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TRI HITA KARANA: THE KEY TO SUSTAINABLE TOURISM AND CONSERVATION AT GUNUNG KAWI TEMPLE IN GIANYAR REGENCY, BALI, INDONESIA

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Abstract: This study aims to develop and evaluate a strategic model for sustainable tourism grounded in the Balinese philosophy of Tri Hita Karana. Hita Karana is a strategy to maintain a balance between tourism and conservation. This study uses qualitative research methods. This study is located in Tampaksiring Village, Gianyar Regency, Bali. Informants include community leaders, managers of the Gunung Kawi Cliff Temple site, village officials, and visiting tourists. Data collection was conducted through interviews, observations, and documentation. Data analysis in this study used the interactive model of Miles and Huberman, which comprises three main steps: data reduction, data presentation, and conclusion drawing/verification. The CHGF model synchronises the government's role as an institutional anchor for spatial planning (Palemahan), the community's role as guardians of intrinsic cultural values (Pawongan), and the private sector's role as a catalyst for ethical innovation. This model does not eliminate the sanctity (Parahyangan) or structural integrity of the site. Therefore, this model is oriented toward high-value conservation to maintain a dynamic balance between 21st-century prosperity and 11th-century preservation. This study concludes that the sustainability of tourism at Pura Tebing Gunung Kawi fundamentally depends on the successful implementation of the Collaborative Heritage Governance Framework (CHGF), grounded in the Tri Hita Karana philosophy. The CHGF model explains that, in the modern era, preserving Pura Tebing Gunung Kawi requires integrating policies, market innovations, and social capital in line with Bali's characteristics.

Keywords: sustainable tourism, ecotourism, Tri Hita Karana, environmental conservation, sustainable development

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INTRODUCTION

Bali, the world's premier tourism destination, offers cultural and natural diversity. Therefore, there needs to be an interesting development with unique characteristics to enhance the value of Indonesia's tourist destinations (Sumarmi et al., 2023). Tourism offers significant potential for developing the ecosystem and the national economy (Rivza et al., 2022). The transition of Tebing Gunung Kawi Temple from a place of worship to a tourism sector can boost the economy, empower the community, preserve the ecology, and preserve local culture (Ciacci et al., 2023). Perubahan penggunaan lahan untuk pariwisata jika dikelola dengan baik akan memberikan dampak positif baik pada budaya, struktur sosial, ekonomi dan lingkungan. Keberhasilan pengembangan pariwisata sangat tergantung pada partisipasi masyarakat local, karena masih dipegang teguhnya nilai-nilai tradisional (Putra et al., 2021). It is known that destinations in Bali receive positive feedback from tourists (80.36%) due to their natural beauty (Ramadhani et al., 2024).

The development of tourist destinations in Gianyar, including Pure Tebing Gunung Kawi, is still in the planning stage due to constraints caused by the pandemic and the lack of a legal framework for spiritual tourism (Wirawan et al., 2023). Tebing Gunung Kawi Temple is a geological and spiritual heritage site, making it one of the most popular tourist destinations in Bali, where local residents earn a living through spiritual and nature-based tourism. According to Wang et al. (2014), geological diversity has a non-renewable heritage. Tourism in Bali, rooted in local traditions and temples, is nature-based spiritual tourism linked to local wisdom, including the community's religious lifestyle, religious rituals, and temple architecture (Wirawan et al., 2023). The development of geotrails that integrate cultural, geological, and biological diversity has proven to boost tourism through environmental conservation education and artistic preservation. Therefore, conservation is necessary to preserve culture and the environment, as they are interrelated (Lestari et al., 2025).

Gunung Kawi Cliff Temple tourism is located on the banks of the Pakerisan River. It requires a deep understanding of sustainable management, given the environmental impact of tourism development (Amerson & Parsons, 2018).

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The Balinese community has an environmental conservation strategy that integrates cultural values, ethics, and religious perspectives. Results of Mgbeadichie's research (2025), which found that the Uli tribe in Nigeria and the Chin community in Myanmar have a cultural heritage that is implemented in daily life, based on traditional knowledge and rituals, and that contributes to sustainable resource management and biodiversity conservation as a conservation policy. Cultural heritage conservation requires a balance of interdisciplinary methods, public participation, and a balance between tangible and intangible aspects, with the aim of sustainable development (Li & Tang, 2023; Mekonnen et al., 2022). Advances in sustainable conservation, marked by innovative monitoring technologies and materials, have made a significant contribution to cultural heritage preservation efforts (Di Turo & Medeghini, 2021; Pérez-Gandarillas et al., 2024).

