

This file has been cleaned of potential threats.

If you confirm that the file is coming from a trusted source, you can send the following SHA-256 hash value to your admin for the original file.

5e9adcfc17506e631d6270b704edaa2deeb4e10e9af9480e2df7c547ce61d0f4

To view the reconstructed contents, please SCROLL DOWN to next page.

Boat Docking Areas for Coastal Hotels: Interpreting Coastal Cultural Landscapes into Contemporary Architecture

Nathapat Jirachotipipat ¹, Somboon Vess ^{2*} and Chanokporn Phathaisittikul ³

^{1,2,3} College of Architecture, Suan Sunandha Rajabhat University, Bangkok, Thailand

*Corresponding author

E-Mail: ¹ s64132523020@ssru.ac.th, ² somboon.ve@ssru.ac.th, ³ chanokporn.ph@ssru.ac.th

Abstract

This research aims to explore the design of boat docking areas within the context of coastal hotels, by interpreting the coastal cultural landscape as a synthesis of social, cultural, and environmental foundations that shape the unique identity of Thailand's coastal environments. The study is grounded in the premise that architecture is not merely a physical construct serving functional requirements, but a cultural medium that reflects the dynamic interrelationship between human life and nature, expressed through traditional beliefs, local wisdom, and maritime heritage accumulated over generations.

The primary objective of this study is to establish design guidelines for boat docking spaces that harmonize technical performance, safety, and functionality with aesthetic, emotional, and cultural dimensions. The boat dock is conceptualized as a "transitional space"—a threshold between humans and the sea, between movement and rest, and between tradition and modernity. It functions as both a physical and symbolic connector, embodying the dialogue between natural forces and human occupation.

The research employs a cultural interpretation framework, analyzing coastal morphology through patterns of water and wind movement, the lifestyles of fishing communities, and maritime rituals. These cultural and environmental insights are synthesized into a contemporary architectural language, expressed through form, materiality, spatial organization, and sensory experience. The design approach seeks not only to construct functional spaces but also to create a dialogue between past and present, integrating indigenous knowledge with contemporary design methodologies.

The research results lead to the development of a design approach for boat docking areas that embodies more than mere hotel facilities, but serves as an integral element of coastal landscape architecture reflecting the harmonious relationship between humans, nature, and local culture. This approach introduces a new perspective on the design of waterfront spaces—not only through structural or technical considerations, but as experiential environments that interconnect functionality with emotion, perception, and the identity of place. The outcome aspires to generate contemporary architecture that achieves sustainability in both environmental and cultural dimensions, while remaining contextually appropriate to the evolving character of modern coastal hotels.

Keywords: Environment, Transitional Space Design, Coastal Architecture, Environmental Integration, Area Development

1. Introduction

Thailand is a country with an extensive coastline and a long-standing relationship with marine resources. The livelihoods of coastal communities reflect this close connection through economic activities, transportation, fishing, and local cultural practices related to the sea. In this context, boat docking areas play a significant role as a “threshold space” between land and water. They are not merely physical infrastructures supporting maritime activities but also spaces that embody the cultural and social relationships between humans and the natural environment.

However, the current development of boat docking areas in Thailand often prioritizes engineering and functional efficiency, while overlooking the cultural, aesthetic, and social contexts of coastal areas. This has resulted in many docking spaces lacking identity and failing to genuinely reflect the cultural values and local context of their communities.

In response to this issue, this research aims to develop design guidelines for boat docking areas that integrate both functional and cultural-aesthetic dimensions. The core concept is that a “boat docking area” should be regarded as a “threshold space” – a space connecting humans with the sea, travel with leisure, and traditional culture with modern technology.

Such a design approach moves beyond purely functional development toward the creation of a “spatial experience” that reflects the interconnectedness of nature, culture, and society. Consequently, boat docking areas are redefined as both “physical spaces” that support maritime travel and activities and “symbolic spaces” that express the identity, traditions, and local knowledge of coastal communities.

1.1 Research Objective

1. To analyze the cultural, social, and environmental contexts of Thailand’s coastal areas in order to understand the relationship between coastal cultural landscapes and the architectural design of boat docking areas.

2. To describe and interpret the “boat docking area” as a “threshold space” that connects functional, emotional, and cultural dimensions – linking humans with the sea, movement with leisure, and tradition with contemporaneity.

3. To develop design guidelines for boat docking areas within the context of coastal hotels, integrating technical efficiency, safety, and usability with cultural and aesthetic dimensions.

2. Literature review

This research employs qualitative methods, including a literature review, the development of theoretical concepts, field data collection in Thailand’s coastal areas, and data analysis. The findings are aimed at informing the development of design concepts for boat docking areas.

