Determinants of resilience-building strategy endorsement in Zambia's tourism industry: Stakeholder evidence and policy implications

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ABSTRACT

The transition from reactive crisis response to proactive resilience-building represents a paradigmatic shift in tourism sector crisis management. This paper investigates stakeholder endorsement of resilience-building strategies in Zambia's tourism industry, examining which strategies attract strongest support, what drives variation in endorsement levels, and how the resulting profile of stakeholder-validated interventions informs evidence-based crisis management model design. The theoretical foundation for this study integrates resilience theory with sustainable tourism development principles to provide a framework for understanding both the nature of tourism resilience and the strategies most likely to build it effectively. Using a convergent parallel mixed-methods design, 137 stakeholders were selected through stratified purposive sampling from five categories — government institutions, private sector tourism operators, community-based organisations (CBOs), non-governmental organisations (NGOs), and tourists — across Livingstone, Lusaka, South Luangwa National Park, and Kafue National Park. The study finds that the composite resilience-building strategy endorsement mean of 3.97 out of 5.0 ($t = 26.85$, $p < 0.001$) is the strongest positive finding across all four constructs measured. Environmental conservation leadership (M = 4.32) and multi-stakeholder collaboration (M = 4.21) attract highest endorsement, followed by gender and youth inclusion (M = 4.08), digital technology integration (M = 3.96), community-based tourism empowerment (M = 3.88), renewable energy investment (M = 3.85), training and capacity development (M = 3.74), and financial resilience mechanisms (M = 3.72). Tourist sustainability preferences confirm strong demand-side alignment, with 84% preferring destinations that support local communities during crisis recovery and 79% preferring destinations with documented environmental protection commitments. The 0.99-point gap between resilience endorsement (M = 3.97) and preparedness reality (M = 2.98) precisely quantifies the implementation deficit that a structured crisis management model must address. The study proposes the Zambia Crisis Management and Resilience Model (Z-CMRM) as a multi-phase framework for converting stakeholder-validated resilience endorsement into operational preparedness capacity. This study concludes that Zambia's tourism stakeholders not only recognise the need for resilience investment but strongly and significantly endorse specific resilience-building strategies that would, if implemented, substantially improve the sector's crisis management capacity. This study recommends that the Ministry of Tourism and Arts should formally adopt environmental conservation leadership and multi-stakeholder collaboration as the two priority pillars of the National Tourism Resilience Strategy, reflecting their highest endorsement levels and their cross-cutting impact on other resilience dimensions.

Keywords: Community-Based Tourism, Crisis Management, Renewable Energy, Resilience Building, Tourism Sustainability, Zambia

I. INTRODUCTION

The concept of resilience has undergone a significant evolution in the tourism literature over the past two decades. Early crisis management frameworks conceptualised resilience primarily as the capacity to recover from disruption — a reactive, post-crisis characteristic of destinations and enterprises that had successfully navigated crisis events (Faulkner, 2001). This recovery-oriented conceptualisation has been progressively challenged and expanded by resilience theory scholarship that reconceptualises resilience as a proactive, systemic capacity that is built before crisis events occur and that determines whether and how quickly recovery is possible when disruptions materialise (Holling, 1973; Folke et al., 2010; Walker et al., 2004).

This proactive conceptualisation of resilience has profound implications for tourism crisis management policy and practice. If resilience is a capacity built over time through deliberate investment, institutional development, and stakeholder collaboration rather than a characteristic that emerges spontaneously in response to crisis, then the primary policy challenge shifts from improving crisis response to building the enabling conditions for resilience before crises

occur. This shift requires identifying which resilience-building strategies are most effective, which have the strongest stakeholder support, and which are most applicable to the specific vulnerabilities and capacities of Zambia's tourism landscape.

The study addresses this challenge by investigating stakeholder endorsement of eight primary resilience-building strategy categories in Zambia's tourism industry: environmental conservation, multi-stakeholder collaboration, renewable energy investment, digital technology integration, community-based tourism empowerment, gender and youth inclusion, training and capacity development, and financial resilience mechanisms. The endorsement profile generated through this investigation constitutes what this study terms the stakeholder-validated mandate for resilience investment — the evidence-based foundation for prioritising and sequencing resilience-building interventions within a structured crisis management framework.