Tri Hita Karana is a Balinese Hindu philosophy that explains harmony among three interrelated areas: God, humans, and the natural environment. This philosophical principle encourages responsible environmental management, social cohesion, and sustainable development by emphasising spiritual, social, and ecological relationships (Hisyam et al., 2024; Mildawani et al., 2024a). Various aspects of life in Bali uphold this philosophy, including religious activities, cooperation, urban planning, environmental management, tourism development, and cultural heritage preservation (Ardani et al., 2025; Mildawani et al., 2024a; Suryono, 2021). This philosophy encourages the government, the private sector, and the community to achieve sustainable tourism. Its implementation takes the form of land management in Bali, preservation of cultural heritage, use of natural resources, and legal practices (Kiriana et al., 2025; Wiryawan, 2024). Through synergy between government policy, local wisdom practices such as irrigation and vegetation management, and visitor education programmes, Pura Tebing Gunung Kawi aims to balance 21st-century economic prosperity with the protection of local wisdom for future generations (Jawabreh et al., 2024).

Research on conservation and sustainable tourism at Gunung Kawi Cliff Temple remains limited, highlighting several challenges and gaps. This is because the relationship between land use and cultural and natural values has not been thoroughly researched. Research on the relationship between spirituality, local customs, and nature remains very limited, for example, Tri Hita Karana, which influences conservation and natural resource management in Bali (Rosalina et al., 2023). In addition, literature reviews on sustainable tourism remain incomplete due to insufficient exploration of resilience, multi-stakeholder cooperation, and localization challenges (Zhang et al., 2022). The lack of exploration into the impact of environmentally friendly behaviour by tourists, mediated by cultural ties, at Gunung Kawi Cliff Temple, results in a lack of understanding of sustainable visitor practices (Cheng & Chen, 2022). Furthermore, other studies have also overlooked governance and socio-political complexities, including unequal participation by government and communities, which affect environmental conservation and cultural heritage (Lawasi et al., 2025). Research on the impact of conservation and biodiversity outcomes on tourism in Mount Kawi remains limited, underscoring the need for further empirical and interdisciplinary studies to sustain cultural preservation and sustainable tourism development (Kiriana et al., 2025).

Tourism facilities are often constructed without regard for environmental impact, disrupting ecosystems (Sutrisno et al., 2024). In addition, it causes gradual degradation of natural capital and the environment, including environmental pollution, changes in land use, and increased waste, thereby threatening the balance of biodiversity and ecosystems (Baloch et al., 2023). The gap between government policy and stakeholder cooperation in balancing tourism development with environmental conservation results in socio-environmental vulnerability (Javan et al., 2023). The limited empirical research on the environmental impact of infrastructure development thereby hinders evidence-based decision-making aimed at reducing negative consequences (Murphy & HUallacháin, 2025). The absence of comprehensive ecological assessments and facility monitoring will hinder sustainable management (Gavrilaș et al., 2025). Overall, the problem lies in policy enforcement, inadequate planning, and an interdisciplinary approach that emphasises the need to develop facilities to support economic growth without damaging the ecosystem. If sustainable tourism is not implemented, it will lead to a decline in tourist satisfaction. Therefore, sustainable tourism management can address environmental impacts through conservation, ensuring tourists are always satisfied with the natural and cultural conditions (Bentz et al., 2016). There is a gap in understanding and implementing the Tri Hita Karana concept, leading to an imbalance among ancestors, humans, and nature, which, in turn, impacts the environment and society. In addition, the lack of strong collaboration between the government, community, and private sector hinders effective, sustainable tourism.

The urgency of this research lies in the lack of consideration of ecological aspects in sustainable tourism management practices, which has resulted in an imbalance between cultural heritage and the environment. This study offers a new approach: integrating Tri Hita Karana into environmental conservation and sustainable tourism management, supported by multi-stakeholder collaboration, such as the pentahelix framework. The objective of this study is to utilise Tri Hita Karana as a strategy to maintain a balance between tourism development and environmental preservation, and to promote sustainable and responsible tourism. The application of this philosophy encourages ecological innovation and green human resource management in Bali's tourism sector, thereby contributing to long-term environmental and cultural sustainability. Broadly speaking, this study addresses the gap in systematically applying traditional Balinese wisdom to modern tourism challenges, aiming to harmonise economic growth with culture and ecological conservation.

Although various studies have examined the relationship between local wisdom, collaborative governance, and sustainable tourism development, there remain conceptual and empirical gaps in the existing literature. Previous studies have shown that the Tri Hita Karana philosophy plays a significant role in fostering harmony between humans and God (parahyangan), fellow humans (pawongan), and the environment (palemahan), and can serve as a source of legitimacy in the practice of international relations at the subnational level. However, such research remains largely descriptive and normative, and has yet to provide a comprehensive empirical analysis of the concrete implementation of these values in the management of tourist destinations (Intentilia & Utomo, 2025). Other research on forest-based ecotourism in Indonesia

