

# Local Wisdom in the Management of Domestic Landscapes of the Kelantan Malay Community: An Analysis of Yard Sustainability and Functionality

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## ABSTRACT

This study was conducted to analyze local wisdom in the management of domestic landscapes among the Malay community in Kelantan, focusing on the sustainability and functionality of house yards. Although the Kelantan Malay community is often associated with strong religious beliefs through the title 'Serambi Mekah' (Veranda of Mecca), the physical outdoor space of their homes is rarely viewed as a manifestation of systematic and holistic cultural wisdom. Therefore, this article aims to dissect how the yard is managed not merely for its aesthetic value but as a strategic zone that supports survival and reflects the local community's worldview. The methodology employs a qualitative approach with an ethnographic design through field research in the Kota Bharu District. Data was obtained via observation and semi-structured interviews with 7 informants, comprising local residents and mosque imams. The data was then analyzed thematically using the Malay Hygiene Model as the primary analytical instrument, which encompasses the concepts of Islamic cleanliness, social civilization, local wisdom and the traditional Malay house. The findings indicate that the management of this community's domestic landscape is centered on systematic spatial division. The front yard functions as an ecological and social buffer zone through the use of materials like white gravel. The side yard is optimized not only as a utility transition space but also acts as a "third space" and a visual privacy boundary for the family. Meanwhile, the back yard exhibits high local wisdom through the integration of a mini edible garden, the application of ethnobotanical knowledge for traditional food packaging materials and a sustainable food waste disposal cycle via small-scale domestic animal farming. The study concludes that yard management in Kelantan is a sustainable form of cultural technology that guarantees the sustainability of logistical resources, ecological balance, and the architectural identity of the nation.

**Keywords:** Local Wisdom, Domestic Landscape, Malay Hygiene Model, Yard Functionality, Kelantan Malays.

## INTRODUCTION

The Kelantan Malay community is generally known for the uniqueness of its customs, language and culture, which are laden with traditional heritage. The strategic position of Kelantan state on the east coast of Peninsular Malaysia establishes it as a state that firmly defends its community identity as Malay Muslims. Kelantan, synonymous with the title 'Serambi Mekah' (Veranda of Mecca), reflects a profound Islamic influence, where the steadfast practice of religious teachings has shaped the community's worldview, which is then translated into various aspects of daily life, including hygiene practices and spatial management. In this context, an in-depth study of local wisdom in managing the domestic landscape of the Kelantan Malay community becomes highly important, considering the threats of modernization and urban development to traditional values and local aesthetics (Jaffar & Harun, 2019).

A holistic approach integrating cultural, ecological and functional aspects is highly necessary to understand how traditional Malay landscapes can be preserved and adapted in the face of changing times (Azlam et al., 2024; Harun et al., 2017). This study aims to bridge the gap between the preservation of cultural heritage and the demands of contemporary development, to ensure that this rich treasure remains relevant amidst the currents of

global change through the interpretation of architectural and design elements that integrate nature into built structures (Baharum et al., 2025; Hasdi et al., 2025).

The focus of the study centers on the intrinsic values of local wisdom in traditional yard design, where these elements not only function as aesthetic components but also as markers of cultural identity and guardians of ecological sustainability (Razak & Sabil, 2024). This domestic green space is viewed as a resource that provides basic needs such as herbs and edible plants (edible garden), thereby affirming the close connection between humans and nature (Said et al., 2023).

To systematically analyze these practices, this study's analysis uses the Malay Hygiene Model as the primary analytical instrument. This model integrates four core concepts, namely the concept of Islamic cleanliness, the concept of social civilization, the concept of local wisdom and the concept of the traditional Malay house. Through the lens of this model, the study will examine how heritage values and local wisdom can be enhanced and maintained as a 'local character' (genius loci) within the context of sustainability (Shuaib, 2013). The integration of traditional design elements into contemporary design is considered a vital approach to preserving the nation's heritage values (Shuaib & Olalere, 2014), particularly in creating a national identity through architecture that reflects the richness of local culture (Latif & Kosman, 2017). This approach not only strengthens Malaysia's architectural identity but also contributes to the sustainability of the built environment through the adaptation of traditional designs to current needs (Hussain & Ahmad, 2017; Razak & Sabil, 2024).

