



Strategic Bubble Tourism for Sustainable Destination Governance: Policy Readiness, Carrying Capacity, and Community Participation in Bali

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Abstract

Strategic bubble tourism, environmental carrying capacity, collaborative governance, and adaptive destination management are increasingly relevant to Bali as visitor growth intensifies spatial and ecological pressures. This study assesses whether Bali's provincial policy architecture is ready to support Strategic Bubble Tourism as a capacity-sensitive governance framework. Using a qualitative evaluative case study, the analysis examines spatial-planning regulations, source-based waste-management policies, foreign-tourist levy regulations, official tourism statistics, and published empirical studies through framework analysis. Findings show strong normative foundations but limited operational coupling across four domains: visitor redistribution, carrying-capacity thresholds, shared community authority, and adaptive monitoring with fiscal accountability. The analyzed corpus does not document transparent cluster-level thresholds or decision rules linking capacity signals to visitor-management actions. Strategic Bubble Tourism is therefore best positioned as a diagnostic governance architecture rather than a validated operational model. Its implementation requires explicit cluster boundaries, multidimensional capacity indicators, co-decision mechanisms, interoperable monitoring, and traceable fiscal accountability.

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INTRODUCTION

Tourism can generate substantial income, employment, and local business opportunities, but rapid growth also produces cumulative spatial, environmental, and institutional pressures when visitor flows exceed the capacity of destinations to absorb them. Sustainable tourism research has therefore moved beyond the assumption that increasing arrivals is inherently desirable and has emphasized the need to internalize ecological costs, social distribution, infrastructure constraints, and governance capacity in destination decisions (Hall, 2019; Sharpley, 2020). Overtourism sharpens this problem because pressure is rarely distributed evenly across space or time. Congestion, waste generation, water demand, land-use change, and tensions over cultural space often concentrate in mature tourism corridors, making the governance of visitor flows as important as the absolute number of visitors (Dodds & Butler, 2019; Schoenherr et al., 2023).

Bali is a particularly relevant case. The Bali Province Statistics Agency recorded approximately 6.33 million direct international tourist arrivals in 2024, confirming a strong post-pandemic recovery and the continued global attractiveness of the destination (Badan Pusat Statistik Provinsi Bali, 2025). Yet the benefits and burdens of tourism remain spatially uneven. Studies of Bali increasingly associate high tourism intensity with pressure on environmental

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resources, land-use conflicts, governance fragmentation, and a need to shift from growth-centered planning toward more regenerative and collaborative approaches (Salam et al., 2024; Mananda et al., 2025; Pramono et al., 2026). These concerns are important for community empowerment because destination sustainability depends not only on the distribution of visitors but also on who participates in decisions, who bears environmental costs, and who benefits from tourism-related revenues.

A common policy response to congestion is visitor dispersal: encouraging tourists to move from saturated destinations toward less visited areas and low-season periods. Dispersal can reduce localized pressure and broaden economic benefits, but it can also displace rather than resolve overtourism. Receiving areas may have weaker waste systems, more limited water resources, less transport capacity, or stronger dependence on cultural and ecological assets that are sensitive to rapid visitation. From a social-ecological systems perspective, interventions in one part of a destination can generate feedback elsewhere through mobility, land prices, water extraction, infrastructure demand, and changing livelihood patterns (Ostrom, 2009; Folke et al., 2010; Roxas et al., 2020). Sustainable redistribution therefore requires a mechanism that links visitor movement to the capacity and governance conditions of receiving areas.

Tourism carrying capacity provides one foundation for such a mechanism. The concept refers broadly to the level and type of use that a destination can sustain without unacceptable deterioration in environmental quality, resident well-being, visitor experience, or infrastructure performance. However, carrying capacity is not a single universal number. It is multidimensional and context dependent, and its operational value lies in management processes that define indicators, baselines, thresholds, monitoring intervals, and actions when conditions change (O'Reilly, 1986; Paskova et al., 2021; Banos-Pino et al., 2024). Environmental carrying capacity is therefore a crucial component of destination control, but it should not be treated as the only capacity dimension or as an automatic threshold that can be applied without transparent measurement procedures.

