

Service Quality Dimensions, Stakeholder Perspectives, and a Sustainable Management Framework for Water-Based Cultural Heritage Tourism

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ABSTRACT

Water-based community tourism constitutes a strategically significant yet under-examined dimension of heritage tourism management in Southeast Asia. This mixed-methods study examined service quality dimensions, multi-stakeholder development priorities, and evidence-based management strategies for boat route tourism at Koh Kret—a distinctive Mon ethnic heritage island situated within the Chao Phraya River, Pak Kret District, Nonthaburi Province, Thailand. Grounded theoretically in the SERVQUAL framework (Parasuraman et al., 1988) and stakeholder theory (Freeman, 1984), the research employed a sequential explanatory design integrating quantitative surveys with 400 tourists (247 domestic; 153 international) selected through accidental sampling, and qualitative semi-structured interviews with 60 purposively selected key informants representing boat operators, community members, and government officials. Quantitative analysis encompassed descriptive statistics, independent samples t-test, and one-way ANOVA; qualitative data were subjected to systematic thematic content analysis. Findings revealed a moderately high overall tourist satisfaction level ($\bar{x} = 3.52$, $\sigma = 0.65$), with scenic route quality achieving the highest rating ($\bar{x} = 3.87$) while cultural interpretation and information provision demonstrated the most pronounced service quality gaps ($\bar{x} = 2.89$ and 2.76 , respectively). Multi-stakeholder assessment identified safety standards enhancement as the critical priority ($\bar{x} = 4.32$), consistent with post-pandemic behavioral shifts toward heightened risk consciousness. Drawing on these convergent empirical findings, this study advances a Seven-Pillar Integrated Management Framework (7P-IMF) addressing governance integration, safety standardization, interpretive program development, route and product diversification, community benefit-sharing, environmental sustainability, and infrastructure modernization. The framework contributes both theoretical and practical insights to community-based water heritage tourism management literature and offers actionable policy guidance for sustainable destination development at Koh Kret.

Keywords: Service Quality, Water-Based Heritage Tourism, Community-Based Tourism, Tourist Satisfaction, Stakeholder Management, Sustainable Tourism, Mon Cultural Heritage

JEL Classifications: Z32; L83; Q56

1. INTRODUCTION

Thailand's rivers and canals have historically functioned as arterial networks for cultural exchange, economic vitality, and community identity, earning the country a long-standing designation as the "Land of Water" (Unhasuta et al., 2021; Chatkaewnapanon and Lee, 2022). As Thailand's tourism sector navigates a complex post-pandemic recovery trajectory, water-based community

tourism has re-emerged as a strategically significant vehicle for delivering authentic, place-bound experiences that simultaneously support local economic resilience, cultural heritage preservation, and ecological stewardship (Ministry of Tourism and Sports, 2024; Krittayarangroj et al., 2023). Thailand's Third National Tourism Development Plan (2023-2027) explicitly prioritizes community-oriented and creative tourism models that leverage the nation's richly layered natural and cultural waterway heritage

as comparative and competitive advantages (Tourism Authority of Thailand, 2021).

Within this evolving policy context, heritage-embedded river and canal tourism destinations confront a dual imperative: consistently delivering service quality sufficient to satisfy the increasingly sophisticated demands of post-pandemic travelers, while ensuring that development processes remain ecologically responsible and socially equitable (Sharpley, 2020; Wang and Ye, 2022). Meeting this dual imperative demands rigorous empirical examination of current service performance gaps, disaggregated stakeholder priorities, and evidence-based management frameworks capable of guiding systemic—rather than merely incremental—quality improvement. The post-pandemic travel context has introduced additional complexity: behavioral research confirms that tourists now exhibit significantly heightened risk sensitivity and environmental consciousness compared with pre-pandemic cohorts, fundamentally reordering service quality priority hierarchies (Grilli and Curtis, 2021; Streimikiene et al., 2021).

Koh Kret, a small but culturally exceptional island situated within the Chao Phraya River in Pak Kret District, Nonthaburi Province, exemplifies both the considerable potential and the persistent operational challenges characteristic of Thailand's community-based water heritage tourism sector. Home to Thailand's Mon ethnic minority community, the island sustains intangible cultural heritage of uncommon depth, most notably a generational ceramic pottery tradition transmitted across multiple artisan lineages, Mon Buddhist architectural forms, and living linguistic and ceremonial practices that constitute a genuinely rather than reconstructed cultural landscape (Xie, 2011; Tian et al., 2023). Boat route tours encircling the island represent the primary visitor engagement mechanism—offering panoramic access to riverside Mon temples, artisan workshops, floating commerce, and traditional community life. Despite these inherent cultural and scenic assets, Koh Kret's boat tourism sector operates without standardized quality management frameworks, exhibits fragmented inter-agency coordination, and provides limited interpretive infrastructure—structural deficiencies that systematically constrain visitor experience quality and long-term destination competitiveness (Arintoko et al., 2020; Valderrama et al., 2024).

