this pathway depends on meaningful local participation, ensuring that festive practices remain community-centered rather than becoming staged spectacles.

Design strategies should therefore encourage collaborative involvement between residents and visitors. During seasonal events, local participants may introduce the background and significance of customary practices, while guests engage in related hands-on activities. For example, during the Sanyuesan celebration associated with local traditions, participants may learn to craft small decorative items inspired by customary motifs. During the Dragon Boat Festival period, activities such as preparing herbal sachets or arranging seasonal plants can be organized within the courtyard. These interactive processes allow cultural knowledge to be shared through cooperative making rather than passive observation.

In one homestay in Wuzhishan, residents guide visitors in understanding traditional etiquette connected with betel nut exchange, while also demonstrating the crafting of simple accessories related to this custom. Through dialogue and shared activity, culture shifts from an object of consumption to a co-created experience. The courtyard thus functions as a container of cultural memory, where the alternation between ordinary days and festive moments generates temporal depth. By integrating everyday practice with seasonal celebration, the courtyard achieves continuous renewal of regional culture within a dynamic cycle of participation and shared experience.

5. Conclusion

The regional cultural expression embodied in the courtyards of rural homestays in Hainan represents a process of creative transformation and localized application of long-standing living wisdom. Rather than relying on superficial visual symbols, this process emphasizes structural integration across multiple dimensions. Its fundamental pathways can be summarized as follows: extending climate-responsive logic within spatial layout; translating local knowledge through the adaptive use of materials and construction techniques; constructing ecological-cultural imagery via context-sensitive plant configuration; and activating mechanisms of lived cultural transmission through daily and seasonal life scenarios. These four pathways are not isolated strategies but interwoven components of a coherent system. Together, they form a multidimensional framework of cultural expression structured around "space-materials-plants-scenes," in which physical form, ecological performance, and social practice mutually reinforce one another.

In future development, the construction of rural homestay courtyards in Hainan should move beyond the homogenized pattern often described as "a thousand villages with one face." Instead, design practice should adopt a place-oriented paradigm that engages deeply with local culture, respects community participation, and responds to environmental responsibility. Emphasis should be placed on establishing participatory design mechanisms that encourage the involvement of local residents in planning, decision-making, and implementation processes, thereby ensuring that cultural expression remains grounded in lived experience. At the same time, it is essential to develop a balanced evaluation framework integrating ecological sustainability, cultural continuity, and reasonable economic viability. Such a framework can help prevent excessive commercialization and ensure that cultural resources are interpreted with authenticity and long-term vision.

Only through this integrated approach can the courtyards of rural homestays in Hainan evolve into hospitality spaces that are genuinely rooted in their regional context. These spaces should not only respond to visitors' interest in meaningful cultural engagement but also safeguard and revitalize local memory, craftsmanship, and everyday

knowledge. Within the broader context of rural revitalization and the coordinated development of culture and tourism, the pathways discussed in this study provide practical guidance for homestay design in Hainan and offer valuable reference for exploring sustainable approaches to cultural inheritance and rural modernization in China.

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