indicates that sustainable tourism can contribute to environmental conservation and improved well-being among local communities. However, its implementation still faces various challenges, particularly regarding collaborative governance, conflicts of interest, and infrastructure disparities (Apriyanto et al., 2025). Furthermore, studies on the values of Balinese local wisdom, such as Tat Twam Asi and Menyama-Braya, indicate that the involvement of local communities is a key factor in the development of culture-based tourism; however, as these studies are limited to a single religious tourist destination, the generalisability of the findings to the broader context of tourism in Bali remains limited (Mulyana, 2025). Meanwhile, research on the governance of cultural heritage tourism through a collaborative governance approach in the Majapahit House Heritage Area indicates that collaboration among stakeholders can enhance tourism resilience; however, most of this research has not yet integrated the values of local wisdom as a key conceptual framework within models of sustainable tourism governance, nor has it comprehensively examined the relationship between environmental conservation, spiritual values, and tourism development within a single integrated strategic framework (Basyar et al., 2025). Therefore, this study aims to address this gap by developing a model for sustainable tourism and conservation strategies based on the Tri Hita Karana philosophy, applied to the Pura Tebing Gunung Kawi area in Tampaksiring, through a robust collaborative governance approach that integrates the roles of the government, local communities, and the private sector in maintaining a balance between cultural preservation, environmental protection, and the development of sustainable tourism.

This study aims to develop and evaluate a model for sustainable tourism and cultural heritage conservation in the Pura Tebing Gunung Kawi area, located in Tampaksiring, Bali, by integrating the local philosophy of Tri Hita Karana as the primary conceptual framework. Specifically, this study aims to analyse the interrelationships among spiritual values, community participation, and environmental management in tourism practices within this cultural heritage site, and to evaluate the roles of multi-stakeholder actors, including the government, local communities, and the private sector, in establishing sustainable collaborative governance. Furthermore, this study also aims to formulate the Collaborative Heritage Governance Framework (CHGF) as a strategic model capable of balancing the needs of environmental conservation and the preservation of cultural values with the demands of modern tourism development. As such, this study is expected to make a theoretical contribution to the literature on sustainable heritage tourism and to offer a practical framework for the management of cultural heritage sites grounded in local wisdom and multi-stakeholder collaboration.

MATERIALS AND METHODS

This study uses qualitative methods to explore complex social phenomena through in-depth, human-centred insights. (Denny & Weckesser, 2022). The research location is in Tampaksiring Village, Gianyar Regency, Bali. Gianyar Regency is located in Bali Province, between 08°18'48" – 08°38'58" South Latitude and 115°13'29" – 115°22'23" East Longitude (Figure 1).

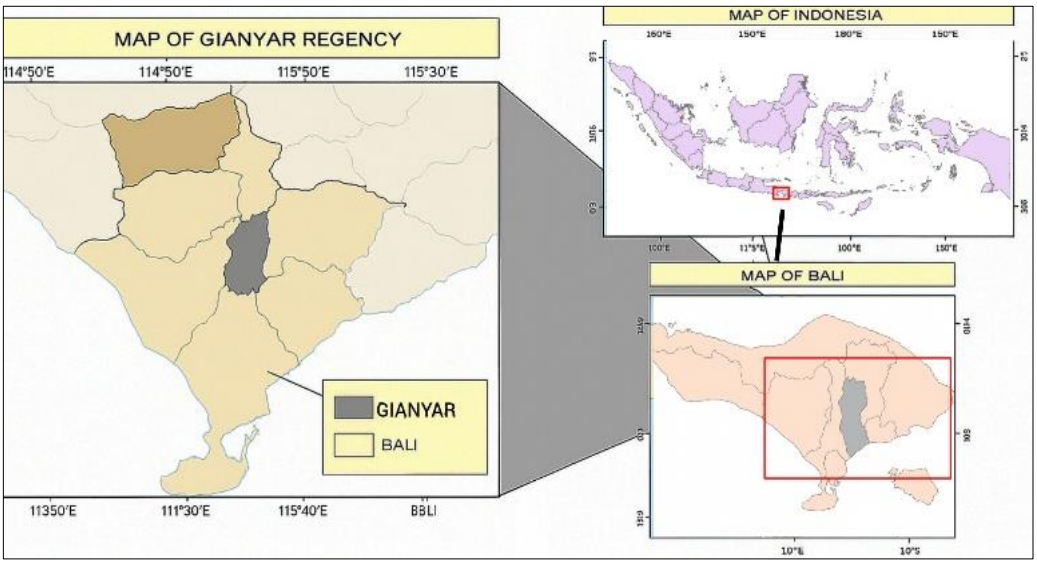

Figure 1. Research Location, Gianyar, Bali

The data sources in this study were primary and secondary data. Primary data were collected through in-depth interviews with key informants who had direct relationships with the research subjects, including community leaders, managers of the Gunung Kawi Cliff Temple site, village officials, and visiting tourists. Sampling was purposive, aimed at selecting informants with relevant experience (Mustadi et al., 2024). The characteristics and demographic information of the key informants are presented in Table 1.