## METHODOLOGY

This study employs a qualitative approach based on an ethnographic design to examine local wisdom in the domestic landscape management practices of the Kelantan Malay community. The ethnographic approach was chosen because it is highly suitable for understanding the meanings, values and practices of human interaction with the environment, formed through the life experiences and cultural background of a community. The implementation of this study combines library research to build a conceptual framework and field research to obtain primary data focused on the observation of the design of residential outdoor spaces.

### Study Location and Sampling

The field research was conducted in the Kota Bharu District, Kelantan. The selection of this location was made strategically to observe the ecosystem of traditional and semi-modern residential yard designs that still maintain botanical elements and spatial functionality based on Kelantan Malay culture.

The selection of informants involved a total of 7 individuals identified through purposeful sampling techniques. While the sample size may appear modest, it is rigorously justified within the ethnographic tradition, which prioritizes 'depth over breadth' to capture rich, nuanced cultural insights. The selection of these informants was specifically for those who have experience and knowledge in yard space maintenance, the use of local herbs, as well as religious understanding regarding the sanctity of space. The group of informants comprises local residents and religious figures experienced in practicing yard management. Crucially, data collection was concluded at the point of data saturation, where subsequent interviews and observations no longer yielded new thematic categories or insights regarding the Malay Hygiene Model.

### Data Collection Techniques

The collection of field data was carried out through three main methods. First, semi-structured interviews were conducted to enable informants to share the philosophies, tips and functions of each botanical element and landscape layout practiced in their homes. Second, participant observation was applied where the researchers directly observed the division of yard zones (front, side and back) as well as the community's daily routines such as domestic waste management through animal husbandry. Third, visual documentation such as taking photographs was used extensively as tangible evidence to record landscape typologies, types of functional plants, and the use of natural materials such as the spread of gravel.

## Trustworthiness and Data Validation

To ensure the rigor and credibility of the findings, this study employed methodological triangulation by cross-referencing data obtained from the semi-structured interviews, participant observations and visual documentation. This multi-layered approach allowed for the verification of verbal accounts against the physical reality of the domestic landscapes. Furthermore, member checking was conducted by sharing preliminary findings with several informants to confirm the accuracy of the interpreted cultural meanings. The analytical process was also subjected to peer debriefing among researchers to minimize bias and enhance the reliability of the interpretations.

## Data Analysis

The empirical data obtained were analyzed qualitatively using the thematic analysis method. The analysis process began with the transcription of interview data, initial coding, and grouping of codes into themes of yard functionality. The overall interpretation of the data was guided by the Malay Hygiene Model which acts as the primary analytical instrument. This analytical lens is broken down into four core concepts adapted to the context of the domestic landscape:

- i. Concept of Islamic Cleanliness: Used to evaluate the understanding of the dirt buffer zone (purity) concept in the front yard before stepping into the house.
- ii. Concept of Social Civilization: Analyzes landscape elements as visual and privacy boundary markers that maintain the harmony of relationships among neighbors.
- iii. Concept of Local Wisdom: Evaluates the community's wisdom in exploiting natural resources sustainably such as the planting of kitchen gardens (edible garden) and the organic food waste cycle.
- iv. Concept of the Traditional Malay House: Analyzes the connection between the physical design and the division of the outdoor space (front, side and back yards) with the ecological sustainability of daily life.

## RESULTS AND DISCUSSION

Based on the field study conducted, the Kelantan Malay community exhibits a highly practical and systematic domestic landscape management system. The analysis found that the management of the outdoor yard of the house is optimized through a two-pronged approach. It is not only managed to guarantee aesthetic value and the cleanliness of the visual boundary, but is also supported by botanical planting that maintains the continuity of the organic food chain and family medicine. To facilitate data analysis based on the Malay Hygiene Model, the hygiene practices of this house yard are divided into three functional space sectors, namely the front yard, the side yard and the back yard.

### Functionality and Aesthetics of the Front Yard as a Buffer Zone

The front yard is the first point of visual interaction for a residence. This study analyzes the role of the front yard as a critical element that not only functions as an ecological buffer but also as a reflection of the aesthetic values and social interactions of the Kelantan Malay community (Harun et al., 2017; Shuaib & Enoch, 2013). In the context of Malay culture, the traditional house environment encompasses spaces that are separated into front and back spaces (Kling, 2000). Specifically, the front space or commonly referred to as 'laman' is often integrated with the veranda concept as a multifunctional space for social and customary activities (Azlam et al., 2024; Latif & Kosman, 2017). The demand to maintain this zone is highlighted through a consistent daily cleaning routine. The veranda and yard areas are swept and the finished floors are mopped every morning to ensure they are always clean. This directly reflects the identity and personality of the homeowner.