Bali already has policy instruments that can support capacity-sensitive destination management. Provincial Regulation No. 2 of 2023 establishes the Bali Spatial Plan for 2023-2043, while Governor Regulation No. 47 of 2019 provides a legal basis for source-based waste management (Pemerintah Provinsi Bali, 2019, 2023a). In 2025, the provincial government accelerated waste management in tourism-related activities through the Program Super Prioritas Mendesak, which operationally reinforces existing source-based waste rules rather than creating a new governor regulation (Bali Media Center, 2025). On the fiscal side, Provincial Regulation No. 6 of 2023 introduced a levy on foreign tourists for cultural and environmental protection, with payment procedures regulated by Governor Regulation No. 2 of 2024 (Pemerintah Provinsi Bali, 2023b, 2024). Together, these instruments show that spatial, environmental, and fiscal components of sustainable tourism governance already exist within the provincial policy architecture.

The remaining question is whether these components are sufficiently connected to support adaptive control. Collaborative governance literature emphasizes that coordination is not achieved simply because multiple actors participate in meetings. Meaningful collaboration requires information access, shared understanding, legitimate representation, decision authority, and mechanisms of accountability (Ansell & Gash, 2008; Healey, 1997). Tourism research likewise shows that community participation can remain operational or symbolic even where local institutions are formally recognized, particularly when communities have limited influence over strategic decisions, resource allocation, or the distribution of tourism benefits (Scheyvens, 1999; Dangi & Petrick, 2021; Dolezal & Novelli, 2022; Reindrawati, 2023). In Bali, customary institutions and village-based tourism can provide important governance capacity, but the degree to which local communities share authority over visitor thresholds and tourism revenues remains a critical empirical and policy question (Astawa et al., 2024; Putra Nugraha et al., 2024).

Strategic Bubble Tourism was proposed as a governance idea that clusters tourism spaces and links visitor distribution, capacity limits, stakeholder coordination, and monitoring (Madya & Arma, 2025). The term risks becoming a new label for familiar practices if it is understood only as zoning or destination clustering. Its stronger contribution lies in governance coupling: spatial clusters become units of management; capacity indicators provide signals; collaborative institutions determine the legitimacy and authority of responses; and monitoring and fiscal

mechanisms provide feedback for adaptation. This interpretation does not claim that the word 'bubble' is conceptually novel. Instead, it treats Strategic Bubble Tourism as an integrative architecture that connects established instruments into a rule-based and auditable destination-governance cycle.

Recent Bali scholarship has examined overtourism, sustainable governance, community participation, and penta-helix or regenerative approaches (Miswanto et al., 2026; Mananda et al., 2025; Pramono et al., 2026). Less attention has been given to whether the province's separate instruments for spatial planning, environmental control, tourist redistribution, fiscal management, and participation can function as a connected capacity-sensitive system. Addressing this gap, the present study evaluates Bali's policy readiness across four dimensions: spatial-temporal zoning and visitor redistribution, operational carrying-capacity thresholds, collaborative participation and shared authority, and adaptive monitoring with fiscal accountability. The study asks: To what extent does the available policy architecture satisfy these preconditions, what readiness gaps remain, and what do those gaps imply for the operationalization of Strategic Bubble Tourism? The study is explicitly diagnostic; it neither tests the effectiveness of an operational model nor calculates a province-wide carrying capacity.

METHOD

Research Design and Case Boundary

This study uses a qualitative evaluative case-study design with a document-led orientation. The case is bounded at the level of Bali Province and focuses on policy instruments that directly affect visitor distribution, environmental pressure, community participation, monitoring, and fiscal accountability. A case-study approach is appropriate because the study evaluates how policy components operate within a specific institutional and spatial context rather than estimating statistical relationships or causal effects (Yin, 2018). Framework analysis was selected because it provides a transparent structure for linking research questions, predefined analytical dimensions, evidence extraction, and cross-source comparison (Gale et al., 2013).

Evidence Corpus

The formal evidence corpus contains four source groups. First, legally authoritative spatial-planning and environmental regulations were used to identify policy mandates and institutional design. Second, provincial administrative information was used to clarify the implementation direction of source-based waste management. Third, regulations governing the foreign-tourist levy were analyzed to identify the fiscal basis for cultural and environmental protection. Fourth, official tourism statistics and peer-reviewed empirical studies were used as contextual and comparative evidence. Scholarly studies were selected purposively for direct relevance to Bali, overtourism, carrying capacity, collaborative governance, community participation, and sustainable destination management; the literature component was not treated as a systematic review. Table 1 summarizes the evidence corpus and the analytical role assigned to each source type.