Table 1. Informant Data

informant	informant's name
Tourism Manager	I Ketut Nuarke (75 years old)
Community Member	Mr. Rana (68 years old), Dadong (65 years old), Ajik Teguh (59 years old)
Tourist	Carlos (34 years old), Kyein (31 years old), Carla (28 years old)

These informants provided contextual insights into cultural values, community participation, and the opportunities and challenges of sustainable tourism development in the Gunung Kawi Temple area. Secondary data in this study include various relevant documents and archives, such as historical records of temples, cultural preservation policy documents, regional tourism reports, previous research results, scientific articles, and books and publications related to cultural heritage and sustainable tourism management, to strengthen written information. Observations through direct observation (da Costa et al., 2024) on the physical condition of the temple in geological terms and on tourism activities in both social and economic terms. To maintain the validity and legitimacy of the data, this study uses data triangulation techniques. The triangulation used involves combining diverse data sources to improve the validity and authenticity of the data through cross-verification, thereby obtaining unbiased data (Schlunegger et al., 2024). Data derived from interviews, observations, and documentation were combined to provide a more comprehensive understanding of the phenomenon under study (Papavasileiou & Dimou, 2025). Through this triangulation approach, the reliability of the data obtained is expected to increase, enabling a more comprehensive description of reality. The data, derived from interviews, observations, and documents, were analysed using Miles and Huberman's interactive model, which consists of three main steps: data reduction, data presentation, and conclusion drawing/verification. The stages of data analysis based on the Miles and Huberman interactive model are presented in Table 2. Data reduction is achieved through selection, simplification, focusing, and transformation, aiming to make data easier to manage and more meaningful.

Data presentation is achieved by organising and displaying data in an easily understandable manner, using tables, graphs, and narratives. The final step is to draw conclusions and verify them through data interpretation to identify patterns, while continuously checking for consistency and validity (Mustadi et al., 2024; Papavasileiou & Dimou, 2025).

Table 2. Data analysis from the Miles and Huberman model

Analysis Stage	Description
Data Reduction	Sort, simplify, and select data relevant to the research focus.
Data Presentation	Organise data in the form of descriptive narratives, interview excerpts, and thematic tables.
Conclusion Drawing	Interpret data, find patterns, and draw verifiable conclusions.

RESULTS AND DISCUSSION

Tebing Gunung Kawi Temple is a historical site believed to have been built in the 11th century, during the reign of King Udayana of the Warmadewa Dynasty. Located on the banks of the Pakerisan River, this temple consists of 10 buildings carved directly into the rock cliffs. The spatial distribution of the Gunung Kawi Temple complex and the location of the temple monuments carved into the northern and southern cliff faces are illustrated in Figure 2.

