

Strengthening the Competence of Community-Based Water Tourism Guides to Support Sustainable Tourism

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Abstract

Purpose: This study aims to analyze the strengthening of human resource competencies among community-based water tourism guides in supporting sustainable tourism. It focuses on the strategic role of guides in ensuring visitor safety, environmental preservation, and enhancing the welfare of local communities within the framework of community-based tourism.

Method: This research employs a qualitative approach with a descriptive design. The study was conducted in a community-based water tourism destination. Data were collected through field observations, in-depth interviews with water tourism guides, destination managers, and relevant stakeholders, as well as document analysis. The data were analyzed using qualitative descriptive techniques, including data reduction, data display, and conclusion drawing, to obtain a comprehensive understanding of guide competencies and the strategies implemented to enhance them.

Result: The findings reveal that strengthening the competencies of water tourism guides must be conducted continuously through structured education, training, and standardized certification. Key competency areas requiring improvement include technical skills, occupational health and safety, and interpersonal abilities. Additionally, active community involvement in tourism management contributes to improved service quality, reduced accident risks, and stronger sustainability outcomes, while also generating economic benefits for local communities.

Contribution:

This study contributes to the growing body of knowledge on sustainable and community-based tourism by highlighting the critical role of human resource competency development in high-risk tourism activities. It provides practical insights for policymakers, destination managers, and training institutions to design more effective capacity-building programs. Furthermore, the findings offer a framework for integrating safety, sustainability, and community empowerment, thereby supporting the long-term development of water tourism destinations.

Keywords: Community-Based Tourism; Water Tourism; Tour Guides; Sustainable Tourism, Community Empowerment,

Introduction

Water tourism represents a form of tourism activity that places water resources as its primary attraction, including coastal areas, rivers, lakes, reservoirs, waterfalls, springs, and other aquatic environments (Rahman & Putra, 2023). Beyond offering scenic landscapes, water-based settings provide recreational, educational, and adventure experiences with distinctive characteristics compared to other tourism types (Hall et al., 2021). Activities such as swimming, sailing, diving, rafting, canoeing, and various water sports have developed as



integral components of water tourism products, requiring specific technical skills and specialized equipment (Buckley, 2021).

As an archipelagic country, Indonesia possesses abundant and geographically dispersed water resources, constituting a significant asset for the development of water tourism (Kemenparekraf, 2022; BPS, 2024). This diverse natural endowment presents opportunities for positioning water tourism as a leading product and a competitive alternative destination (Sunaryo et al., 2023; OECD, 2024). In addition to diversifying tourism offerings, water tourism contributes to a more equitable distribution of tourism development across regions (UNWTO, 2023). Nevertheless, the utilization of such potential must be carefully planned and managed to ensure safety, environmental conservation, and the sustainability of water resources (UNEP, 2022; Putri et al., 2025).

In practice, water tourism extends beyond recreational activities and constitutes a structured tourism business that provides services both above and below the water surface (Kemenparekraf, 2023). Its operations involve guiding services, safety equipment provision, supporting facilities, and complementary services such as food and accommodation (Permenparekraf No. 4 of 2021 in Prabowo et al., 2024). According to prevailing regulations, water tourism businesses are categorized as medium- to high-risk activities, thereby requiring strict occupational health and safety standards, including the protection of visitors and the environment (Kemenparekraf, 2022; ILO, 2023).

The high risk of accidents, potential ecosystem degradation, and safety-related issues pose tangible challenges in water tourism management (Buckley & Westaway, 2021). In several destinations, limitations persist in operational standard awareness, inadequate safety equipment, and insufficient workforce competence (Lestari & Hakim, 2024). These shortcomings directly affect service quality and visitor trust (Chen et al., 2024). Consequently, water tourism management must not be driven solely by economic objectives but must also prioritize professionalism, safety, and long-term sustainability (Rahmawati et al., 2025). Within this context, human resources emerge as a decisive factor. Given the inherent safety risks associated with water tourism, the quality of human resources becomes a critical element (Nugraha & Santoso, 2023). Water tourism guides operate at the forefront of ensuring visitor safety, comfort, and overall experience (Prasetyo et al., 2024). The competencies required extend beyond technical mastery and equipment handling to include an understanding of water conditions, effective communication skills, and the ability to respond to emergency situations (Suryani & Putra, 2023).