Academic scholarship on service quality in water-based heritage tourism remains notably sparse compared to research on mainstream accommodation and land-based attraction contexts, particularly within Southeast Asian settings (Koc, 2020; Gligor et al., 2021). Furthermore, community-based tourism literature has disproportionately examined community empowerment and participation dimensions while giving substantially less analytical attention to service delivery quality, multi-stakeholder governance dynamics, and integrated quality improvement frameworks (Tuyen et al., 2025; Krittayaruangroj et al., 2023). This study addresses these intersecting gaps through three primary research objectives: (1) to assess current levels of tourist satisfaction across key service quality dimensions in Koh Kret's boat-route tourism; (2) to identify and rank development priorities as perceived by diverse stakeholder groups; and (3) to construct a comprehensive, stakeholder-informed sustainable management framework

applicable to community-operated water heritage tourism destinations. The findings contribute empirically grounded and theoretically coherent insights to community-based water tourism management while offering actionable policy and operational guidance for Koh Kret's sustainable development trajectory.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. Service Quality and Tourist Satisfaction in Heritage Contexts

The theoretical conceptualization of service quality adopted in this study draws from Parasuraman et al. (1988) landmark SERVQUAL framework, which operationalizes quality through five gap-based dimensions—tangibles, reliability, responsiveness, assurance, and empathy—by measuring the discrepancy between tourist expectations and perceptions. Although developed in general service contexts, SERVQUAL has demonstrated robust adaptability to tourism settings, particularly where visitor experience involves multi-dimensional, emotionally charged service encounters (Rasoolimanesh et al., 2022; Hosany et al., 2022). Heritage and cultural tourism researchers have expanded the framework to encompass interpretive quality, cultural authenticity, and experiential depth dimensions that purely tangible measures cannot capture (Alazaizeh et al., 2019; Zhou et al., 2022). In boat-based heritage tourism specifically, satisfaction formation is further shaped by the multi-sensory riverine environment—encompassing visual scenery, physical comfort, social interaction, and narrative interpretation—necessitating multi-dimensional quality assessment approaches (Mehran and Olya, 2018; Amalia et al., 2023).

Tourist satisfaction represents a central mediating variable linking perceived service quality to post-visit behavioral intentions, including revisit likelihood and positive word-of-mouth recommendations (Koc, 2020; Rasoolimanesh et al., 2022). In heritage tourism, the relationship between satisfaction and revisit intention is conditioned by the quality of the experiential and interpretive dimensions: tourists who access authentic cultural knowledge and emotionally resonant narratives through skilled guides exhibit substantially stronger behavioral loyalty (Carvalho, 2022; Zhou et al., 2022). Guide competence and interpretive performance constitute particularly decisive satisfaction determinants at cultural heritage destinations. Ham (2005) demonstrates that effective interpretation functions as a transformative force, converting historical sites and cultural artifacts from passive backdrops into cognitively and emotionally meaningful visitor experiences. The communication and narrative competence of guides therefore function as a critical service-quality lever at sites such as Koh Kret, where “Mon heritage depth” constitutes the core experiential differentiator.

2.2. Community-Based Tourism: Governance, Equity, and Empowerment

Community-based tourism (CBT) has been theorized as a sustainable development paradigm that distributes tourism-generated benefits equitably while empowering host communities

to exercise meaningful cultural agency over how their heritage is represented and commodified (Dolezal and Burns, 2015; Wondirad et al., 2020). Three decades of CBT research have produced convergent evidence that successful implementation requires genuine community participation in planning and decision-making, transparent and equitable benefit-sharing mechanisms, and collaborative governance structures bridging community, private-sector, and government interests (Tuyen et al., 2025; Anindhita et al., 2024). Krittayaruangroj et al.'s (2023) bibliometric analysis of 869 Scopus-indexed CBT sustainability documents confirms a notable research trajectory shift toward developing-country contexts, underscoring the global significance of CBT scholarship for destinations such as Koh Kret. Within Thailand specifically, evidence indicates that communities possessing distinctive cultural identity assets achieve greater CBT viability when governance arrangements ensure authentic community voices in product design and revenue allocation (Chatkaewnapanon and Lee, 2022; Boonwanno et al., 2022).

Stakeholder theory, as articulated by Freeman (1984), provides a complementary analytical lens through which the governance complexity of community-based tourism can be systematically examined. Applied to heritage tourism destinations, stakeholder theory recognizes that sustainable outcomes depend on the systematic identification, negotiation, and alignment of the interests of diverse actors—including regulatory agencies, local government, private operators, community organizations, and visitors—whose interdependencies shape collective destination outcomes (Valderrama et al., 2024; Konovalov, 2016). At Koh Kret, this multi-stakeholder ecology encompasses national and provincial tourism authorities, municipal government, private boat operators, Mon community enterprises, Buddhist temple institutions, and visitors from diverse cultural origins—each exerting distinct forms of influence on tourism development directions. Effective governance must navigate these stakeholder relationships to achieve integrated, rather than fragmented, quality management outcomes.