Table 1. Evidence corpus and analytical role of each source group

Source group	Primary evidence	Analytical role
Spatial planning	Bali Provincial Regulation No. 2/2023 on the 2023-2043 Provincial Spatial Plan	Identify spatial governance mandates and the formal planning basis for capacity-sensitive management.
Environmental governance	Bali Governor Regulation No. 47/2019; 2025 provincial administrative information on priority waste-management implementation	Assess source-based waste-management rules and the implementation direction of tourism-related environmental control.
Tourism levy	Bali Provincial Regulation No. 6/2023; Bali Governor Regulation No. 2/2024	Identify the fiscal instrument for cultural and environmental protection and the accountability questions attached to it.
Official statistics	Bali Province Statistics Agency, Statistics of International Visitors to Bali Province 2024	Provide a verified macro-level context for the scale of international visitor flows.
Empirical studies	Peer-reviewed studies on Bali/Indonesia, overtourism, carrying capacity, collaborative governance, and community participation	Provide comparative and contextual evidence; not treated as a systematic-review corpus.

The separation of source functions prevents legal norms, administrative statements, official statistics, and findings from previous research from being treated as equivalent forms of evidence.

Regulations establish what is formally authorized; administrative information clarifies implementation direction; official statistics provide macro-level context; and empirical studies help interpret whether the observed policy architecture is consistent with known sustainability and governance challenges.

Analytical Procedure and Claim Discipline

The analysis followed a structured framework method. Four top-level categories were defined deductively from the research objective and literature: visitor redistribution, carrying capacity, collaborative participation, and monitoring-accountability. The author then coded the corpus manually in an evidence matrix using five descriptors: existing instrument or practice, documented capacity, implementation gap, evidence that constrained the strength of a claim, and implications for Strategic Bubble Tourism. Iterative subcoding was used to capture recurring cross-source patterns such as receiving-area capacity gaps, data-authority disconnects, and the distinction between operational participation and strategic co-decision. The analysis did not assign numerical readiness scores because the evidence does not support a validated index. Source triangulation was used to compare the legal status of instruments, administrative implementation information, official statistics, and peer-reviewed evidence. Negative or absent evidence was handled conservatively: where a threshold, decision rule, or accountability mechanism was not documented in the analyzed corpus, the study reports that it was 'not identified in the corpus' rather than claiming that it does not exist anywhere in Bali. Figure 1 summarizes this workflow. Because the study analyzes public policy documents, official aggregate statistics, and published literature and involves no human participants or identifiable personal data, human-subject ethics approval was not applicable to the formal design reported here.

Table 2. Operational framework for evaluating policy readiness

Dimension	Operational definition	Readiness indicators sought in the corpus
Spatial-temporal zoning and redistribution	Visitor flows are managed across space and time with explicit consideration of receiving-area capacity.	Defined management units; dispersal mechanism; receiving-capacity indicators; incentives/restrictions; decision rules.
Operational carrying capacity	Capacity is translated into measurable, revisable indicators and actions.	Baseline; indicator definition; threshold; update frequency; action when pressure approaches or exceeds the threshold.
Collaborative participation	Stakeholders share information and influence strategic decisions rather than only implementation tasks.	Representation; access to information; co-decision; grievance mechanisms; shared authority; oversight.
Adaptive monitoring and fiscal accountability	Environmental, mobility, infrastructure, and fiscal information can change decisions in a timely and accountable manner.	Interoperable data; responsible institution; early warning; public reporting; traceable use of levy revenue and outcomes.

The framework deliberately avoids a numerical readiness score because the available evidence does not support a validated index. Readiness is interpreted qualitatively as the extent to which a documented policy basis is connected to measurable indicators, legitimate authority, and an operational response mechanism. Figure 1 presents the analytical workflow from source identification to the four evaluation dimensions and the final diagnostic output. The figure represents a qualitative evidence process rather than statistical frequency or effect size.