This study reviews research on the livelihoods, occupations, beliefs, and maritime rituals of Phuket's coastal communities to inform design strategies related to boat docking areas, coastal architecture, cultural landscapes, and human-nature relationships. The review aims to understand the existing body of knowledge and identify design gaps that can be further developed. The key points are as follows.

3. Methodology

3.1 Coastal Livelihoods and Primary Occupations

The main occupations of Phuket residents related to the sea include fishing, aquaculture, and marine tourism. These activities are not only primary sources of income but also reflect the profound relationship between humans, the sea, and the natural environment.

3.2 Maritime Beliefs and Rituals

Maritime beliefs and rituals in Phuket, such as worshipping the goddess of the boat (Jao Mae Yanang), floating ceremonies (Loeng Ruea), and sea apology rituals, reflect a deep respect for nature and the spiritual dimension of coastal communities.

3.3 Coastal Community Identity

The lifestyle of Phuket's residents embodies the identity and spirit of the coastal community, blending traditional local culture with external influences. This is a crucial element that shapes the way of life and the cultural identity of Phuket's coastal communities.

3.4 Local Architectural Forms

Phuket's local buildings coexist harmoniously with the coastal environment, reflecting unique residential design strategies. The architectural forms demonstrate a reciprocal and respectful relationship with nature, forming the foundation of local cultural wisdom. Influences from Eastern and Western cultures have contributed to the distinctive Sino-Portuguese architecture of the region.

4. Results

Fieldwork conducted in Phuket's coastal communities revealed that traditional fishing communities maintain a strong connection with the sea. Most residents engage in fishing and aquaculture, reflecting a mutually dependent relationship with nature. Housing typologies such as stilted houses and maritime rituals—including worshipping Jao Mae Yanang, floating ceremonies, and sea apology rituals—demonstrate respect and attachment to the marine environment.

These findings are critical for designing boat docking areas in coastal hotel contexts. Such designs should align with the lifestyles, culture, and rituals of local communities by providing spaces for cultural activities, employing locally inspired materials and architectural forms, and supporting fishing and maritime activities. Thus, a boat docking area functions not only as a

physical structure but also as a “transitional space” connecting humans with the sea in physical, cultural, and spiritual dimensions.

4.1.Data Analysis – The analysis focuses on understanding the “coastal cultural landscape of Phuket” by interpreting the community’s lifestyle, beliefs, and architectural forms to synthesize spatial design concepts for boat docking areas in coastal hotel contexts. The analysis is divided into three dimensions:

Physical Dimension

Socio-Cultural Dimension

Symbolic and Spiritual Dimension

4.2. Physical Dimension

The physical dimension reflects how communities adapt to the natural environment, such as settling near water sources, using local materials, and designing houses to suit the climate and fluctuating sea levels.

4.3. Stilted Houses

Local wisdom allows houses to adapt to tidal fluctuations and facilitate ventilation.



Figure 1 Elements of data analysis.

The design concept is inspired by the Southern stilt house, which reflects traditional wisdom for living in harmony with nature and the coastal environment. The building mass is elevated to create open spaces that allow wind and air to circulate, forming a “transitional space” that seamlessly and sustainably connects humans with nature.

4.4 Waterfront Functional Spaces

These areas accommodate fishing activities such as boat maintenance, equipment preparation, and seafood processing.

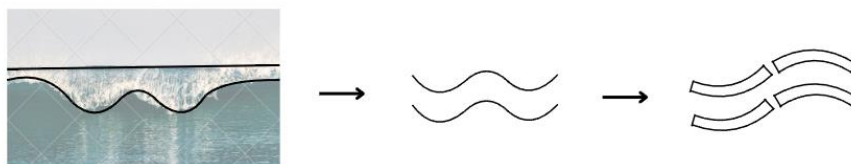


Figure 2 Elements of data analysis.

The inspiration comes from the movement of water currents and sea waves, which are vital pathways for the livelihoods of coastal communities, both in transportation and fishing activities. The form of the waves is interpreted as architectural guiding lines, symbolizing the connection between people, boats, and the sea. These forms are developed into spatial elements that reflect the rhythm of movement and the spirit of the coastal fishing way of life.

4.5 Waterway Networks

Water routes are essential for daily life, connecting communities with the sea.