2.3. Ethnic Heritage Tourism: Authenticity, Representation, and Equity

The commodification of ethnic minority cultural heritage for tourism purposes engages complex questions concerning cultural authenticity, representation, and community self-determination (Xie, 2011; Tian et al., 2023). Research consistently demonstrates that contemporary heritage tourists are increasingly discerning consumers of cultural authenticity, seeking experiences that convey genuine heritage depth rather than staged or simplified performances (Feng and Li, 2020; Zhou et al., 2022). The Mon community at Koh Kret occupies a distinctive position in Thailand's ethnic heritage tourism landscape: The community's maintenance of living ceramic traditions, Mon Buddhist religious practices, traditional architectural forms, and linguistic distinctiveness constitutes a genuine—rather than reconstructed—cultural landscape with considerable tourist appeal. However, as Anindhita et al. (2024) document in their study of indigenous community-based tourism in Indonesia, the sustainability of such authentic cultural environments is contingent on the economic and social vitality of the communities that sustain them.

The equity dimensions of ethnic heritage tourism require particular analytical attention in the Koh Kret context. Tian et al. (2023) demonstrate that benefit distribution asymmetries in ethnic tourism frequently disadvantage host communities whose cultural capital and heritage practices underpin destination attractiveness, while economic returns are captured disproportionately by external commercial actors. Ngo and Pham (2021) document similar patterns in Southeast Asian indigenous tourism contexts, where policy frameworks inadequately protect minority communities from unequal power relationships within tourism value chains. The asset-based community development approach advanced by Dolezal and Burns (2015) proposes an alternative paradigm in which community cultural assets—rather than external capital infusion—form the foundational basis for tourism value creation, ensuring that economic returns flow equitably to the custodians of heritage. This equity imperative is not merely normatively desirable but practically strategic: the long-term sustainability of the Mon cultural experience that differentiates Koh Kret as a tourism destination depends fundamentally on the cultural and economic vitality of the Mon community itself.

2.4. Sustainable Water-Based Tourism and Environmental Management

Water-based tourism destinations face distinctive and compounding environmental management imperatives, including river and canal pollution from boat fuel emissions, acoustic disturbance to aquatic ecosystems, waterway carrying capacity limitations, and shoreline ecosystem degradation from visitor concentration (Panwanitdumrong and Chen, 2021; Abbas et al., 2025). These environmental challenges intersect with service quality considerations: noise and pollution from conventional boat engines simultaneously degrade ecological quality and diminish visitor experience in scenic heritage waterway settings. Thailand's national commitment to the Bio-Circular-Green (BCG) economy policy framework provides an overarching architecture within which sustainable transitions in water tourism can be systematically planned and incentivized. The shift toward electric or hybrid boat propulsion, comprehensive waste management, and scientifically grounded carrying capacity management represents a convergence of environmental sustainability imperatives with service quality enhancement opportunities.

Post-pandemic behavioral research reinforces the practical urgency of sustainable water tourism. Grilli and Curtis (2021) document durable shifts in tourists' environmental consciousness and risk tolerance attributable to pandemic experience, creating demand-side incentives for cleaner, safer, and more environmentally responsible water tourism operations. Fu et al. (2020) similarly find that residential support for tourism development is contingent on perceptions of environmental responsibility—a finding with important implications for the community governance of Koh Kret's boat tourism. Streimikiene et al. (2021) provide empirical evidence that sustainable tourism development and destination competitiveness are positively associated, challenging the assumption that sustainability investment requires competitiveness trade-offs. Cammarota et al. (2025) identify policymaker engagement as a critical enabling condition for sustainable rural tourism transitions, emphasizing that institutional commitment

rather than community action alone is insufficient to drive systemic change.

3. RESEARCH METHODOLOGY

3.1. Research Design and Ethical Approval

This investigation employed a sequential explanatory mixed-methods design, in which quantitative data collection and analysis preceded and structurally informed qualitative inquiry (Creswell and Plano Clark, 2018). The sequential structure enabled the research to establish statistically representative service quality patterns and development priority profiles through survey methods, and then achieve contextual explanation and interpretive depth through qualitative stakeholder interviews. This mixed-methods logic is particularly well-suited to community tourism research contexts where statistical patterns require stakeholder-grounded explanation to yield actionable insights (Krittayaruangroj et al., 2023; Arindhita et al., 2024). Fieldwork was conducted at Koh Kret, Pak Kret District, Nonthaburi Province during peak tourism periods spanning October 2024 through January 2025. Ethical clearance was granted by the Ethics Review Board of Rangsit University (Certificate of Approval No. RSUERB2025-143, approved June 2025), with all procedures adhering to the Declaration of Helsinki principles and the CIOMS guidelines.