The number of guides holding certification in accordance with national and international standards remains limited (Wulandari et al., 2024). In many destinations, human resource capacity development has yet to become a strategic priority (Hakim & Dewi, 2025), despite the fact that human capital quality is a key determinant of tourism sector sustainability and performance (UNDP, 2024). Therefore, strengthening competencies through education, structured training, and certification has become an urgent necessity (Rahman et al., 2025).

The community-based tourism approach offers a relevant framework for the development of water tourism. This concept positions local communities as primary actors in destination management (Beeton, 2022) and promotes empowerment through cultural preservation and economic benefit enhancement (Sunaryo, 2023). In water tourism, community involvement as guides and managers creates direct opportunities for improving local welfare (Tedy et al., 2024). Nevertheless, participation is often constrained by limited knowledge and skills (Putri et al., 2023). Planning processes that remain predominantly top-down may also generate unequal benefit distribution and potential conflicts of interest (Wibisono et al., 2024; Sari & Nugroho, 2025). Thus, strengthening community competencies becomes a strategic imperative (Kemenparekraf, 2024).

From an economic perspective, community involvement in water tourism has been shown to generate employment opportunities and increase local income (BPS, 2023; World Bank, 2024). It also enhances managerial and service capacities (Lestari et al., 2025) while fostering a sense of ownership and environmental responsibility toward destinations (Wijaya & Sasmita, 2024). Despite these benefits, capacity development remains uneven across

destinations (Kemenparekraf, 2024). Many guides continue to rely primarily on experience without structured competency standards (Hakim et al., 2024), a condition that may undermine competitiveness and increase safety risks (Buckley, 2024). This situation further reinforces the urgency of research on competency strengthening (Rahman et al., 2025). Based on these conditions, the central issue in community-based water tourism development lies in the low competency standards of guides, limited access to continuous training, and suboptimal implementation of occupational health and safety standards. Meanwhile, the substantial potential of water resources has not been fully supported by adequate human resource quality. Considering the high-risk nature of water tourism, professionalism is an indispensable requirement.

This study seeks to provide a conceptual contribution to the formulation of strategies for strengthening the competencies of community-based water tourism guides. The findings are expected to serve as a reference for destination managers, government authorities, and stakeholders in designing policies and development programs that ensure safe, high-quality, and sustainable water tourism. Beyond enhancing competitiveness, competency strengthening is also directed toward ensuring that economic benefits align with community welfare and environmental preservation. Accordingly, this research aims to analyze the forms of competency strengthening among community-based water tourism guides in improving sustainable and competitive water tourism management.

Research Method

This study employs a qualitative approach with a descriptive design to explore the implementation of sustainable tourism from the perspectives of key stakeholders (Creswell, 2018). This approach is appropriate given the complex, contextual, and interpretive nature of sustainable tourism practices, which cannot be adequately captured through quantitative measures alone (Moleong, 2017). It enables an in-depth examination of stakeholders' experiences, meanings, and perceptions, while also facilitating the interpretation of relationships across environmental, socio-cultural, and economic dimensions.

This study employs a descriptive qualitative approach aimed at gaining an in-depth understanding of the strengthening of human resource competencies among community-based water tourism guides in supporting sustainable tourism. A qualitative approach was selected because it enables the exploration of meanings, processes, and experiences of tourism actors comprehensively within their natural settings. Qualitative research emphasizes the interpretation of social phenomena from the perspectives of research participants, making it highly relevant for examining the roles, competencies, and involvement of water tourism guides within community-based tourism practices.