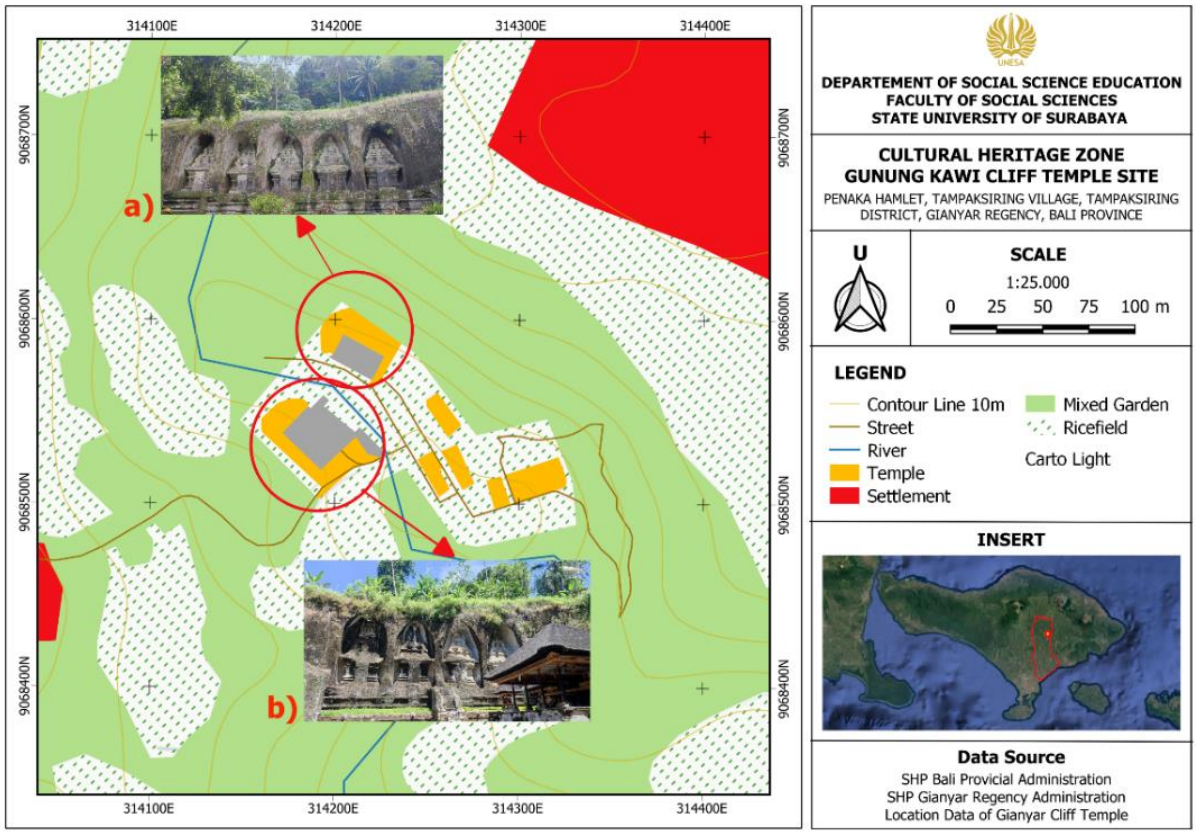

Figure 2. Spatial distribution of the cultural heritage site of Pura Tebing Gunung Kawi, Tampaksiring a) Temple monuments carved into the northern cliff face of the temple complex; b) Temple structures carved into the cliff face located in the southern part of the temple courtyard (Source: GIS data from the Provincial Government of Bali and the Regency Government of Gianyar; field photographs taken by the authors)

The photographs were taken during a field survey on 29 April 2025 in Tampaksiring Village, Tampaksiring Sub-district, Gianyar Regency, Bali Province, Indonesia. The Gunung Kawi Cliff Temple site offers a unique integration of human engineering and significant geological features. Based on field documentation, the temple structure was built on volcanic rock formations formed by ancient magmatic activity on Mount Batur. Stratigraphically, the rocks are arranged in layers following the principle of Lateral Continuity, which provides natural structural stability for the ten monuments carved directly into the cliff walls. Although these volcanic materials have high density and strong physical resistance, their intrinsic rock characteristics indicate they are particularly vulnerable to biochemical and physical weathering processes. The volcanic rock structure of Mount Batur is characterised by complex subsurface features, including shallow and deep magma chambers, as revealed in magnetic and gravity modelling studies on the island of Bali. These models also indicate the presence of intrusive rocks between Mount Agung and Mount Batur, as well as volcanic deposits covering the graben structure to a depth of 6 km, reflecting the eastward migration of volcanic activity (Suryanata et al., 2024).

The degradation of volcanic rock at sites such as Gunung Kawi Cliff Temple is influenced by environmental factors, including humidity, which can accelerate weathering and surface damage, posing challenges for conservation efforts. Although specific studies on rock degradation at Gunung Kawi Cliff Temple are limited, volcanic rock weathering is generally known to be influenced by humidity, temperature fluctuations, and biological activity, which can weaken rock structure over time. Understanding volcanic processes and the properties of volcanic rocks, as seen in eruptions such as Mount Batur, is essential for assessing the long-term stability and conservation needs of cultural heritage sites built on or near volcanic material. Integrating geological insights with environmental monitoring can help develop strategies to reduce the risk of degradation at significant historical sites (Malawani et al., 2021).

The main challenge in conserving this site is the degradation of materials caused by microclimatic factors, particularly high humidity and intense rainfall in the Pakerisan River area. Analysis shows that water infiltration into rock pores and cliff cracks accelerates the weathering process of the temple structure. This condition is exacerbated by biological threats, such as taproot tree growth, which can penetrate rock crevices, thereby increasing the risk of more extensive structural fractures.

As an environmental mitigation measure, the local community has implemented preventive local wisdom practices. This strategy includes modifying land use, such as converting Rice fields into dry plantations at the top of the cliff to minimise groundwater seepage towards the temple. In addition, community regulations prohibit the planting of vegetation with deep root systems in the cliff area to protect the integrity of the rock. These findings confirm that the sustainability of the Gunung Kawi Cliff Temple is highly dependent on the synergy between natural geological resilience and community-based conservation interventions. Although naturally solid, these rocks are susceptible to weathering due to high rainfall and humidity. Local communities apply ecological wisdom (the Palemahan aspect) by converting Rice fields into dry plantations to reduce water absorption, which accelerates rock weathering.

In addition, a strict ban on planting trees with taproots is enforced to prevent damage to the cliff structure through rock fractures. The involvement of local communities in participatory management is a key pillar of sustainability. The community plays an active role as guides, artisans, and guardians of tradition, preserving cultural values and improving local economic welfare. Spiritually, this site is maintained as a sacred place through the performance of regular rituals and unwritten rules that prohibit the destruction of reliefs, reflecting a commitment to Parahyangan values. The conservation rules and practices implemented at Gunung Kawi Temple to support the preservation of its cultural heritage and sustainable tourism are summarized in Table 3. The location of Gunung Kawi Cliff Temple, situated atop volcanic rock formed by ancient eruptions of Mount Batur, provides a naturally solid foundation due to the rock layers' lateral continuity. However, its position in the valley along the Pakerisan River makes the site vulnerable to high humidity and erosion, common challenges for volcanic structures in similar environments. Studies of volcanic landforms show that erosion processes develop over time, with the development of river basins and fluvial activity playing a key role in shaping volcanic rock surfaces and contributing to degradation. High humidity in river valleys can accelerate the weathering and erosion of volcanic rocks, potentially threatening the structural integrity of cliff temples carved directly into the rock.