The study's contribution extends beyond the measurement of endorsement levels to the analysis of the implementation deficit — the gap between what stakeholders endorse as necessary resilience investments and what current preparedness levels reveal has actually been implemented. This endorsement-implementation gap, quantified at 0.99 points in this study (endorsement M = 3.97 versus preparedness M = 2.98), represents the primary challenge for tourism crisis management policy in Zambia: translating widely endorsed principles into operational reality across a fragmented and resource-constrained sector.

1.1 Statement of the Problem

Despite near-universal stakeholder awareness of crisis risks and strong endorsement of resilience-building strategies in principle, Zambia's tourism industry has failed to systematically implement resilience investments at scale. The endorsement–implementation gap documented in this study confirms that the sector's challenge is not a motivational deficit — stakeholders both understand the need for resilience investment and endorse the strategies required — but an institutional implementation deficit: the absence of the governance frameworks, financing mechanisms, technical capacity, and coordination structures necessary to convert broadly endorsed principles into sector-wide operational readiness.

1.2 Research Objectives

i. Measure stakeholder endorsement of eight primary resilience-building strategy categories and identify the strategy profile attracting strongest support;
ii. Analyse demand-side (tourist) sustainability preferences and their alignment with supply-side resilience endorsement;
iii. Investigate the qualitative themes that explain stakeholder endorsement of specific resilience strategies;
iv. quantify the endorsement–implementation gap and analyse its implications for crisis management model design;
v. Propose an evidence-based framework for converting stakeholder-validated resilience endorsement into operational preparedness capacity.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Resilience Theory and Sustainable Tourism Development

The theoretical foundation for this study integrates Resilience Theory with Sustainable Tourism Development principles to provide a framework for understanding both the nature of tourism resilience and the strategies most likely to build it effectively. Resilience Theory, drawing on Holling's (1973) foundational ecological resilience framework and its extension to socio-economic systems by Folke et al. (2010) and Walker et al. (2004), identifies three primary resilience capacities: absorptive capacity — the ability to withstand shocks without losing core function; adaptive capacity — the ability to adjust and reorganise in response to change; and transformative capacity — the ability to create fundamentally new systems when existing ones become untenable. These three capacities correspond to different time horizons and institutional investment requirements.

Sustainable Tourism Development theory, as articulated by Bramwell et al. (2017) and the UNWTO's sustainable tourism framework, establishes that tourism resilience must be understood in terms of three interconnected sustainability dimensions: environmental sustainability (the long-term health of the natural ecosystems on which tourism depends), economic sustainability (the long-term financial viability of tourism enterprises and destination economies), and social sustainability (the equitable distribution of tourism benefits and the maintenance of community wellbeing and cultural integrity).

2.2 Conceptual Review

2.2.2 Environmental Conservation as a Resilience Foundation

Tourism destinations whose competitive advantage is grounded in natural and environmental resources face a particular class of resilience challenge: the deterioration of the natural resource base that attracts tourism is itself a crisis risk. In Zambia's context, Victoria Falls, South Luangwa National Park, Kafue National Park, and the Zambezi River system are the primary attractions driving international tourist arrivals and revenue generation. The 2018–2019 drought that reduced Victoria Falls water levels to historically low levels, severely damaging destination image and visitor arrivals, demonstrated concretely that deterioration of natural features is a direct crisis risk for tourism revenue. Conservation investments that build the health and resilience of natural ecosystems are therefore simultaneously environmental and economic resilience investments (Saarinen et al., 2022; Becken & McLennan, 2017).