3.2. Quantitative Component: Tourist Survey

The quantitative study population comprised tourists who completed boat route tour experiences at Koh Kret during the study period. The research employed accidental (convenience) sampling—a methodologically accepted approach in destination tourism research where constructing a complete sampling frame is methodologically impractical—yielding a total sample of 400 participants (Fu et al., 2020; Wondirad et al., 2020). The sample comprised 247 domestic Thai tourists (61.8%) and 153 international visitors (38.2%), consistent with Koh Kret's documented visitor composition and proportionally aligned with arrival statistics from the Tourism Authority of Thailand (2021). Structured questionnaires measured tourist satisfaction across six service quality dimensions: route quality and scenery, boat safety and comfort, guide professionalism, cultural interpretation, information provision, and overall satisfaction. All dimensions utilized validated five-point Likert scales (1 = Strongly Dissatisfied; 5 = Strongly Satisfied), with scale reliability confirmed through Cronbach's alpha coefficients exceeding 0.80, satisfying established internal consistency thresholds (Parasuraman et al., 1988; Rasoolimanesh et al., 2022). Statistical analyses included descriptive statistics (frequency, percentage, mean, standard deviation), independent samples t-test for domestic-international comparison, and one-way ANOVA for multi-group demographic comparisons.

3.3. Qualitative Component: Stakeholder Interviews

The qualitative component enrolled 60 purposively selected key informants representing three stakeholder categories directly engaged in Koh Kret boat tourism: boat operators ($n = 20$), community members including local enterprise operators and community organizational leaders ($n = 25$), and government officials from relevant municipal and provincial tourism agencies

($n = 15$). Purposive sampling ensured informant selection based on knowledge relevance, stakeholder representativeness, and direct operational experience (Miles et al., 2014). Semi-structured interview protocols explored informants' perspectives on service quality challenges, development priorities, governance structures, environmental management, and aspirational futures for Koh Kret boat tourism. All interviews were conducted in Thai, audio-recorded with explicit participant consent, and transcribed verbatim with all identifying details removed during transcription. Thematic content analysis was conducted through iterative coding following established procedures (Miles et al., 2014), with trustworthiness ensured through investigator triangulation, member checking, and prolonged field engagement. Quantitative and qualitative findings were integrated at the interpretation stage through a convergent narrative synthesis strategy.

4. RESEARCH FINDINGS

4.1. Tourist Satisfaction Across Service Quality Dimensions

Table 1 presents mean satisfaction scores and standard deviations across six service quality dimensions assessed among the 400-participant tourist sample. The quantitative data reveal a notably uneven satisfaction profile with significant implications for quality management strategy.

Route quality and scenic value achieved the highest satisfaction rating among all dimensions ($\bar{x} = 3.87$, $\sigma = 0.62$, classified as High), affirming that Koh Kret's natural riverine landscapes, Mon architectural heritage, and artisan activity create substantive visual and environmental experiential value. Boat safety and comfort received moderately high satisfaction ($\bar{x} = 3.64$, $\sigma = 0.71$). Guide professionalism occupied an intermediate position ($\bar{x} = 3.42$, $\sigma = 0.78$), rated as Moderate-High, indicating variable service delivery across guide individuals. Critically, cultural interpretation services ($\bar{x} = 2.89$, $\sigma = 0.95$) and information provision ($\bar{x} = 2.76$, $\sigma = 0.98$) received substantially lower scores—approaching the moderate satisfaction threshold—with their elevated standard deviations suggesting significant inconsistency in delivery. Overall tourist satisfaction reached $\bar{x} = 3.52$ ($\sigma = 0.65$), classified as High and broadly consistent with regional heritage tourism satisfaction benchmarks reported in analogous community tourism contexts (Amalia et al., 2023; Rasoolimanesh et al., 2022).

The service quality gap between route quality and interpretation services ($\Delta = 0.98$ scale points) constitutes the study's most consequential quantitative finding. As Alazaizeh et al. (2019) and Carvalho (2022) demonstrate in comparable heritage settings, interpretation quality deficits systematically suppress the conversion of physical heritage assets into cognitively and emotionally resonant visitor experiences, constraining overall satisfaction below the level that destination attractiveness would theoretically support. In Koh Kret's case, tourists access visually compelling Mon heritage landscapes while receiving insufficient narrative context to transform observation into meaningful cultural understanding—a gap with direct implications for both satisfaction scores and longer-term destination positioning.

4.2. Multi-Stakeholder Assessment of Development Priorities

Table 2 presents stakeholder assessment of development needs across five improvement domains, with disaggregated data by stakeholder category enabling inter-group priority comparisons.