Table 3. Conservation Rules and Practices

Conservation Rules and Practices Stage	Description
Natural Mitigation	Prohibiting the planting of trees to prevent roots from damaging the cliff structure.
Water Management	Converting Rice fields into dry plantations to reduce water absorption, which accelerates rock weathering.
Modern Technology	Regular evaluation and modern conservation by the Bali Cultural Heritage Conservation Centre are required to maintain the temple structure.
Visitor Control	Implementing a reservation system and limiting visitor numbers to reduce the impact of physical damage.

Understanding the geomorphological and hydrological dynamics of volcanic landscapes is essential for developing conservation strategies that reduce erosion and preserve such cultural heritage sites. Although specific erosion assessments for Mount Kawi are limited, insights from volcanic-erosion studies highlight the importance of monitoring drainage patterns and environmental conditions to protect these significant cultural structures.

The environmental conditions at the Gunung Kawi temple site are vulnerable to degradation from uncontrolled human activities, erosion, and infrastructure development that often disregard ecological balance. Modern conservation efforts emphasise the importance of regular environmental assessments and strict spatial planning to prevent damage to the site's authenticity and ecological harmony (Németh et al., 2021). Research on heritage sites in mountains and cliffs shows that environmental factors, such as humidity, erosion, and land-use changes, significantly affect the preservation

of cultural sites, requiring careful management to maintain sustainability (Saha et al., 2021; Yan et al., 2025). The study also shows that tourism pressure can exacerbate sites' vulnerability through increased foot traffic and inadequate visitor management, highlighting the importance of community involvement and awareness in conservation strategies (Flyen et al., 2023). In addition, salt weathering in humid conditions can accelerate the deterioration of stone heritage, suggesting that microclimate factors should be considered in conservation plans (Despotovic & Hauser, 2025). Overall, integrating environmental monitoring, sustainable tourism practices, and spatial controls is critical to maintaining the ecological and cultural integrity of the Kawi Temple site. The implementation of the Tri Hita Karana philosophy in supporting sustainable tourism and cultural heritage conservation at Gunung Kawi Temple is summarized in Table 4.

Table 4. Tri Hita Karana in Tourism & Conservation

Tri Hita Karana in Tourism & Conservation	Description
Parahyangan	Preserving the temple's function as a place of worship and sacred site through rituals that honour its spiritual values.
Pawongan	Involving the community as guides, artisans, and guardians of tradition to raise awareness of historical preservation.
Palemahan	Emphasising the harmony between natural forces (volcanic rock) and the environment surrounding the Pakerisan River.

Discussions on Tri Hita Karana in tourism and conservation emphasise its role in fostering harmony between spiritual, social, and environmental dimensions. The spiritual aspect (Parahyangan) involves preserving temples as sacred sites through ceremonies that honour their spiritual significance, ensuring cultural and religious continuity. The social aspect (Pawongan) highlights community involvement as guides, artisans, and guardians of tradition, thereby raising awareness and supporting historical preservation. The environmental aspect (Palemahan) focuses on maintaining harmony between natural elements, such as volcanic rock and the Pakerisan River ecosystem, and promoting sustainable interaction with the environment. Studies show that applying Tri Hita Karana in tourism management enhances sustainable development by integrating government roles, community empowerment, green marketing, and corporate social responsibility, leading to more responsible and inclusive tourism practices (Widhiasthini et al., 2025). Based on the findings of this study, an integrated strategy for sustainable tourism and cultural heritage conservation at Gunung Kawi Cliff Temple, Bali, is presented in Figure 3. This philosophy also underpins environmentally friendly innovations in Bali's tourism sector by balancing cultural values with environmental conservation. The concept of Palemahan in the Tri Hita Karana philosophy emphasises harmony between humans and the natural environment, promoting ecological balance as a key aspect of overall well-being. This principle encourages sustainable environmental practices rooted in local wisdom, such as converting terraced Rice fields on cliffs into dry plantations to reduce water seepage that can accelerate rock weathering, and prohibiting the planting of deep-rooted trees near cliffs to prevent root damage to rock structures (Astuti et al., 2021; Mildawani et al., 2024b). To achieve this strategy, multi-stakeholder synergy is required in cultural heritage governance: integration of government, community, and private sector.

Figure 3. Sustainable Tourism and Conservation Strategy at Gunung Kawi Cliff Temple, Bali

The sustainability of the Gunung Kawi Cliff Temple site depends heavily on a robust collaborative governance model that integrates the roles of the government, local communities, and the private sector. This synergy ensures that the historical integrity of the site is maintained while socio-economic growth can continue to be stimulated. The integration of the roles of the government, local communities, and the private sector in supporting sustainable tourism management and cultural heritage conservation at Gunung Kawi Cliff Temple is presented in Table 5.