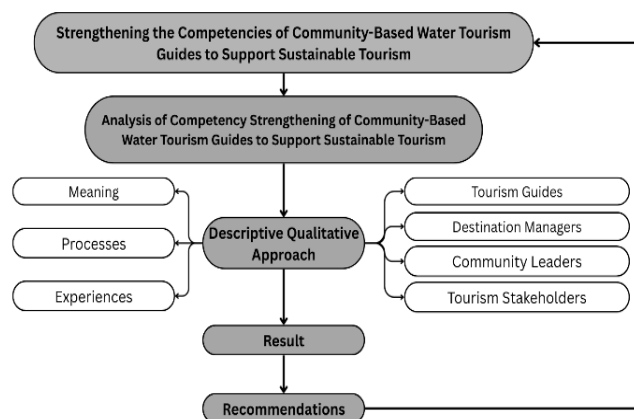


Figure 2.1 Research framework

The research location was purposively selected in a community-based water tourism destination in Bali. Research participants included water tourism guides, destination managers, community leaders, and local tourism stakeholders. Informants were selected using purposive sampling, taking into consideration their direct involvement in water tourism activities and their relevance to the research objectives. This technique enabled the researcher to obtain in-depth and information-rich data concerning the strengthening of human resource competencies in the management of water tourism.

Data collection was conducted through in-depth interviews, direct observation, and document analysis. Semi-structured interviews were employed to explore informants' perceptions, experiences, and understanding of water tourism guide competencies, safety aspects, and community roles in tourism management. Observations were carried out to directly examine water tourism activities, guide–visitor interactions, and the implementation of safety standards in practice. Document analysis was undertaken to review supporting materials such as regulations, guide certifications, training modules, and destination management reports in order to complement and validate primary data.

Data analysis was conducted interactively through the stages of data reduction, data display, and conclusion drawing. Data reduction involved selecting and focusing on information relevant to the research objectives. Subsequently, the data were presented in descriptive narrative form to facilitate the identification of patterns and conceptual relationships. Conclusions were drawn gradually by applying source and method triangulation to enhance data credibility. The trustworthiness of the study was further strengthened through member checking and systematic documentation of the research process, ensuring the scientific rigor and accountability of the findings.

Result and Discussion

Profile and Characteristics of Community-Based Water Tourism Guides

The findings indicate that community-based water tourism guides possess diverse characteristics in terms of age, educational background, experience, and roles in destination management. The majority of the guides are local residents living in the vicinity of the tourism area and have been involved in water tourism activities for a considerable period of time. Their involvement generally began through participation in tourism awareness groups or destination management organizations that were voluntarily established by the local community.

Table 1. Profile and Characteristics of Community-Based Water Tourism Guides

No	Aspect Examined	Research Findings	Analytical Notes
1	Age Background	Diverse (productive age group dominates)	Indicates the involvement of the active working-age generation in water tourism management
2	Social Status	Majority are local community members living around the destination	Reinforces the community-based character
3	Years of Experience	5–15 years	Field experience serves as the primary capital for competency development
4	Initial Involvement	Tourism awareness groups / community-initiated management organizations	Participation emerged from community initiatives
5	Formal Education	Majority have secondary-level education	Formal education is not the dominant factor; experience plays a greater role
6	Training Attended	Basic guiding training, water safety, first aid	Enhances technical and safety capacities
7	Certification Ownership	Not evenly distributed; only some possess official certification	Presents a challenge for competency standardization

8	Role Management	in	Not limited to technical guiding, but also scheduling, equipment maintenance, and information delivery	Guides function as part of the destination governance system
9	Involvement Decision-Making	in	Participate in deliberations and management evaluations	Reflects active participation in community-based management
10	Social and Cultural Characteristics		Understand environmental conditions, seasonal patterns, and local values	Serves as an advantage in maintaining harmony between tourism and the community

Source: Primary data 2026

Based on Table 1, it is evident that community-based water tourism guides are predominantly local residents of productive working age who possess substantial field experience, ranging from five to fifteen years. This condition indicates that guiding practices are shaped more by direct experiential learning than by formal educational pathways. Although the majority of guides have participated in basic guiding and water safety training, the ownership of official certification remains uneven. This suggests a gap in competency standardization that requires attention within capacity-strengthening strategies. In terms of roles, guides are not limited to technical functions; they are also involved in operational management and destination-level decision-making, reflecting the community-based character of governance. Moreover, their social proximity and deep understanding of environmental conditions, seasonal patterns, and local cultural values constitute distinctive advantages not typically possessed by guides from outside the community. Overall, the table underscores that while community-based water tourism guides demonstrate strengths in experiential knowledge and local attachment, further enhancement is needed in certification and competency standardization to support more professional and sustainable management practices.