Safety standards enhancement emerged as the singular critical-priority development need, achieving near-consensus across all stakeholder groups (overall $\bar{x}$ = 4.32; operators $\bar{x}$ = 4.45, community $\bar{x}$ = 4.28, government $\bar{x}$ = 4.23). This convergent prioritization reflects the documented post-pandemic intensification of risk awareness and safety consciousness among both service providers and tourist populations (Grilli and Curtis, 2021; Tuyen et al., 2025). The notably higher prioritization by boat operators compared to government officials (4.45 vs. 4.23) suggests that frontline service providers possess more acute awareness of operational safety gaps than regulatory agencies—a pattern consistent with Cammarota et al.’s (2025) finding that institutional distance from operational contexts creates systematic risk perception asymmetries. Guide training programs ($\bar{x}$ = 4.18) and infrastructure improvement ($\bar{x}$ = 4.12) followed as high priorities, along with route diversification and environmental management, which the priority hierarchy.

Qualitative analysis provided essential contextual depth to quantitative priority rankings. Boat operators consistently identified regulatory compliance cost burdens and the absence of standardized training pathways as primary operational constraints undermining service quality. Community member informants emphasized the lack of formal mechanisms for translating boat tourism revenues into tangible community benefits, expressing concerns about the cultural sustainability of Mon heritage practices under current unequal benefit distribution arrangements. Government officials identified inter-agency coordination deficits as the primary governance challenge, noting that safety inspections, environmental oversight, and tourism development functions are distributed across multiple agencies without systematic coordination—consistent with Konovalov’s (2016) analysis of governance fragmentation in community-oriented tourism systems.

Figure 1 presents a spatial cartographic representation of boat route circuits around Koh Kret Community, mapping key tourist attraction nodes, pier landing points, and scenic viewpoints relative to visitor volume distribution and recommended tour durations along Chao Phraya River segments.

The SWOT synthesis (Table 3) identifies Koh Kret’s Mon ethnic heritage distinctiveness and strategic Chao Phraya River positioning as primary competitive strengths, while fragmented governance, inadequate infrastructure, and weak interpretation infrastructure represent the most significant operational weaknesses. Opportunity identification prioritized sustainable tourism certification pathways, post-pandemic domestic tourism expansion, and the transition to electric boat propulsion as the highest-potential development vectors. The threat matrix highlighted climate-change-driven riverine environmental risks, water quality degradation from urban runoff, and over-tourism carrying capacity concerns as requiring preemptive strategic policy attention (Sharpley, 2020; Panwanitdumrong and Chen, 2021). Figure 2 provides a visual radar chart illustration of the comparative satisfaction profile across all five primary service quality dimensions.

5. DISCUSSION

The empirical findings situate Koh Kret boat tourism within broader patterns documented in community-based heritage water tourism literature, while illuminating contextually distinctive dynamics that advance theoretical understanding. The overall satisfaction score ($\bar{x}$ = 3.52) aligns with benchmarks reported in analogous ethnic heritage tourism settings across Southeast Asia (Wondirad et al., 2020; Boonwanno et al., 2022), yet the asymmetric quality profile—with route scenery substantially outperforming interpretive dimensions—suggests that satisfaction is partially sustained by place attachment mechanisms rather than by consistently excellent service delivery across all dimensions. Hosany et al. (2022) demonstrate that place attachment at scenic heritage destinations buffers satisfaction at levels above what functionally justified service quality would otherwise produce, creating a latent risk that quality deficits go unaddressed until they

Table 1: Tourist satisfaction across service quality dimensions (n=400)

Service dimension	Mean ($\bar{x}$)	Standard deviation (σ)	Satisfaction level	n	Priority
Route quality and scenery	3.87	0.62	High	400	Strength
Boat safety and comfort	3.64	0.71	High	400	High
Guide professionalism	3.42	0.78	Moderate-High	400	Medium
Cultural interpretation	2.89	0.95	Moderate	400	Critical
Information provision	2.76	0.98	Moderate	400	Critical
Overall satisfaction	3.52	0.65	High	400	—

Table 2: Multi-stakeholder assessment of development priorities

Development area	Overall mean	Boat operators	Community	Government	Standard deviation	Priority level
Safety standards	4.32	4.45	4.28	4.23	0.53	Critical
Guide training programs	4.18	4.05	4.25	4.25	0.61	High
Infrastructure improvement	4.12	4.20	4.10	4.05	0.64	High
Route diversification	3.95	3.85	4.05	3.95	0.68	High
Environmental management	3.88	3.70	3.95	4.00	0.72	High
Overall deviation need	4.10	4.05	4.13	4.10	0.58	High