Table 5. Integration of Government, People (Community), and Private Sector

Tri Hita Karana in Tourism & Conservation	Description
Government	Strengthening cultural heritage zoning policies, spatial planning regulations, and infrastructure development control in cultural heritage areas
Community	Serving as a key pillar in community-based tourism that supports local welfare without compromising historical values
Private Sector	Engaging in the development of sustainable tourism and creative industries that support Bali's cultural identity

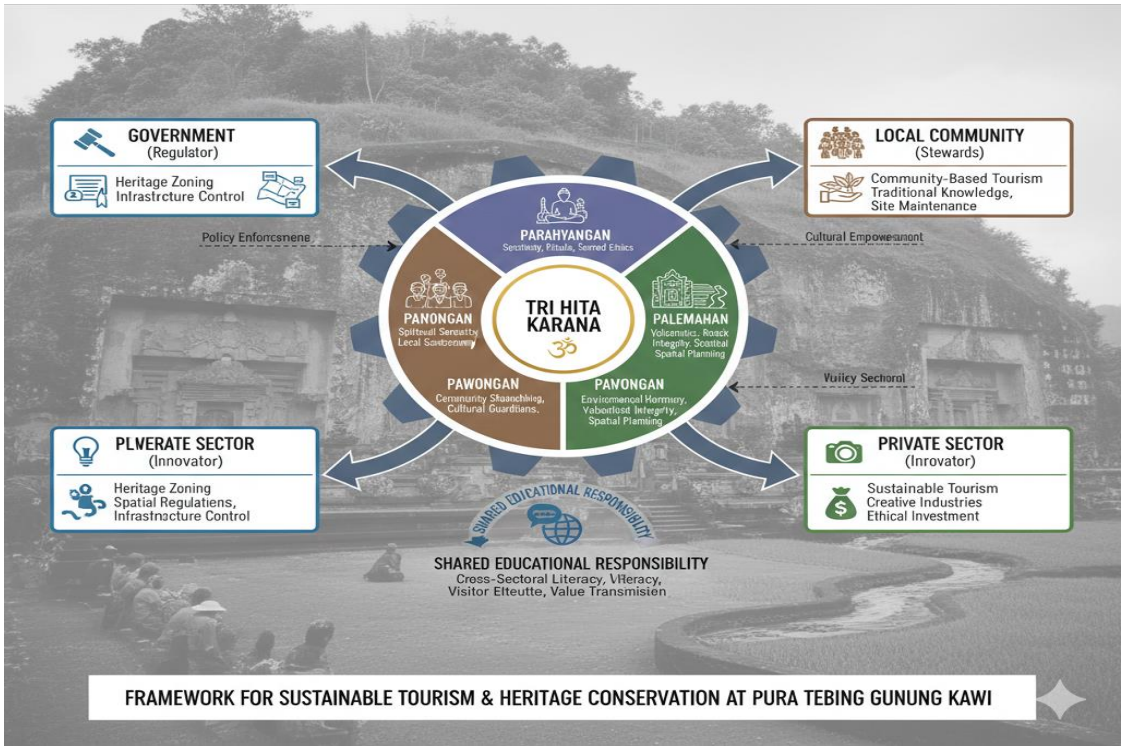

Figure 4. Cooperative Heritage Governance (CHG) Framework: Pura Tebing Gunung Kawi, Bali) (Source: The authors' conceptualisation based on field observations, interviews with stakeholders, and a review of the literature)

Based on the findings of this study, the proposed Cooperative Heritage Governance (CHG) Framework for Pura Tebing Gunung Kawi, Bali, is presented in Figure 4. The author is responsible for the conceptualisation, development of methodology, field research, data analysis, visualisation, and manuscript writing, including the conceptualisation and initial design of the Governance Framework. Cooperative Heritage Governance (CHG), as outlined in this study, explains the integration of cultural values, environmental conservation, and collaborative tourism governance at Pura Tebing Gunung Kawi, Bali, based on the philosophical principles of Tri Hita Karana. This research contributes to the study of sustainable cultural heritage tourism by proposing a Collaborative Cultural Heritage Governance Framework that integrates local philosophical values with stakeholder-based governance mechanisms. This framework demonstrates how the principles of Tri Hita Karana can be implemented as a practical governance model to balance cultural heritage conservation, environmental sustainability, and tourism development. The role of the government is to establish a regulatory and spatial control framework. The government acts as the primary regulator, focusing on strengthening cultural heritage zoning policies. This includes implementing strict spatial regulations and strategic control over infrastructure development within and around protected cultural heritage sites. By establishing clear legal boundaries, the government mitigates the risks of excessive commercialisation and unauthorised land-use changes that could threaten the site's authenticity.

