

Beyond Carrying Capacity: Reimagining Visitor Management in Bali's Overtourism Crisis Through Community-Based Governance Models

Author: Nurbaeti

Affiliation: Trisakti Institute of Tourism

Email: nurbaeti@iptrisakti.ac.id

ORCID: <https://orcid.org/0000-0001-7750-2138>

Author: Muhammad Rahmad

Affiliation: Trisakti Institute of Tourism

Email: muhammadrahmad@iptrisakti.ac.id

ORCID: <https://orcid.org/0009-0007-1899-9480>

Abstract

The intensification of overtourism in Bali has exposed the limits of conventional carrying-capacity approaches, which prioritize numerical thresholds while neglecting socio-cultural thresholds, ecological complexity, and local agency. As post-pandemic arrivals exceeded 6.3 million international visitors in 2024 and continued upward in 2025, conflicts over water, land use, traffic, waste, and cultural commodification have escalated, yet governance responses remain top-down and metric-driven. This study aims to re-conceptualize visitor management in Bali by examining how community-based governance models—anchored in customary institutions (*desa adat*) and polycentric arrangements—can complement and, in some domains, supersede carrying-capacity logics. Adopting an interpretivist case-study design, the research integrates 38 semi-structured interviews with stakeholders across four sub-regions (Ubud, Canggu, Sanur, and Nusa Penida), participant observation at *banjar* meetings, and analysis of 47 policy and planning documents collected between April 2025 and March 2026. Thematic analysis was conducted in NVivo 14 using a hybrid deductive–inductive coding strategy. Findings reveal that purely quantitative caps are perceived as legitimate only when co-produced with customary leaders, and that polycentric arrangements—linking *desa adat*, provincial regulators, and tourism enterprises—generate more enforceable, context-sensitive thresholds than centralized quotas. The study contributes a *Community-Anchored Visitor Governance* (CAVG) framework that reframes carrying capacity as a relational, negotiated construct rather than a fixed engineering parameter. Implications are offered for policymakers, destination managers, and tourism scholars in island economies confronting similar tipping points.

Keywords: *overtourism; community-based governance; carrying capacity; desa adat; polycentric governance; sustainable tourism; Bali*

1. Introduction

Bali has long been positioned as a global archetype of tropical island tourism, yet the destination is now widely cited as a paradigmatic case of overtourism in the Global South (Cole, 2022; Hampton & Jeyacheya, 2024). After the COVID-19 collapse, international arrivals rebounded from near zero in 2021 to over 6.3 million in 2024 and a provisionally reported 6.9 million in 2025, with provincial projections pointing toward 7.4 million in 2026—

figures that exceed pre-pandemic peaks and surpass the population of Bali itself (Bali Provincial Tourism Office, 2026; UNWTO, 2024). Coupled with rapid villa construction in southern sub-regions, declining aquifer levels, mounting plastic loads, and recurrent traffic gridlock, this visitor surge has triggered protests by *desa adat* (customary villages), public complaints over the conduct of foreign visitors, and emergency provincial regulations including a tourist levy and a behavioral code of conduct (Sutawa, 2023; Suriyani, 2024).

Internationally, overtourism has become a dominant lens for interrogating the externalities of mass mobility (Cheer et al., 2023; Milano et al., 2023; Veríssimo et al., 2023). Yet the dominant policy response—revising or imposing numerical *carrying capacities*—rests on assumptions that have been increasingly contested in tourism scholarship (Butler, 2024; Manning, 2022). Carrying capacity, as inherited from rangeland ecology and recreation management, presumes that destinations possess discoverable thresholds beyond which negative impacts become inevitable. In tourism settings, however, thresholds are not merely ecological; they are socially constructed, culturally inflected, and politically negotiated (Manning, 2022; Sæþórsdóttir et al., 2022). When applied without local mediation, capacity caps risk reproducing technocratic governance that displaces affected communities while creating the appearance of action (Higgins-Desbiolles et al., 2022).

The Indonesian context further complicates these dynamics. Bali's tourism economy is hybridized: a globally networked industry overlays a dense fabric of customary institutions, where *desa adat* hold ritual, spatial, and resource-management authority recognized by Provincial Regulation 4/2019 and reinforced by Law 6/2014 on Villages (Picard, 2023; Putra et al., 2023; Wibawa & Antara, 2023). Despite this institutional richness, mainstream visitor-management discourse often treats Bali's communities as objects of consultation rather than as governing bodies. The result is a persistent *governance dissonance*—a misalignment between the spatial and cultural scales at which tourism impacts are felt and the administrative scales at which interventions are designed (Hampton et al., 2022; Wibawa & Antara, 2023).

Although a growing body of work has documented overtourism symptoms in Bali (Cole, 2022; Putra et al., 2023), three gaps remain underexplored. First, there is limited empirical engagement with how customary institutions actually function as governance actors in tourism—beyond their symbolic invocation. Second, the literature tends to either critique carrying capacity in principle or apply it instrumentally, rather than examining hybrid models that integrate quantitative thresholds with relational governance. Third, post-pandemic Bali represents a distinct conjuncture in which both visitor pressures and institutional reform momentum are unusually high, creating an empirical window that has not yet been adequately analyzed (Suriyani, 2024).

This article addresses these gaps by asking three questions:

- **RQ1.** How do diverse stakeholders in Bali interpret the limits and legitimacy of carrying-capacity-based visitor management in the post-pandemic period?
- **RQ2.** What roles do *desa adat* and other customary institutions play—or could plausibly play—in governing visitor flows and impacts?
- **RQ3.** What governance configurations enable carrying-capacity thresholds to be co-produced and enforced at scales that match the spatial reality of tourism impacts?