2.2.3 Multi-Stakeholder Collaboration and Public–Private Partnerships

The tourism crisis management literature consistently identifies multi-stakeholder collaboration as among the most critical resilience-building mechanisms, because tourism crises by their nature affect multiple actors simultaneously and require coordinated responses that no single actor can provide independently (Ritchie & Jiang, 2019; World Travel & Tourism Council [WTTC], 2019). Public–private partnerships (PPPs) represent a particularly important collaboration mechanism for tourism resilience in resource-constrained environments. Research from diverse developing-country tourism contexts demonstrates that PPPs can leverage private sector management expertise, marketing networks, and investment capacity alongside government regulatory authority and public infrastructure investment in ways that neither sector can achieve independently (World Bank, 2020b).

2.2.4 Renewable Energy Investment as Resilience Infrastructure

Energy insecurity represents one of the most distinctive and operationally significant crisis risks for Zambia's tourism sector. Dependence on hydropower — which provides over 85% of national electricity supply and is directly vulnerable to the droughts that are becoming more frequent and severe under climate change projections — creates a structural vulnerability that links energy crisis, climate crisis, and tourism crisis in a single systemic risk chain (International Energy Agency, 2020; Minister of Green Economy and Environment, 2023). Solar photovoltaic systems, battery storage, and solar water heating are proven technologies that can effectively address the energy resilience deficit in Zambia's tourism sector at enterprise level, generating multiple co-benefits including reduced energy costs, improved service reliability, and enhanced environmental credentials (Karabuğa et al., 2015).

2.2.5 Community-Based Tourism Empowerment

Community-based tourism (CBT) development represents both a resilience strategy and a sustainable development objective in Zambia's tourism landscape. CBT organisations distribute tourism benefits across local communities, create economic diversification for households dependent on subsistence agriculture, and foster the community ownership of tourism assets essential for long-term destination sustainability (UNWTO, 2021). From a crisis resilience perspective, strong CBT organisations diversify the income base of tourism-dependent communities, reducing vulnerability to the revenue collapse that characterises crisis events, and maintain tourism-relevant skills and infrastructure that enable faster recovery when crises pass.

III. METHODOLOGY

The mixed-methods convergent parallel design described in the broader study methodology was applied to the resilience-building strategy investigation. The Resilience-Building Strategy subscale of the Quantitative Questionnaire comprised eight Likert-scale items measuring stakeholder endorsement of each strategy category. The Tourist Questionnaire's Sustainability Preferences section assessed demand-side alignment through six items on preferences for sustainability attributes, crisis management communication, and community support during crisis events. The target population encompassed all tourism stakeholders with direct roles in crisis management and tourism operations across Zambia's major tourism regions. Stratified purposive sampling was applied to ensure representation across five stakeholder categories, with Yamane's (1967) formula confirming the adequacy of the 137-respondent sample at a 95% confidence level and 5% margin of error. The 137 respondents comprised 46 quantitative questionnaire respondents who provided Likert-scale endorsement data, 50 tourist questionnaire respondents, and 41 qualitative questionnaire respondents plus 16 key informant interview participants. Resilience strategy endorsement data were analysed using descriptive statistics and one-sample t-tests. Tourist sustainability preference data were analysed using frequency distributions. Qualitative resilience theme data were subjected to thematic analysis following Braun and Clarke's (2006) framework. The endorsement–implementation gap was calculated as the arithmetic difference between the composite resilience endorsement mean and the composite preparedness capacity mean.

IV. FINDINGS & DISCUSSION

4.1 Composite Resilience Endorsement: The Strongest Positive Finding

The composite resilience-building strategy endorsement mean of 3.97 (SD = 0.77) produced the strongest positive statistical result across all four constructs measured. The one-sample t-test yielded $t = 26.85$ ($df = 45$, $p < 0.001$), confirming that stakeholder endorsement is highly and significantly above the neutral midpoint of 3.0. This result establishes that Zambia's tourism stakeholders are not merely aware of the crisis threat but actively endorse the resilience investment strategies necessary to address it. The sector's challenge is therefore not a motivational deficit but an implementation deficit — the absence of institutional mechanisms through which this endorsement is converted into operational preparedness. The 3.97 composite endorsement mean also establishes a statistically precise measurement of the endorsement–implementation gap: 3.97 (resilience endorsement) minus 2.98 (preparedness capacity) equals 0.99 points. This gap precisely quantifies the structural distance between the sector's aspirational position and its actual operational position, providing a measurable target for the Z-CMRM framework.