This top-down institutional support is essential for maintaining physical and environmental stability in the Pakerisan Watershed Area (Wang et al., 2023). The Community as the Main Pillar of Community-Based Tourism (CBT): At the grassroots level, local communities are the central pillar of sustainable tourism. Through the Community-Based Tourism (CBT) model, residents are not merely passive spectators but active participants who serve as cultural guides, artisans, and guardians of tradition. This participatory approach ensures that income from the tourism sector contributes directly to local welfare without compromising the site's historical and spiritual values (Lajçi et al., 2022).

The community's proximity to this site creates a layer of organic protection, as their livelihoods are closely intertwined with the preservation of this cultural heritage, the Private Sector as Sustainable Development, and the Creative Industry. The private sector contributes to this ecosystem by developing sustainable tourism products and promoting creative industries that align with Bali's cultural identity. Instead of pursuing a mass tourism model, private entities are encouraged to invest in high-value, low-impact tourism experiences that respect the site's carrying capacity. This collaboration stimulates local entrepreneurship and increases Mount Kawi's global visibility by marketing ethical cultural experiences (Raihan, 2024) educational Synergy as Cross-Sector Literacy. A critical component of this integration is the creation of educational synergy across all sectors. Collaborative initiatives are designed to improve visitors' understanding of local ethics, religious values, and the temple's historical significance. By educating tourists about etiquette at sacred sites, stakeholders collectively reduce the risk of cultural desecration and physical degradation. This integrated management strategy demonstrates that preserving 11th-century monuments in the 21st century requires a careful balance between strict regulation, communal ownership, and ethical private investment (Mihardja et al., 2023).

Preserving Tebing Gunung Kawi Temple in the 21st century requires shifting from conventional site management to a Collaborative Heritage Governance framework. This model integrates the unique strengths of the government, local communities, and the private sector into a cohesive ecosystem that balances economic aspirations with conservation

imperatives. The government serves as a vital institutional anchor, enforcing strict cultural heritage zoning policies and spatial regulations designed to mitigate the risks of anthropogenic degradation and uncontrolled infrastructure encroachment within the Pakerisan Watershed Area. This regulatory framework is essential to preserving the structural integrity of the 11th-century volcanic stone temple from environmental and modern land-use pressures. By establishing a clear legal mandate, the state ensures that the historical authenticity of the site remains protected from the detrimental effects of unregulated commercial expansion (Fairbrass et al., 2024).

Complementing this top-down governance, local communities serve as the primary guardians of the site's intrinsic value, spearheading community-based tourism initiatives that align socio-economic well-being with the preservation of tangible and intangible cultural heritage. By positioning residents as active managers rather than passive participants, this model fosters a deep sense of ownership, ensuring that traditional rituals and spiritual functions continue to animate these physical monuments (Chiarini et al., 2022). Simultaneously, the private sector acts as a catalyst for sustainable innovation, shifting the tourism paradigm from mass consumption to a high-value, low-impact creative industry that respects Bali's cultural identity. This tripartite integration is ultimately realised through a nexus of shared educational responsibility, in which cross-sector collaboration transforms visitor behaviour. By synchronising government historical archives, communal traditional knowledge, and private sector communication platforms, a comprehensive framework is formed to make tourists aware of the ecological fragility and sanctity of the site, ensuring that 21st-century economic prosperity and the conservation of ancient architectural treasures coexist in a state of dynamic equilibrium (Ruban et al., 2023; Demkova et al., 2022).

CONCLUSION

This study concludes that the sustainability of tourism at Pura Tebing Gunung Kawi fundamentally depends on the successful implementation of the Collaborative Heritage Governance Framework (CHGF), grounded in the Tri Hita Karana philosophy. The CHGF model explains that, in the modern era, preserving Pura Tebing Gunung Kawi requires integrating policies, market innovations, and social capital in line with Bali's characteristics.

The government, as the palemahan aspect, has strict zoning policies to protect the structural integrity of volcanic rocks from the threat of anthropogenic degradation and infrastructure encroachment in the Pakerisan River Basin. The community, as the pawongan aspect, has the strength of the site's intrinsic values. The community also actively participates in governance, ensuring that economic growth does not neglect the principles of preventive conservation.

Private sector involvement as a catalyst for the creative industry within the CHGF framework also strengthens destinations' competitiveness without exceeding environmental carrying capacity, thereby creating an ethical, non-exploitative tourism ecosystem. Ultimately, CHGF serves as an instrument for preserving the Parahyangan dimension, ensuring that spiritual sanctity remains at the core of all activities at this site. This tripartite synergy offers a solution to the dichotomy between current economic needs and the need to conserve the past. By integrating local values into modern governance policies, this model ensures the achievement of a sustainable dynamic balance. These findings make a significant theoretical contribution to global cultural heritage management, affirming that multi-stakeholder collaboration grounded in local wisdom is key to addressing future challenges in preserving world heritage sites.

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Glossary: CBT (Community-Based Tourism); CHG (Cooperative Heritage Governance); CHGF (Collaborative Heritage Governance Framework); GIS (Geographic Information System)

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