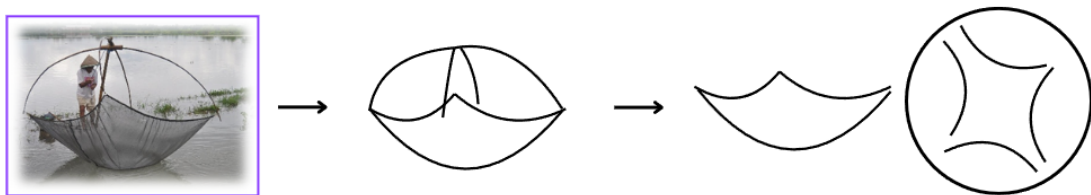


Figure 3 Elements of data analysis.

This concept abstracts the lines of sea waves, a symbol of the coastal fishing way of life, into architectural forms. Consequently, the boat docking area reflects a harmonious relationship between humans, nature, and livelihood activities.

4.6 This analysis highlights the role of coastal areas as “life infrastructure” supporting economic, social, and cultural activities. These principles can inform the design of boat docking areas to meet both technical requirements and spatial integration with surrounding areas



Figure 4 Elements of data analysis.

4.7 Socio-Cultural Dimension

This dimension interprets the lifestyle, beliefs, and rituals of coastal communities, which are central to Phuket's coastal identity.

1. Maritime Beliefs

The community reveres the sea and its deities, such as Jao Mae Yanang, performing ceremonies before voyages to ensure safety and bountiful catches.

2. Local Rituals and Festivals

Floating ceremonies (Loeng Rueda) and sea apology rituals reflect the concept of restoring balance between humans and nature, recognizing the sea as a living entity deserving respect.

3. Community Structure and Settlement Patterns

Clustered coastal housing demonstrates kinship networks and mutual reliance for livelihoods, storm-season support, and religious ceremonies.

This analysis indicates that boat docking areas should not be designed solely for commercial use but as “cultural public spaces” accommodating community gatherings, ritual practices, and knowledge sharing with visitors.

4.8 Symbolic and Spiritual Dimension

This dimension reflects the community’s deeper meanings attached to the sea, expressed through symbols, rituals, and architectural elements.

The sea is regarded as a “sacred space,” both life-sustaining and deserving reverence.

Boat decoration, worship of Jao Mae Yanang, and coastal shrines create sacred spaces linking humans with nature.

Boat docking areas can function as a “spiritual threshold,” connecting humans with the sea through symbolic elements such as natural materials, light and shadow, and spatial arrangements that echo ritualistic journeys.

4.9 Synthesis and Architectural Translation

From the three dimensions above, the following architectural concepts can be synthesized:

1. Boat docking areas should act as “transitional spaces” connecting sea, community, and hotel, integrating economic activities (fishing/tourism) with cultural practices (rituals/community gatherings).

2. Architectural forms should reflect local wisdom through natural materials (wood, bamboo, local stone), elevated floors, and open layouts allowing sea breezes.

3. Portions of the site should accommodate rituals and public activities, such as boat worship areas or gathering points for fishermen.

These insights lead to a conceptual diagram linking coastal cultural landscapes with architectural elements at three scales:

Site Scale: Land–water relationship and boat circulation routes.

Architectural Scale: Building forms, wind orientation, materiality, and coastal wisdom-inspired structures.

Experiential Scale: Sensory experiences of light, sound, waves, and sea scent, creating an “experience of coexisting with the sea.”

Design Concept Development

Design concepts for boat docking areas in coastal hotel contexts are developed by interpreting cultural, ritualistic, and lifestyle factors. The goal is to create spaces that are not only functional but also harmoniously connected to local ways of life, reflecting the identity of coastal communities.

The design draws inspiration from Southern stilt houses, which elevate structures for airflow, forming “transitional spaces” that connect humans with nature. Wave movements, representing fishing community livelihoods, are abstracted as architectural guiding lines, linking people, boats, and the sea. Rituals such as boat floating ceremonies inspire building forms that facilitate airflow, symbolizing nature’s spirit within functional spaces.

Through interpretation of Phuket’s coastal environment, community traditions, and beliefs, these insights form the basis for architectural concept development.

Cultural Interpretation

The conceptual approach explores the meanings embedded in coastal landscapes through natural elements (water, wind, waves), lifestyles, and maritime beliefs. Insights are translated into a contemporary architectural language expressing identity through form, materiality, spatial organization, and sensory experiences.

Designs for hotel-related boat docking areas integrate functional efficiency with emotional and identity-driven experiences, resulting in contemporary architecture that is environmentally and culturally sustainable while appropriate for modern coastal hotel contexts.

5. Conclusion

This research investigates the design of boat docking areas in coastal hotel contexts by interpreting Thailand’s coastal cultural landscapes, integrating cultural, natural, and community life values. Using qualitative methods, including literature review, fieldwork, and cultural data analysis, the study develops design guidelines aligned with sustainable coastal contexts.