Dimensions of Water Tourism Guide Competence

The findings indicate that the competencies of community-based water tourism guides are multidimensional in nature and are shaped through a combination of field experience, formal training, and social interaction within the community. The identified competency dimensions include technical competence, safety and risk management, communication and service skills, as well as social and local cultural competence.

Table 2. Competency Dimensions, Strengthening Processes, Constraints, and Implications

No	Aspect	Identified Indicators	Summary of Findings
1	Technical Competence	Mastery of equipment, understanding of water conditions, operational procedures	Guides are capable of using and inspecting equipment, understanding currents and high-risk points, and conducting briefings and activity supervision
2	Safety & Management Competence	Risk Safety instructions, emergency response, first aid	Guides are able to provide safety instructions and perform initial emergency response; however, formal standards are not uniformly documented
3	Communication & Service Competence	Interpersonal communication, quality, interpretation, service tourism	Guides are communicative, friendly, and able to provide clear and simple explanations to visitors
4	Social & Local Cultural Competence	Understanding of customary norms, environmental education, community representation	Guides understand local values and play a role in maintaining harmony between tourism activities and the community

5	Competency Strengthening Process	Formal training, internal training, mentoring, community participation	Competency development is carried out through training and learning by doing, with active community involvement
6	Constraints in Competency Strengthening	Access to training, certification, institutional support	Costs, location, and limited facilities constitute the main obstacles
7	Implications for Management & Sustainability	Service quality, safety standards, environmental practices	Competence contributes to improved safety, visitor satisfaction, and more responsible tourism practices

Source: Primary data 2026

Based on Table 2, it is evident that the competencies of water tourism guides encompass interrelated technical, safety, communication, and socio-cultural dimensions. Technical and safety competencies constitute the primary foundation for ensuring the smooth implementation and security of water tourism activities. Meanwhile, communication and socio-cultural competencies play a crucial role in creating a comfortable tourism experience while maintaining harmonious relationships with the local community. The table also indicates that competency strengthening is carried out through a combination of formal training and experiential learning. However, constraints such as limited access to training programs and the uneven distribution of certification remain significant challenges in achieving standardized competencies.

Competency Strengthening as the Foundation of Water Tourism Management

Strengthening the competencies of community-based water tourism guides constitutes a fundamental basis for building effective and sustainable destination governance. Given the high-risk characteristics of water tourism and its dependence on natural conditions, competence should not be viewed merely as technical skill, but as an integrated capacity encompassing knowledge, attitudes, and operational abilities. Conceptually, competence is a prerequisite for sound destination management, as the quality of governance largely depends on the capacity of its key actors. In water tourism, guides function not only as activity facilitators but also as central actors mediating interactions between visitors, aquatic environments, and destination management structures. Consequently, their competence directly influences service quality, safety standards, and destination image. The findings indicate that well-managed technical and safety competencies contribute to more orderly and standardized operations, demonstrating that competence serves as a mechanism for risk control. Without adequate competence, management practices tend to be reactive, reliant on individual experience, and lacking systemic consistency.

From a community-based management perspective, competency strengthening also embodies an empowerment dimension. Improved competencies reinforce the position of local communities as primary actors rather than peripheral participants in the tourism value chain. Adequate capacity enables communities to make more rational, professional, and adaptive decisions in response to market dynamics and environmental change. Furthermore, competency strengthening is closely linked to accountability and professionalism in destination governance. The standardization of operational procedures, implementation of safety protocols, and consistency in service delivery depend on competent human resources. In terms of sustainability, competence functions as an internal mechanism to balance economic, social, and environmental interests. Competent guides not only prioritize visitor satisfaction but also demonstrate awareness of environmental carrying capacity and local socio-cultural values. Thus, strengthening competence represents not merely a service improvement strategy, but a comprehensive approach to sustainable destination development.