From the perspective of local wisdom, the approach to ground surface finishing plays an important role in the management of physical cleanliness and landscape adaptation. According to Harun and Ibrahim (2011), the Kelantan Malay house yard is traditionally left un-grassed (sandy yard) to make it easier to sweep clean from

dirt, in addition to facilitating its utility function for holding feasts or drying clothes. This traditional practice is found to be still widely applied in a modernized form through the use of white gravel spread over the soil surface. This adaptation of contemporary residential design is highly important to maintain cultural integrity, history, functionality, aesthetics, and sustainability (Latif & Kosman, 2017; Razak & Sabil, 2024) and is in line with the Malay landscape in urban planning that shapes the identity of residential areas (Baharum et al., 2025).



Picture 1: The spread of gravel and the orderly arrangement of flower pots in the house compound function to prevent water puddles and mud splashes.

Referring to Picture 1, this modernization method not only maintains the aesthetic value of the spacious area but acts practically to prevent water puddles, reduce mud splashes on the residence walls during heavy rain and naturally control the growth of weeds. Critically, this indigenous practice parallels the modern framework of Sustainable Urban Drainage Systems (SUDS). Unlike conventional Western landscaping that heavily relies on resource-intensive manicured lawns, the Kelantan Malay approach offers a low-carbon, permeable ground cover alternative that prevents soil erosion, facilitates groundwater recharge, and regulates the domestic microclimate. This directly ensures the continuity of cultural and ecological heritage in sustainable development and adapts traditional houses to the tropical climate of Malaysia (Hasan et al., 2023).

The function of the front yard also goes beyond physical aspects, encompassing ecological dimensions through botanical management. The strategic placement of ornamental plants at the front of the house (Hussain & Ahmad, 2017) complies with traditional wisdom, where flower pots are arranged at a level slightly higher than the ground surface to minimize flood damage risks. This acts as a resilient botanical buffer against environmental threats a localized climate adaptation strategy deeply embedded within the community's design. Furthermore, the planting of functional trees such as Mahkota Dewa (*Phaleria macrocarpa*) and Nam Nam provides thermal comfort and preserves a collective identity that appreciates nature (Lim, 1987).

### **The Side Yard as a Transition Space and Social Privacy**

The side yard of a residence typically functions as a transition space and is fully utilized as a domestic logistics space for the family. The spatial structure of the left and right boundary environment of a traditional house is usually narrow and elongated towards the back, providing a practical space for residents to manage daily utilities (such as clotheslines and washing machine stations) without compromising the aesthetic value at the front part of the house. In this context, the side yard is not merely a physical barrier but instead, it acts as a dynamic spatial element that shapes the interaction patterns and territorial behavior of its occupants, where this transition space becomes a medium for the continuity of daily activities (Fitria et al., 2022).

Field observations reveal that tiled side aisles are frequently transformed into highly organized washing utility stations equipped with outdoor water pipes and multi-tiered clotheslines. This strategic utilization illustrates spatial adaptation that goes beyond mere utilitarian functions, effectively creating a "third space" that negotiates functional needs and socio-cultural boundaries (Pande et al., 2025).



Picture 2: An open side yard whose function is optimized with the placement of clotheslines and a stone table set.

Based on the analysis in Picture 2, the spacious grassy area is fully exploited with the placement of outdoor furniture such as a stone table set. This facility acts not only as a relaxing resting place but practically functions as an outdoor workspace for family domestic matters. In addition, this yard area that is directly exposed to sunlight is typically used as an efficient open drying site. Alongside the use of modern iron clotheslines, traditional practices are found to be still intactly practiced where simple traditional-concept clotheslines built from a combination of wooden structures and old bamboo poles continue to be widely used over this grassy area. This highlights the continuity of local wisdom in maximizing space function based on the weather and natural resources available in the environment.

From the aspect of greening and landscape planning, the layout in the side yard is seen as more utilitarian and functional. This is supported by the view of Harun and Ibrahim (2011) who state that the spaces on the left and right sides of the house are usually planted with trees that specifically function as markers of the house or land boundary. Interestingly, this side space is also cleverly adapted to meet the demands of the social civilization concept, particularly in preserving 'aurat' (modesty) and family privacy boundaries. For residences whose layout plan extends along the side of a public road route, the side aisle of the house is managed by placing rows of leafy flowering trees and potted ornamental plants (such as the pudding tree or Croton) arranged closely extending along the exterior of the residence walls.