4.2 Strategy-Specific Endorsement: The Resilience Priority Profile

Table 1 presents the full resilience strategy endorsement profile by strategy category. Environmental conservation leadership attracted the highest individual strategy endorsement at M = 4.32 (SD = 0.71), reflecting the recognition of natural resource conservation as the foundation of Zambia's tourism competitive advantage. Qualitative analysis confirmed that 79% of respondents linked environmental conservation explicitly to destination sustainability and long-term economic viability. Multi-stakeholder collaboration and public–private partnerships scored second at M = 4.21 (SD = 0.85), with 73% of respondents identifying collaboration as the most important change needed in tourism crisis management.

Table 1

Resilience-Building Strategy Endorsement Scores by Strategy Category

Resilience Strategy	Endorsement M (SD)
Environmental conservation leadership	4.32 (0.71)
Multi-stakeholder collaboration and PPPs	4.21 (0.85)
Gender and youth inclusion	4.08 (0.92)
Digital technology integration	3.96 (0.88)
Community-based tourism empowerment	3.88 (0.94)
Renewable energy investment	3.85 (0.87)
Training and capacity development	3.74 (0.91)
Financial resilience mechanisms	3.72 (0.96)
Composite Resilience Endorsement	3.97 (0.77) — $t = 26.85$, $p < 0.001$

Gender and youth inclusion scored M = 4.08 (SD = 0.92), reflecting awareness of the structural gender gap in tourism leadership and the economic significance of the youth population in Zambia's tourism labour market. Respondents consistently linked gender and youth inclusion not only to equity objectives but to resilience effectiveness: 'Crises affect women and young workers hardest in tourism, but they are the least involved in planning for them' (NGO Representative, Lusaka). Digital technology integration scored M = 3.96 (SD = 0.88), notable given the current digital infrastructure deficit (early warning system availability M = 2.52), confirming that stakeholders simultaneously recognise the importance of digital tools for resilience and are aware that current infrastructure is inadequate.

Community-based tourism empowerment scored M = 3.88 (SD = 0.94), with qualitative analysis identifying a significant gap between the aspiration for CBT empowerment and its implementation reality: while 71% of qualitative respondents endorsed CBT empowerment, only 12% of CBT organisations in the sample maintained formal crisis management plans. Renewable energy investment scored M = 3.85 (SD = 0.87), with financing identified as the primary barrier by 68% of respondents who had not yet implemented it. Financial resilience mechanisms scored lowest at M = 3.72 (SD = 0.96), reflecting the perception that insurance and emergency reserves are aspirational rather than immediately achievable given current financial constraints.

4.3 Tourist Sustainability Preferences: Demand-Side Alignment

Tourist questionnaire data revealed strong demand-side alignment with supply-side resilience endorsement (Table 2). Preference for destinations that support local communities during crisis recovery was endorsed by 84% of tourists — the highest tourist preference score — confirming that community resilience investment has direct commercial implications for destination competitiveness. Preference for destinations with documented environmental

protection commitments was endorsed by 79% of tourists, directly aligning with the highest supply-side endorsement (environmental conservation M = 4.32). Preference for destinations with visible crisis preparedness information was endorsed by 73% of tourists.

Table 2

Tourist Sustainability Preferences (n = 50)

Tourist Sustainability Preference	% Endorsement
Destination supports local communities during crisis recovery	84%
Destination has documented environmental protection commitments	79%
Destination provides visible crisis preparedness information	73%
Destination uses renewable energy	68%
Destination includes gender and youth in planning	61%

4.4 Qualitative Resilience Themes: Mechanisms and Barriers

Thematic analysis of qualitative questionnaire responses and key informant interview data identified five primary resilience themes. The first theme was systems thinking — the recognition by 62% of respondents that resilience requires integrated, systemic approaches rather than isolated strategy-by-strategy investments. This reflects growing awareness that the interconnected vulnerabilities of Zambia's tourism sector — energy-water-climate links, economic-health-travel links, and conservation-revenue-community links — require systems-level responses. The second theme was financing innovation, identified by 68% of respondents as requiring new and creative financing mechanisms, including public-private resilience funds, tourism levy mechanisms, green bond financing, and development partner co-financing arrangements.