Table 3 Results of the researcher's interviews
with research informants

No	Informant	Verbatim Quote	Initial Code (Open Coding)	Category	Theme
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1	I Made Arta (Tour Guide)	"We learned on our own how to explain water safety; there has been no formal training."	Lack of formal training	Competency gap	Human Resource Capacity
2	Sarah Wijaya (Tourist)	"The guide was friendly, but the safety explanations were still unclear."	Limited safety communication	Service quality	Human Resource Capacity
3	Ahmad Fauzi (Tour Guide)	"We know the dangerous areas, but not all guides can explain them properly."	Unstandardized local knowledge	Competency standardization	Human Resource Capacity
4	Ni Luh Sari (Tourism Manager)	"There is no specific certification for water tourism guides here yet."	Absence of certification	Regulation and standards	Governance
5	Wayan Sudarma (Local Community)	"Guides should also explain the importance of protecting the environment."	Environmental education role	Educational function	Environment

Source: Primary data 2026

Multidimensionality of Competence from a Theoretical Perspective

The findings reveal that the competencies of community-based water tourism guides are not singular but multidimensional, encompassing technical, safety, communication, and socio-cultural aspects. From a human resource competency perspective, competence is understood as the integration of knowledge, skills, and attitudes reflected in professional work behavior. Thus, competence extends beyond technical ability to include personal and social qualities in performing professional roles. The technical and safety dimensions identified in this study align with the concept of core competencies in operational management. Technical competence forms the basis for implementing water tourism activities, while safety competence represents risk management capability, which is essential in high-risk water-based environments. Without these dimensions, destination operations remain vulnerable to disruption and accidents.

Meanwhile, communication and service competencies highlight the relational dimension of guiding. In service quality theory, interactions between service providers and visitors shape the overall tourism experience. Therefore, interpersonal communication, tourism interpretation, and service-oriented attitudes constitute integral components of professional competence. Within the framework of community-based tourism (CBT), the multidimensional nature of competence acquires broader significance. CBT positions local communities as key actors in planning, managing, and benefiting from tourism activities. Consequently, socio-cultural competence becomes a strategic element distinguishing community-based management from conventional tourism models. Understanding local norms, customary values, and indigenous knowledge strengthens social legitimacy and maintains harmony between tourism activities and community life.

From an empowerment perspective, competence enhances not only individual capacity but also collective community capability. Competent guides are more able to participate actively in decision-making and destination management, reflecting a shift from being objects of development to empowered subjects. The multidimensionality of competence also suggests that capacity strengthening cannot be partial. Strategies focusing solely on technical training without addressing social, cultural, and service dimensions will result in fragmented capacity development. Therefore, human resource development in community-based water tourism

must adopt a comprehensive and context-sensitive approach, aligned with local characteristics and tourism industry dynamics.

Community Participation in the Competency Strengthening Process

Community participation constitutes a fundamental element in strengthening the competencies of community-based water tourism guides. The findings indicate that capacity development does not rely solely on external interventions such as formal training or certification, but is also strongly influenced by internal community initiatives. In this context, bottom-up and top-down approaches provide relevant analytical frameworks for understanding the dynamics of competency strengthening. The top-down approach is generally characterized by policies and programs formulated by government authorities or external institutions and subsequently implemented for the community as beneficiaries. This model offers advantages in terms of standardization, access to resources, and formal legitimacy. In water tourism, top-down initiatives are reflected in safety training programs, guide certification schemes, and the dissemination of nationally regulated service standards. Such standardization is essential to ensure service quality and visitor safety. However, a purely top-down approach may be limited if it lacks sensitivity to local contexts. Uniform programs often overlook social, cultural, and internal community dynamics, positioning local actors merely as program recipients rather than active decision-makers.

Conversely, the bottom-up approach originates from the needs, experiences, and aspirations of local communities. Competency strengthening under this model develops from collective awareness of the importance of capacity enhancement for destination sustainability. Learning processes frequently occur informally through practical engagement, peer knowledge sharing, and adaptation to field challenges. In community-based water tourism, this approach is evident in local initiatives to establish internal regulations, define role distribution, and implement community-based safety monitoring mechanisms. The strength of the bottom-up approach lies in its high level of ownership. When communities actively participate in designing and implementing competency development processes, stronger collective commitment emerges toward service quality and destination sustainability. Active participation also reinforces social capital—such as trust and solidarity—which forms a critical foundation for community-based tourism.