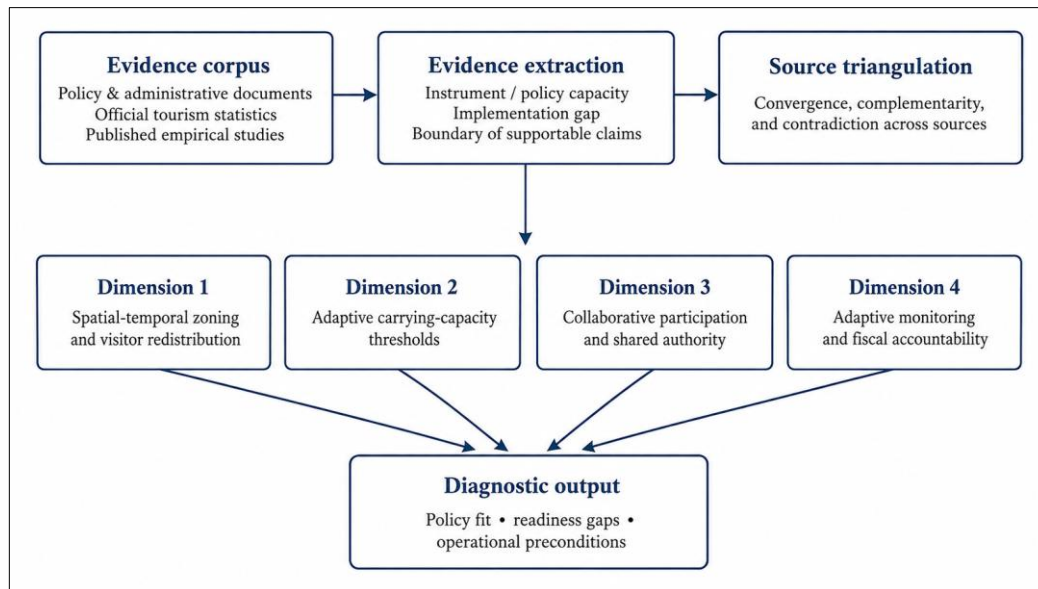


Figure 1. Document-led qualitative case-study workflow and source-triangulation process

This workflow separates evidence extraction from interpretation so that proposed tools such as dynamic visitor quotas or integrated dashboards are treated as future design options rather than as outcomes demonstrated by the present study.

RESULTS AND DISCUSSION

The cross-dimensional diagnosis indicates a consistent pattern: Bali has substantial policy availability, but operational readiness is partial because the instruments do not yet function as a single adaptive decision system. The province possesses a spatial plan, source-based waste-management regulation, a foreign-tourist levy, tourism statistics, and established channels for community participation. These foundations are important, but readiness depends on whether information about destination pressure can trigger legitimate and coordinated action. Table 3 synthesizes the available policy basis, the gaps identified in the corpus, and the operational preconditions required for a capacity-sensitive Strategic Bubble Tourism framework.

Table 3. Diagnostic synthesis of Strategic Bubble Tourism policy readiness in Bali

Dimension	Policy basis identified	Readiness gap identified in the analyzed corpus	Operational precondition
Visitor redistribution	Spatial plan and dispersal-oriented policy direction.	No explicit rule was identified that links redistribution to receiving-area capacity.	Define clusters, receiving-capacity indicators, and graduated response rules.
Carrying capacity	Environmental regulations and location-specific carrying-capacity evidence.	No integrated cluster-level adaptive threshold linked to visitor-management actions was documented.	Establish multidimensional baselines, thresholds, update cycles, and decision rules.
Community governance	Formal participation channels, customary institutions, and village-tourism capacity.	The corpus does not establish strategic co-decision or shared authority over thresholds and redistribution.	Formalize representation, information rights, co-decision, grievance, and oversight mechanisms.
Monitoring and finance	Official tourism statistics, environmental governance, and a foreign-tourist levy.	Data remain institutionally separated; macro arrivals are not cluster pressure data; fiscal outcomes were not independently audited.	Develop interoperable monitoring, institutional ownership, early warning, and traceable fiscal reporting.

The matrix shows that policy readiness is not a binary condition. Bali has instruments that are conceptually compatible with Strategic Bubble Tourism, but the analyzed corpus does not demonstrate that those instruments have been coupled into an adaptive visitor-management mechanism. This distinction between policy availability and operational readiness organizes the interpretation that follows.

The first readiness gap concerns the relationship between visitor dispersal and receiving-area capacity. Spatial planning and policy discourse provide a basis for reducing excessive concentration and broadening tourism benefits, but the analyzed corpus does not identify an explicit rule that links redistribution decisions to multidimensional capacity indicators in receiving

areas. In practical terms, promoting a less visited destination is different from managing a destination according to carrying capacity. A dispersal strategy can redirect demand, whereas capacity-sensitive management specifies where additional demand is acceptable, which indicators are monitored, when intervention is required, and what type of intervention is legitimate. This distinction is critical in Bali because decongestion in mature tourism corridors may simply transfer pressure to areas with weaker waste systems, water constraints, or more sensitive cultural landscapes. Similar concerns are reflected in overtourism research, which warns that spatial redistribution without capacity assessment can expand the geography of tourism pressure rather than reduce it (Dodds & Butler, 2019; Pramono et al., 2026).