The third theme was regional learning and benchmarking, endorsed by 58% of respondents, reflecting awareness that Zambia can accelerate institutional learning by systematically adapting lessons from peer-context innovations in Kenya, Tanzania, and Botswana, which have more developed tourism crisis governance frameworks. The fourth theme was adaptive management, recognised by 54% of respondents as requiring continuous adaptation of crisis management plans in response to new crisis experiences and emerging risks. The fifth theme was leadership and champions, identified by 49% of respondents as necessary to create the institutional momentum for sector-wide resilience investment: *"Without someone at the top driving this, everyone waits for everyone else, and nothing happens"* (Senior ZTA Official, Lusaka on 16th June, 2024).

4.5 The Z-CMRM: Converting Endorsement into Implementation

The empirical evidence from this study directly informs the design of the Zambia Crisis Management and Resilience Model (Z-CMRM), a multi-phase framework for converting stakeholder-validated resilience endorsement into operational preparedness capacity. The Z-CMRM comprises five interrelated components organised into three implementation phases. Phase One (institutional foundation, years 1–2) focuses on establishing the National Tourism Crisis Coordination Centre, developing mandatory crisis planning requirements and templates, and creating the Tourism Crisis Resilience Fund. Phase Two (capacity building, years 2–4) focuses on delivering enterprise-level crisis planning support, training and capacity development programmes, and renewable energy and digital technology investment through the resilience fund. Phase Three (systems integration, years 4–7) focuses on integrating tourism crisis governance into national disaster management architecture, developing regional resilience benchmarking frameworks, and establishing adaptive management systems. The 0.99-point endorsement–implementation gap provides a measurable target for the Z-CMRM: the framework will have achieved its primary objective when preparedness capacity scores reach the current resilience endorsement level of 3.97. Progress toward this target should be monitored through annual stakeholder surveys using the measurement instruments developed in this study.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study establishes that Zambia's tourism stakeholders not only recognise the need for resilience investment but strongly and significantly endorse specific resilience-building strategies that would, if implemented, substantially improve the sector's crisis management capacity. The composite resilience endorsement mean of 3.97 ($t = 26.85$, $p < 0.001$) represents the strongest positive finding in the study, confirming that the sector's crisis management challenge is an implementation deficit rather than a motivational or awareness deficit. Environmental conservation, multi-stakeholder collaboration, and gender and youth inclusion attract the strongest endorsement, while financial resilience mechanisms and training reveal the greatest distance between endorsement and current implementation. The demand-

side analysis confirms strong tourist alignment with supply-side resilience priorities, establishing that resilience investment is not merely a risk management cost but a destination competitiveness investment.

5.2 Recommendations

Based on the study's findings, the following recommendations are advanced. First, the Ministry of Tourism and Arts should formally adopt environmental conservation leadership and multi-stakeholder collaboration as the two priority pillars of the National Tourism Resilience Strategy, reflecting their highest endorsement levels and their cross-cutting impact on other resilience dimensions. Second, the ZTA should develop a gender and youth inclusion protocol for all crisis governance structures established under the Z-CMRM, with specific targets for women's and youth representation in coordination committees, training programmes, and decision-making bodies. Third, development partners including the African Development Bank, UNDP, and bilateral donors should prioritise co-financing for the Tourism Crisis Resilience Fund, with dedicated windows for renewable energy investment, digital technology, and CBT empowerment. Fourth, the ZTA should establish a regional resilience benchmarking programme, engaging systematically with tourism crisis governance innovations from Kenya, Tanzania, Botswana, and other comparable regional contexts. Fifth, a National Tourism Crisis Coordination Centre should be established as the institutional champion and implementation coordinator for the Z-CMRM, with a clear statutory mandate, multi-stakeholder governance board, and annual progress reporting to the Ministry of Tourism and Arts.

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