Competence and the Principles of Sustainable Tourism

The competence of community-based water tourism guides is directly linked to the implementation of sustainable tourism principles. Sustainable tourism emphasizes the balance between economic, social, and environmental aspects as an integrated and interrelated whole. In this context, competence is understood not only as operational technical skills but also as a strategic capacity to maintain harmony between resource utilization and long-term conservation.

1. **Economic Dimension,** From an economic perspective, guides' competence contributes to improving service quality and visitor satisfaction, which ultimately impacts the sustainability of community income. Professionalism, interpretive ability, and communication skills strengthen the destination's image and enhance its competitiveness. When guides are able to provide safe, informative, and memorable tourism experiences, the potential for repeat visits and word-of-mouth promotion increases significantly.
2. **Social Dimension,** In the social dimension, guides' competence plays a role in maintaining social cohesion and preserving local cultural values. Guides who understand local norms, customs, and identity can function as mediators between tourists and the community. They not only convey information but also foster awareness regarding visiting ethics and respect for local wisdom.
3. **Environmental Dimension,** Within the context of water-based tourism, the environmental aspect becomes particularly crucial. Water-based activities depend heavily on the quality of ecosystems such as rivers, beaches, lakes, and coastal areas.

Guides' competence in understanding environmental carrying capacity, safety procedures, and environmentally friendly practices is a determining factor in ensuring destination sustainability.

The research findings indicate that the integration of economic, social, and environmental aspects in guiding practices does not occur automatically but rather through continuous learning and capacity-building processes. Fragmented competence—such as focusing solely on service delivery without ecological awareness—will result in unbalanced tourism practices. Therefore, competence development must be designed holistically by incorporating sustainability values into training curricula and community work culture. Community-based water tourism guides act not only as service providers but also as agents of sustainability who bridge economic, social, and environmental interests.

Table 4 Results of the researcher's interviews with research informants

No	Informant	Verbatim Quote	Initial Code (Open Coding)	Category	Theme
1	Komang Adi (Tour Guide)	"We often remind tourists not to litter."	Informal environmental education	Sustainability practice	Environment
2	David Tan (Tourist)	"I like it when guides explain the local culture, it helps me understand the place better."	Cultural interpretation by guides	Tourist experience	Socio-cultural
3	Putu Lestari (Tour Guide)	"Not all guides fully understand the correct cultural narratives."	Lack of cultural knowledge	Interpretation quality	Socio-cultural
4	Budi Santoso (Business Actor)	"Competent guides make tourists more satisfied and willing to return."	Competence impacts satisfaction	Economic value of human resources	Economy
5	Rina Marlina (Tourism Manager)	"We need regular training on safety, environment, and service."	Need for continuous training	Human resource development	Integration

Source: Primary data 2026

Competence as a Competitive Advantage of the Destination

From a tourism development perspective, a destination's competitive advantage is determined not only by the richness of its natural resources but also by the quality of the human resources managing them. The research findings indicate that the competence of community-based water tourism guides plays a significant role in shaping destination image, visitor experience quality, and long-term sustainability. Thus, competence can be positioned as a strategic asset that creates differentiation and competitiveness. Conceptually, destination competitiveness refers to the ability of a tourism area to attract and retain visitors through a combination of product quality, services, and the experiences offered. In the context of water-based tourism, the primary product indeed consists of water-related natural attractions. However, the overall tourist experience is strongly influenced by interactions with guides as representatives of the destination. Professionalism, hospitality, interpretive skills, and mastery of safety standards are key factors shaping perceptions of quality.

Technical and safety competence contributes to creating a sense of security and comfort, which are essential prerequisites in risk-based tourism activities such as water tourism. Destinations capable of ensuring safety through well-trained human resources will gain higher levels of trust among visitors. This trust becomes a reputational asset that is difficult for competing destinations to replicate. Moreover, communication and interpretive

competence provide added value to tourism products. Guides who can effectively explain ecological, cultural, and historical aspects in an engaging manner enrich the visitor experience. This experiential value differentiates community-based destinations from mass tourism models, which tend to be standardized and less personalized.