This finding reframes the role of spatial clustering in Strategic Bubble Tourism. The novelty does not lie in dividing Bali into tourism zones, because zoning and destination clustering are established planning practices. The value lies in making a cluster an operational unit whose management is explicitly linked to receiving-area conditions. Such a unit would require boundaries that can be monitored, a defined set of environmental and infrastructure indicators, and response options such as timed access, demand-shifting incentives, mobility management, or staged restrictions. These tools should not be presumed necessary in every cluster; rather, the diagnostic framework identifies the institutional conditions under which they could be considered and publicly justified.

The second gap concerns carrying capacity. Bali's environmental policy architecture clearly recognizes the need to manage waste and protect ecological resources. Governor Regulation No. 47 of 2019 establishes source-based waste management, and the 2025 priority program strengthens implementation in tourism-related activities (Pemerintah Provinsi Bali, 2019; Bali Media Center, 2025). At the same time, empirical work on Nusa Penida illustrates that water carrying capacity is highly location specific and cannot be generalized into a single threshold for the whole province (Sudipa et al., 2020). The analyzed corpus does not document a transparent cluster-level system that combines environmental, infrastructure, and social indicators with a decision rule for visitor management. Therefore, the defensible conclusion is not that Bali lacks carrying-capacity analysis, but that the evidence reviewed here does not demonstrate an integrated adaptive threshold mechanism for tourism-flow control.

This interpretation is consistent with the contemporary reconceptualization of carrying capacity as a management process rather than a final number. Paskova et al. (2021) emphasize the need to embed capacity within destination monitoring and decision making, while Banos-Pino et al. (2024) show that crowding and quality deterioration are also relevant to optimal capacity. A threshold that can support policy must therefore specify at least the spatial unit, indicator definition, baseline, update interval, and action associated with different levels of pressure. For Bali, water, waste, congestion, infrastructure load, ecological sensitivity, resident tolerance, and visitor experience may all be relevant, but the weighting and trigger rules require empirical testing at the cluster level. This is why Strategic Bubble Tourism should currently be understood as a diagnostic governance architecture rather than a formula for automatic quotas.

The third gap concerns the quality of participation. Bali has substantial community and customary institutional capacity, and research on village tourism confirms the importance of local participation for sustainable destination development (Astawa et al., 2024; Putra Nugraha et al., 2024). Nevertheless, the policy documents analyzed in this study do not by themselves establish the degree to which communities share authority over strategic decisions such as capacity thresholds, tourism redistribution, investment priorities, or oversight of levy-funded programs. The distinction between participation and co-decision is fundamental. Communities may be highly active in managing attractions, guiding visitors, maintaining cultural rules, or delivering tourism services while remaining peripheral to decisions that determine the scale and distribution of tourism development.

Collaborative governance theory helps explain why this distinction matters. Ansell and Gash (2008) emphasize deliberation, trust, and shared understanding, while Healey (1997) frames collaborative planning as a process through which legitimate collective decisions are constructed. Tourism studies further show that participation can be constrained by unequal power, uneven access to information, and differences in who captures economic benefits (Scheyvens, 1999; Dolezal & Novelli, 2022; Wondirad et al., 2020). For Strategic Bubble Tourism, community empowerment

therefore requires more than consultation. Operational design should specify who is represented, what information is shared, who can contest a threshold or restriction, how customary institutions interact with government authority, and how distributional effects are reviewed. These questions are especially important when a policy limits access to a destination or redirects visitors to a community that did not previously experience high tourism pressure.

The fourth gap concerns monitoring and fiscal accountability. Official tourism statistics provide a robust macro-level picture of arrivals, but aggregate arrivals cannot indicate real-time pressure in a specific cluster. An adaptive system would require more spatially granular information on mobility, occupancy, congestion, infrastructure load, and environmental conditions. Equally important, data integration alone does not create adaptive governance. Indicators become policy-relevant only when institutional actors have authority to interpret them, agree on trigger conditions, and implement proportionate responses. Research on sustainability indicators shows that their usefulness depends on how deeply they are embedded in governance processes rather than on technical sophistication alone (Moniche & Gallego, 2023). An integrated dashboard, therefore, should be treated as governance infrastructure, not as a stand-alone solution.