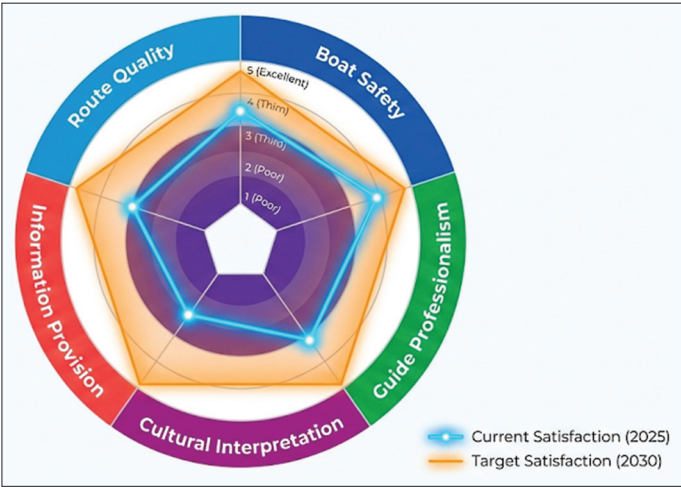
Table 3: SWOT analysis of Koh Kret boat route tourism development

Strengths	Weaknesses	Opportunities	Threats
• Authentic Mon cultural heritage • Strategic Chao Phraya location • Generational pottery craftsmanship • Historical religious landmarks • Established visitor market base • Distinctive ethnic identity	• Fragmented governance structure • Inadequate pier infrastructure • Inconsistent service standards • Weak interpretation services • Limited guide training programs • Minimal digital marketing	• Sustainable tourism certification • Electric boat propulsion transition • Community empowerment programs • Post-pandemic domestic tourism growth • Digital marketing and social media • International market expansion	• Climate change and river flooding • Water quality degradation • Over-tourism carrying capacity • Economic volatility post-pandemic • Competition from other destinations • Regulatory compliance burdens

Figure 1: Map of boat routes around Koh Kret community showing key tourist attraction nodes, pier landing points, and scenic viewpoints, color-coded by visitor volume and recommended experience duration



Figure 2: Radar chart displaying comparative tourist satisfaction across five primary service quality dimensions (route quality, boat safety, guide professionalism, cultural interpretation, and information provision), visually illustrating the service quality asymmetry between physical and communicative dimensions



erode competitiveness sufficiently to trigger a visitor satisfaction decline.

The interpretation quality gap—representing the most significant service quality deficit identified in this study—warrants sustained analytical attention. Koh Kret’s Mon cultural heritage is intrinsically rich: ceramic pottery traditions transmitted across generations, Mon Buddhist architectural forms, and linguistic distinctiveness create a cultural environment of genuine depth and tourist learning potential. However, this heritage wealth is systematically inaccessible to most visitors in the absence of competent, prepared, and bilingual interpretive narration. Zhou et al. (2022) demonstrate in their heritage authenticity research that tourist satisfaction with cultural depth is significantly predicted by perceived interpretive quality; Carvalho (2022) confirms that guide competence functions as the primary mediator through which heritage sites generate memorable, cognitively rich visitor experiences. The implication is clear: investment in guide training and certification represents the highest-leverage quality improvement intervention available to Koh Kret boat tourism

operators—one whose returns extend beyond satisfaction scores to long-term destination differentiation.

The safety prioritization finding extends behavioral literature on post-pandemic tourism transformation.” Grilli and Curtis (2021) document that COVID-19 pandemic experience produced durable rather than transient changes in tourist risk tolerance and safety consciousness, creating new baseline service quality expectations that many informal community boat operators had not anticipated or prepared for. The convergent multi-stakeholder safety prioritization observed in this study—with all three stakeholder groups rating safety above other development needs—signals a window of opportunity for implementing mandatory safety certification and standardization without encountering significant stakeholder resistance. This consensus around safety reform contrasts with the more contested prioritization dynamics documented in other development areas, where operator and community interests partially diverge (Konovalov, 2016; Valderrama et al., 2024).

The multi-stakeholder governance gap identified through qualitative analysis resonates strongly with Valderrama et al.'s (2024) analysis of collaborative governance deficits at rural heritage tourism destinations. When boat operators, community organizations, and regulatory agencies function without systematic coordination mechanisms, predictable dysfunctions emerge: Inconsistent service standards, regulatory arbitrage undermining safety compliance enforcement, and missed opportunities for integrating cultural programming with commercial tour delivery. The equity dimension identified through community informant perspectives adds critical normative and strategic depth: when Mon community members whose cultural heritage drives Koh Kret's tourist appeal lack formal representation in governance or systematic benefit-sharing mechanisms, the long-term cultural sustainability that underpins destination distinctiveness is itself at risk. Tian et al. (2023) and Feng and Li (2020) document analogous benefit distribution asymmetries in ethnic tourism across Asia, confirming that this dynamic is structural rather than idiosyncratic to Koh Kret.