From a strategic standpoint, competence is also related to the ability to adapt to market dynamics. Changing tourist preferences—shifting toward authentic, responsible, and sustainable experiences—require responsive and innovative human resources. Guides with multidimensional competence are better equipped to adjust to these trends, ensuring that the destination remains competitive. Furthermore, in the context of community-based water tourism, the collective competence of the community serves as a distinctive competence. Solidarity, team coordination, and shared commitment to service standards form a socially embedded advantage that is difficult to replicate by investor-driven destinations. This advantage stems not only from individual capabilities but from the organizational capacity of the community as a whole.

Policy Implications and Development Strategies

The findings of this study affirm that strengthening the competence of community-based water tourism guides is not merely a technical issue, but a strategic agenda within tourism development policy. The multidimensional nature of competence—encompassing technical, safety, communication, social, and environmental aspects—indicates the need for a comprehensive and integrated policy approach in tourism human resource (HR) development. From a policy perspective, these findings align with the sustainable tourism development paradigm, which positions the quality of human resources as a primary pillar alongside destination attractions and infrastructure. In the national context, existing tourism HR development policies that emphasize certification and standardization need to be expanded to incorporate a community-based approach. This means that training programs should not only focus on meeting formal standards but also on strengthening local capacities in accordance with the social and ecological characteristics of water tourism destinations.

From the perspective of human resource development theory, the findings reinforce the view that competence is formed through a combination of formal education, structured training, and experiential learning. This study demonstrates that informal learning within the community significantly contributes to preparedness, team solidarity, and adaptation to environmental risks. Therefore, future development strategies should integrate top-down approaches (standardization and regulation) with bottom-up approaches (empowerment and participatory learning).

Moreover, the findings support community-based tourism theory, which emphasizes the importance of active community participation in destination management. Strengthening competence has been shown not only to improve service quality but also to enhance the bargaining position of communities within tourism governance structures. This is consistent with previous research indicating that community-based destinations with strong human resource capacity tend to be more resilient to market changes and external pressures.

Another strategic implication relates to the design of training curricula. Based on the research findings, competence development materials should include:

1. Safety standards and risk management in water tourism.
2. Communication and interpretation skills grounded in local wisdom.
3. Environmental sustainability literacy and ecosystem carrying capacity.
4. Strengthening community organizational capacity.

Such a strategy will reinforce the integration of economic, social, and environmental dimensions in practical implementation. In addition, multi-stakeholder collaboration among local governments, educational institutions, professional associations, and local communities is necessary to ensure the sustainability of human resource development programs. From a public policy perspective, the findings also highlight the importance of incentive schemes for communities that successfully improve their competency standards. Incentives may include promotional support, access to financing, and facilitation of certification. Responsive policies

of this kind not only encourage improvements in human resource quality but also create a healthy competitive ecosystem among destinations. Theoretically and empirically, this study strengthens the argument that human resource quality is a key determinant of the success of community-based destinations. Competence functions not only as an operational instrument but also as the foundation of governance, sustainability, and competitiveness. Therefore, future tourism development policies and strategies should prioritize competence strengthening in planning community-based water tourism destinations.

Conclusion

The study concludes that strengthening the competencies of human resources among community-based water tourism guides is a strategic foundation for achieving sustainable and competitive destination management. Guide competence is multidimensional, encompassing technical skills, safety and risk management, communication and service abilities, as well as social and cultural understanding, all of which collectively determine the quality of tourism operations. While field experience remains the primary asset, gaps in formal certification and standardization persist, making continuous training, mentoring, and experiential learning essential for enhancing professionalism, safety standards, and service quality. In high-risk water tourism contexts, safety competence is particularly critical for minimizing accidents and building visitor trust. Beyond operational benefits, competence development also empowers local communities by fostering participation, ownership, and environmental awareness, reinforcing their role as key actors in destination management. Furthermore, higher levels of guide competence are directly linked to improved destination competitiveness, as they enable the delivery of safe, high-quality, and authentic experiences that enhance visitor satisfaction and loyalty. Overall, this study highlights that human resource competence is not only a technical requirement but also a long-term investment in building tourism destinations that are safe, inclusive, sustainable, and capable of generating balanced economic, social, and environmental benefits.

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