Findings indicate that Phuket’s coastal lifestyle, beliefs, and architecture reflect a deep human-sea relationship, which can be reinterpreted architecturally. Boat docking areas are thus regarded as transitional spaces linking humans with nature, movement with leisure, and tradition with contemporaneity.

The study proposes architectural design strategies integrating technical efficiency, safety, and usability with cultural and aesthetic dimensions, forming a contemporary architectural language that reflects the identity and spirit of coastal communities. Overall, the research promotes sustainable coastal architecture that conveys the relationship between humans, nature, and place identity, offering meaningful spatial experiences harmonized with the environment.

Acknowledgment

As a student from the College of Architecture at Suan Sunandha Rajabhat University, I would like to express my sincere gratitude to Dr. Chanokporn Phathaisittikul and the Language Institute and the Institute of Research and Development at Suan Sunandha Rajabhat University for their financial support and for policies that have greatly benefited this research project.

References

- Bangtao Muay Thai. (n.d.). The significance of Wai Kru and Ram Muay. Retrieved from <https://bangtaomuaythai.com/the-soul-of-muay-thai-the-significance-of-wai-kru-and-ram-muay/>
- Chanokporn, P., & Waritnan, K. (2024, March 7-9). Guidelines for designing areas for relaxation and practicing Muay Thai, Suan Sunandha Rajabhat University. In Proceedings of the International Academic Multidisciplinary Research Conference in Fukuoka 2023.
- Coastal Reborn. (2021). Coastal Reborn. Dsignsomething.com. Retrieved from <https://dsignsomething.com/2021/07/21/coastal-reborn/>
- Dsignsomething.com. (2018). KOKULO Beach Club: A triangular space of happiness. Retrieved from <https://dsignsomething.com/2018/03/26/kokulo-beach-club>
- Historical and Architectural Studies of Buddhist Temples. (2016). Chulalongkorn University. Retrieved from http://www.arch.chula.ac.th/ejournal/files/article/116_20160108113153_PB.pdf
- Ivo, L. M. Junior, & Andre, M. C. (2022). Muay Thai: The consolidation of an invented tradition as a martial art. *Revista Brasileira de Artes Marciais e Combate Esportivo*, 3(1), 45-58.
- Lesley, J. (2001). *Muay Thai: A living legacy*. Orchid Press.
- Rajadamnern Stadium. (n.d.). What is an authentic Wai Kru in Muay Thai. Retrieved from <https://rajadamnern.com/blog/muay-thai-wai-kru/>
- Saranukrom Thai. (n.d.). The Wai Kru dance in Muay Thai. Retrieved from <https://saranukromthai.or.th/oldchild/>
- Sirichaiekawat, W. (2024). Coastal fisheries management for sustainable aquatic resources. *Thai Publica*. Retrieved from <https://thaipublica.org/2024/02/wicharn-sirichaiekawat23-ecosystems-as-fish-factories/>
- Sonboon, V., & Phathaisittikul, C. (2025). Designing nature-connected spaces using natural materials: Towards wholeness and restoration through biophilic design. In Proceedings of the 15th National & 11th International PIM Conference 2025.
- Srihiran, W. (2023). Participatory communication innovation for community-based tourism promotion.
- Thitirat, M. (2023). A study of the paradigm of dynamic mobility and transformation in the Suan Dusit area. *Journal of Urban Development Studies*, 12(2), 45-58.
- Tony, M. (2004). *Muay Thai: The essential guide*. Tuttle Publishing.
- Traditional Fisheries and the Breath of Local Communities. (2019). Surat Thani Rajabhat University. Retrieved from https://human.skru.ac.th/geo_conference/fB8.pdf

- The Lifestyle of Local Fishermen in Samut Sakhon under the Concept of Sustainability. (2019). Khon Kaen University. Retrieved from <https://app.gs.kku.ac.th/gst/publicationfile/item/20th-ngrc-2019/HMO17/HMO17.pdf>
- Traditional Fisheries, Lifestyles, and Wisdom of Thai Fishermen. (2025). Retrieved from <https://www.paradise-kohyao.com/th/thai-traditional-fishing/>
- Vail, P. (2014). Muay Thai: Inventing tradition for a national symbol. [Online]. Retrieved from <https://example.com/muay-thai-inventing-tradition>
- YOKKAO. (n.d.). Wai Kru Ram Muay: Explaining the Muay Thai ritual prayer. Retrieved from <https://th.yokkao.com/pages/wai-khru-ram-muay>