6. PROPOSED SEVEN-PILLAR INTEGRATED MANAGEMENT FRAMEWORK (7P-IMF)

Drawing on convergent empirical findings from quantitative satisfaction assessment, multi-stakeholder development priority mapping, SWOT analysis, and the theoretical synthesis presented above, this study advances the Seven-Pillar Integrated Management Framework (7P-IMF) for Koh Kret boat route heritage tourism (Figure 3). The framework is designed as an integrated system rather than a set of independent interventions: each pillar addresses a distinct dimension of the empirically identified service quality and governance improvement agenda while generating synergistic effects across the full framework.

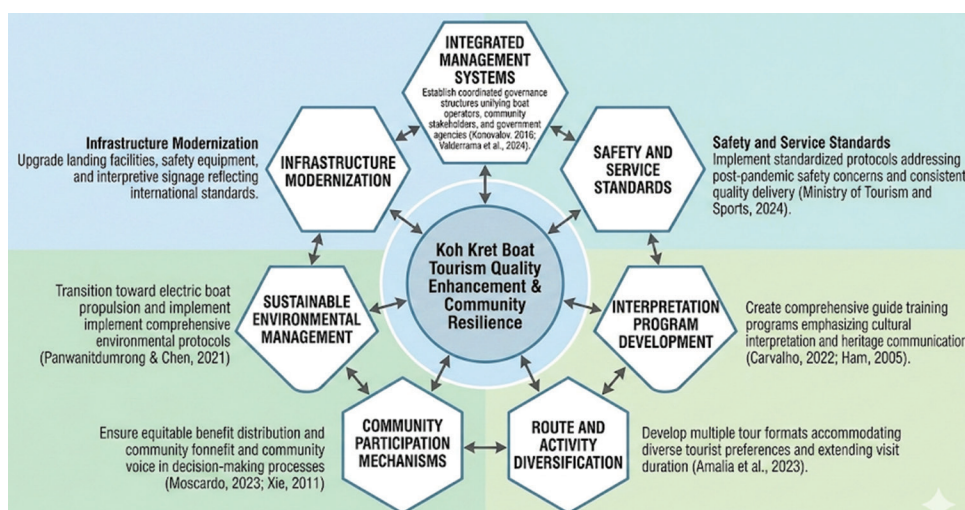
6.1. Pillar 1 — Integrated Governance Systems

Establish a formally constituted Multi-Stakeholder Tourism Coordination Committee (MSTCC) incorporating elected representatives from boat operator associations, Mon community organizations, municipal government, and provincial tourism authorities. The MSTCC should operate under a transparent governance charter specifying decision-making protocols, revenue allocation principles, quality standard responsibilities, and environmental compliance enforcement. This governance architecture aligns with the collaborative governance frameworks advocated by Valderrama et al. (2024) and the community participation principles advanced by Dolezal and Burns (2015), addressing the inter-agency coordination deficits documented in the qualitative findings.

6.2. Pillar 2 — Safety and Service Standards

Implement a mandatory boat safety certification program calibrated to the Department of Marine and Coastal Resources regulatory standards, incorporating periodic vessel seaworthiness inspections, life-safety equipment requirements, emergency response training, and licensed operator credentials. Standardized service quality protocols should establish minimum requirements for guide-to-tourist ratios, passenger pre-departure safety briefings, real-time

Figure 3: Conceptual diagram of the Seven-Pillar Integrated Management Framework for Koh Kret boat route heritage tourism, illustrating interconnections among governance, safety, interpretation, route diversification, community equity, environmental sustainability, and infrastructure dimensions



emergency communication systems, and first-aid certification. Certification compliance should be publicly communicated through boat rating displays at pier embarkation points, creating market incentives for quality differentiation (Grilli and Curtis, 2021; Ministry of Tourism and Sports, 2024).

6.3. Pillar 3 — Interpretive Program Development

Develop a structured Mon Cultural Heritage Guide Certification Curriculum progressing across three competency tiers: foundational Mon cultural history and pottery heritage knowledge; advanced interpretive technique emphasizing thematic, narrative-driven communication; and specialized bilingual (Thai-English) proficiency for international visitor engagement. Curriculum design should incorporate Ham's (2005) thematic interpretation principles and Carvalho's (2022) cultural guide competency model, addressing the critical interpretation quality gap ($\bar{x} = 2.89$) identified as the most urgent experiential improvement need. Continuing professional development requirements should ensure ongoing guide performance quality and cultural knowledge currency.