Picture 3: Rows of potted ornamental plants acting as a visual boundary in the side path of the residence to maintain household privacy.

The formation of the area in this outdoor space through landscape layout reflects the residents' efforts to achieve optimum comfort and privacy suited to their needs (Ratnasari et al., 2021). The deliberate arrangement of dense ornamental plants in Picture 3 is not merely aesthetic. It acts as a bio-architectural screen that filters urban dust and secures visual privacy. This reflects a sophisticated vernacular mechanism where indigenous flora is actively utilized to maintain domestic socio-religious boundaries in increasingly dense settlement patterns.

### Ecological Sustainability and Sustainable Cycles in the Back Yard

The back yard plays a critical role as a functional support space. According to Harun and Ibrahim (2011), large-scale cooking activities are often carried out outside to prevent dirt and heat from being trapped indoors. Based on field study findings, residents maximize this land by transforming it into a mini kitchen garden (Edible Garden). The backyard exemplifies the pinnacle of Indigenous Ecological Knowledge (IEK) through a highly localized circular economy framework.



Picture 4: Rows of pandan plants planted lushly in the border plot of the back yard as a mini kitchen garden.

As observed in Picture 4, the wisdom of maximizing space is proven through the planting of lush leafy pandan plants along the drain path. The planting of functional food sources such as banana foliage and pandan acts as a sustainable supply chain for biodegradable food packaging, directly confronting contemporary global challenges of synthetic waste. This practice reflects the application of ethnobotanical knowledge, where profound environmental understanding meets daily family needs sustainably (Mailawati et al., 2023).

In addition to botany, local wisdom is most prominent through the creation of a sustainable domestic waste management cycle.

As displayed in Picture 5, a harmonious integration exists between food waste management and small-scale animal husbandry. The management of domestic organic waste, where food leftovers (rice and vegetables) are systematically repurposed as feed for livestock like chickens and ducks that creates a closed-loop nutrient cycle. This practice empirically proves that the concept of 'zero waste' is not a novel modern invention but a longstanding manifestation of the community's stewardship (khalifah), effectively minimizing landfill burden while maximizing food security. This holistic integration becomes the pillar for comprehensive domestic landscape sustainability.



Picture 5: Leftover food waste (rice) that is made into a staple food source for livestock to complete the organic solid waste disposal cycle.

### **Bridging Local Wisdom and Global Sustainability**

The novelty of this study lies in bridging the gap between localized religious paradigms and global sustainability metrics. While dominant international literature often compartmentalizes sustainable domestic landscaping into separate ecological or architectural domains, this study articulates how the Malay Hygiene Model uniquely amalgamates religious purity, social ethics and ecological pragmatism. The domestic landscape in Kelantan is not a passive aesthetic backdrop but a functional 'cultural technology'. It's a sustainable survival system that offers alternative, localized templates for contemporary green infrastructure planning in the Global South.

### **CONCLUSION**

In conclusion, this study proves that the Kelantan Malay community possesses a highly holistic domestic landscape management system, where local wisdom is harmoniously integrated with the requirements of daily life. The optimization of this residential outdoor space clearly goes beyond mere aesthetic value, as each zone displays a dynamic, two-pronged function. The front yard is managed as an ecological and social buffer zone that reflects the identity of the occupants. The side yard is adapted as a "third space" and a utility transition space that balances the smoothness of domestic logistics with the protection of family privacy. Meanwhile, the back yard is maximized as the pulse of environmental sustainability through the integration of a mini kitchen garden, the continuity of local ethnobotany, and a sustainable organic solid waste cycle system.

Through the lens of the Malay Hygiene Model, this landscape ecosystem manifests a complete integration between the principles of Islamic purity, the ethics of social civilization and environmental sustainability. The Kelantan Malay community has successfully translated their role as 'khalifah' (stewards) on this earth by managing natural resources prudently, avoiding waste and maintaining a harmonious ecological balance. Ultimately, this traditional design philosophy and landscape management practice constitute a highly practical form of 'cultural technology'. The adaptation of this spatial flexibility and value of wisdom into urban housing planning and contemporary architecture is not only capable of offering solutions to environmental sustainability crises but also serves as a vital approach in defending cultural heritage and the nation's genius loci so that it remains relevant across generations.

## Appreciation

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