Fiscal governance introduces a related accountability question. Bali's foreign-tourist levy creates a formal pathway for linking tourism-generated revenue to cultural and environmental protection (Pemerintah Provinsi Bali, 2023b, 2024). The present study does not audit levy receipts or expenditures and therefore makes no claim regarding financial effectiveness or misuse. Instead, the diagnostic issue is traceability: a capacity-sensitive governance framework is stronger when the public can follow the relationship between revenue, allocation, intervention location, implementation, and environmental or community outcomes. This matters for community empowerment because fiscal transparency can influence whether destination controls are perceived as legitimate and whether communities view tourism restrictions and redistributive measures as fair. The broader Bali literature similarly points to the importance of collaboration, transparent governance, and institutional coordination in transitions toward sustainable and regenerative tourism (Miswanto et al., 2026; Mananda et al., 2025).

The governance transition implied by the findings requires each existing policy basis to be linked to a clearly defined operational requirement before Strategic Bubble Tourism can function as an auditable destination-management system.

Taken together, these findings support a narrower but more defensible conceptualization of Strategic Bubble Tourism. The framework should not be presented as an alternative to carrying-capacity management, collaborative planning, spatial zoning, or adaptive governance. Its contribution is the coupling architecture that requires these mechanisms to work in sequence: clusters define manageable spatial units; capacity indicators provide interpretable signals; collaborative arrangements establish legitimacy and shared authority; monitoring and fiscal mechanisms generate feedback; and decision rules connect signals to actions. The framework becomes empirically meaningful only when each connection can be observed and tested rather than assumed.

For provincial and local decision makers, the implication is that Bali does not need to begin with a province-wide quota or a fully integrated digital platform. A more defensible pathway is staged piloting. Selected clusters could first establish explicit boundaries and community representation, identify a small set of locally meaningful capacity indicators, agree on update intervals, and develop graduated response protocols. Pilot implementation would allow the province to test whether receiving communities accept the indicators and interventions, whether data can be shared across agencies, and whether restrictions create unintended displacement effects. Such an incremental approach is consistent with adaptive governance and with recent arguments for regenerative and multi-actor tourism governance in Bali (Mananda et al., 2025; Salam et al., 2024). It also provides a realistic bridge from diagnostic policy fit to an operational model that can later be evaluated prospectively.

LIMITATION

This study has five limitations. First, it is a document-led policy evaluation and does not include primary interviews, participant observation, or community surveys; consequently, it cannot determine how government agencies, customary villages, businesses, residents, or tourists

experience the policies in practice. Second, the study does not conduct primary environmental carrying-capacity measurement, groundwater modeling, real-time mobility analysis, or quota simulation. Third, the scholarly literature was selected purposively for analytical relevance and was not generated through a systematic-review protocol. Fourth, the analysis represents a policy snapshot centered on instruments available through 2025 and literature available through 2026; Bali's tourism and environmental policies continue to evolve. Fifth, the study does not independently audit foreign-tourist levy revenues or expenditures. These limitations mean that the findings should be interpreted as a diagnosis of policy architecture and testable operational preconditions, not as causal evidence that Strategic Bubble Tourism will improve destination sustainability. Future research should test pilot clusters prospectively using primary stakeholder data, measurable capacity indicators, and comparative environmental and distributional outcomes.

CONCLUSION

Bali's policy architecture provides a credible foundation for capacity-sensitive destination governance, but the analyzed evidence indicates that readiness for Strategic Bubble Tourism remains partial. Spatial planning, environmental regulation, tourism statistics, community institutions, and the foreign-tourist levy constitute important building blocks; the unresolved issue is the operational coupling among them. Visitor redistribution must be conditioned by receiving-area capacity, carrying capacity must be translated into transparent and revisable thresholds, participation must extend toward shared strategic authority, and monitoring must connect data to legitimate decision rules and traceable fiscal accountability. The principal contribution of this study is therefore a diagnostic policy-fit framework that distinguishes the existence of sustainability-oriented instruments from the institutional capacity to activate them as an adaptive system. Strategic Bubble Tourism should be advanced not as a validated model or a fixed quota formula, but as a testable governance architecture. Its next empirical stage should define cluster boundaries, co-design multidimensional indicators with local stakeholders, establish graduated response rules, and evaluate whether those arrangements reduce pressure without transferring environmental burdens or weakening community control over tourism development.

AUTHOR CONTRIBUTIONS STATEMENT

FM: Conceptualization, methodology, investigation, formal analysis, policy-document analysis, visualization, writing - original draft, and writing - review and editing.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this work, the author used ChatGPT (OpenAI) to improve language clarity, organization, and conformity with the journal template. The tool was not used as an author and was not used to generate or alter research data. The author reviewed and edited the resulting text as needed and takes full responsibility for the content of the article.

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