6.4. Pillar 4 — Route and Product Diversification

Design differentiated tour formats accommodating distinct visitor segments and extending average visit duration: heritage-focused cultural circuits emphasizing Mon architectural and artisan heritage; pottery experience tours incorporating hands-on workshop engagement; ecological river observation routes integrating Chao Phraya biodiversity education; and evening cultural performance tours featuring traditional Mon music, dance, and ceremonial demonstrations. Route differentiation distributes visitor loads across the island's tourism infrastructure while enhancing per-capita revenue generation and satisfaction through personalized experience matching (Amalia et al., 2023; Moscardo, 2023).

6.5. Pillar 5 — Community Participation and Benefit-Sharing

Establish formal community benefit-sharing mechanisms ensuring that boat tourism revenues directly fund Mon cultural heritage preservation projects, artisan mentorship programs, youth cultural education initiatives, and community development infrastructure. Implement structured community participation protocols through which Mon community members serve as co-designers of tourism interpretive content, ensuring that heritage narratives reflect community self-representation rather than externally imposed framings (Dolezal and Burns, 2015; Anindhita et al., 2024). Community benefit-sharing transparency should be formally reported through annual tourism impact assessments accessible to all stakeholders.

6.6. Pillar 6 — Environmental Sustainability Management

Initiate a phased transition program toward electric or hybrid boat propulsion systems through the MSTCC, reducing Chao Phraya River water pollution, acoustic disturbance, and carbon emissions while improving onboard comfort quality. Concurrently implement comprehensive waste management protocols encompassing visitor waste minimization systems, river pollution monitoring with

publicly accessible data, and plastic-free zone designations at key cultural and ecological nodes. These environmental initiatives align with Thailand's BCG economy national framework and respond to documented post-pandemic tourist environmental sensitivity, positioning Koh Kret as a sustainability-committed water heritage destination (Panwanitdumrong and Chen, 2021; Abbas et al., 2025).

6.7. Pillar 7 — Infrastructure Modernization

Prioritize upgrading pier landing facilities, visitor waiting areas, interpretive signage systems, and digital visitor information infrastructure to international heritage destination standards. Specific investments should include multilingual (Thai, English, Mandarin) digital interpretation kiosks at major cultural nodes, universally accessible boarding platforms accommodating mobility-challenged visitors, shaded rest facilities at principal attraction points, and integrated wayfinding systems connecting water transport networks with land-based artisan and cultural circuits. Infrastructure investment should follow universal design principles, ensuring inclusivity across visitor demographic profiles (Cammarota et al., 2025; Krittayaruangroj et al., 2023).

7. CONCLUSION AND POLICY RECOMMENDATIONS

This study contributes empirically grounded and theoretically coherent insights to community-based water heritage tourism management by systematically examining service quality dimensions, multi-stakeholder development priorities, and governance frameworks at Koh Kret—a destination whose Mon ethnic heritage distinctiveness creates exceptional tourism potential, constrained by operational fragmentation and interpretive infrastructure deficits. The application of SERVQUAL theory and stakeholder theory to the water-based heritage tourism context extends the analytical reach of both frameworks while demonstrating their combined utility for community tourism quality assessment.

The research reveals a destination characterized by meaningful competitive strengths—authentic Mon cultural heritage, Chao Phraya riverine scenery, and an established visitor market base—operating below experiential potential due to a pronounced service quality asymmetry: Physical and scenic dimensions achieve high satisfaction while interpretive and informational dimensions fall significantly short. This asymmetry pattern, consistent with heritage tourism findings in analogous developing-country community contexts (Arintoko et al., 2020; Boonwanoo et al., 2022), represents a systematic rather than idiosyncratic quality management challenge requiring structured, rather than ad hoc, intervention.

The proposed 7P-IMF offers a transferable integrated management template whose seven pillars collectively address the governance, operational, interpretive, commercial, equity, environmental, and infrastructure dimensions of sustainable community water heritage tourism development. Implementation sequencing should prioritize governance structure (Pillar 1) and safety certification

(Pillar 2) as foundational preconditions enabling the subsequent pillar. Concurrent development of interpretive programs (Pillar 3) addresses the most significant quality gap while building the human capital foundation for product diversification (Pillar 4). Community participation and benefit-sharing mechanisms (Pillar 5) should be institutionalized within the MSTCC governance charter from inception, ensuring that equity considerations are embedded in the governance structure rather than appended as secondary considerations.

Future research should examine the longitudinal effectiveness of 7P-IMF implementation over a 2-3 year period following governance restructuring, enabling evaluation of the framework applicability beyond single-point-in-time assessment. Comparative analysis of service quality improvement trajectories across Thailand's river and canal-heritage tourism destinations would contribute transferable knowledge regarding effective CBT water tourism quality management. Experimental research designs examining the specific contribution of the Mon cultural interpretation program quality to tourist satisfaction, learning outcomes, and revisit intentions would provide particularly valuable evidence for guide certification program investment justification. The 7P-IMF framework advances a conceptual contribution applicable to analogous community-operated water heritage tourism destinations across Southeast Asia and the broader developing-world context.

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