The study contributes to sustainable tourism scholarship in three ways. Conceptually, it repositions carrying capacity as a *relational construct* nested within polycentric governance (Dredge & Saarinen, 2023; Hall, 2023), rather than a stand-alone engineering tool. Empirically, it documents how *desa adat* in distinct sub-regional contexts negotiate visitor pressures, generating fine-grained evidence rarely captured in macro-level overtourism debates. Practically, it advances the *Community-Anchored Visitor Governance* (CAVG) framework, which provides actionable guidance for destinations navigating similar tensions across SDGs 8 (decent work and economic growth), 11 (sustainable cities and communities), 12 (responsible consumption and production), and 17 (partnerships for the goals).

The remainder of the article is organized as follows. Section 2 synthesizes the literature on overtourism, carrying capacity, and community-based governance and presents the theoretical framework. Section 3 details the methodology. Section 4 reports findings across four thematic clusters. Section 5 discusses implications for theory, policy, and practice. Section 6 concludes with limitations and future research directions.

2. Literature Review and Theoretical Framework

2.1 Overtourism: From Symptom to Systemic Lens

The term *overtourism* gained currency in the late 2010s to describe destinations where visitor pressures perceptibly degrade resident quality of life and visitor experience (Cheer et al., 2023; Milano et al., 2023). While initially associated with European cities such as Venice, Barcelona, and Amsterdam, scholarship has expanded to coastal and island destinations, including Mediterranean islands, Iceland, and increasingly Southeast Asia (Cheer et al., 2023; Sæþórsdóttir et al., 2022). Recent reviews emphasize that overtourism is not a discrete event but a *systemic outcome* of growth-oriented tourism models intersecting with weak governance, real-estate financialization, and platform-mediated mobility (Cheer et al., 2023; Koens et al., 2022; Sequera & Nofre, 2022).

Three analytical advances are particularly relevant. First, scholars distinguish *visitor pressure* (numbers, density, peak loads) from *touristification* (the structural reorientation of place economies and identities toward visitors) (Milano et al., 2023; Sequera & Nofre, 2022). Second, residents' perceptions are recognized as central, with frameworks such as the Irridex and Social Exchange Theory used to track shifting attitudes (Sharpley, 2023; Styliadis, 2022). Third, post-pandemic literature highlights that the recovery has not produced a "reset" but rather an intensification of pre-existing imbalances, including labor precarity and ecological strain (Higgins-Desbiolles et al., 2022; Niewiadomski, 2022).

2.2 Carrying Capacity: Persistence and Critique

Carrying capacity remains the most invoked—and most contested—concept in visitor management. Conventionally, it is partitioned into physical, ecological, social, and economic dimensions (Manning, 2022; Sæþórsdóttir et al., 2022). Recent applications in island and protected-area contexts have refined methodological apparatus, drawing on remote sensing, agent-based modeling, and Limits of Acceptable Change (LAC) frameworks (Manning, 2022; Zacarias et al., 2023). Yet methodological refinement has not resolved core conceptual problems.

Three critiques recur. First, capacity thresholds are often presented as objective when they are in fact *value-laden judgments* about acceptable change (Butler, 2024; Manning, 2022). Second, carrying-capacity models tend to be spatially and temporally narrow, missing system-wide cumulative effects across watershed, cultural, and economic domains (Butler, 2024). Third, when thresholds are imposed without affected communities' meaningful participation, enforcement is weak and legitimacy is low, producing what Higgins-Desbiolles et al. (2022) term *cosmetic regulation*. Recent work calls for re-embedding capacity within deliberative governance and Indigenous knowledge systems (Pratt & Higgins-Desbiolles, 2024; Wijesinghe et al., 2024).

2.3 Community-Based Tourism Governance and Polycentricity

Community-based tourism (CBT) has long been promoted as an alternative to corporate-led mass tourism, with claims of empowerment, livelihood diversification, and cultural revitalization (Mtapuri & Giampiccoli, 2023; Nguyen et al., 2022). Empirical evidence is mixed: poorly designed CBT can reproduce elite capture, gendered exclusion, and donor dependency (Lasso & Dahles, 2023; Mtapuri & Giampiccoli, 2023). Recent scholarship increasingly distinguishes between CBT-as-product (homestays, village tours) and CBT-as-governance—communities exercising authority over land, water, ritual space, and visitor conduct (Hampton & Jeyacheya, 2024; Mtapuri & Giampiccoli, 2023).

The latter intersects productively with polycentric governance theory. Polycentricity describes systems in which multiple, partially autonomous decision centers operate within overarching rules, enabling adaptive management of shared resources (Boonstra & Joosse, 2023; Dredge & Saarinen, 2023). Applied to tourism, polycentric governance can resolve scale mismatches by aligning decision authority with the spatial unit of impact (Hall, 2023; Nunkoo et al., 2024). It also accommodates *legal pluralism*—the coexistence of customary, statutory, and corporate normative orders—central to Bali's institutional landscape (Khoiriyati et al., 2023; Putra et al., 2023).

2.4 Bali's Customary Institutions: *Desa Adat* and *Banjar*

The *desa adat* is a customary village distinct from the administrative *desa dinas*, with jurisdiction over religious sites, customary land (*tanah ayahan desa*), water-temple networks (*subak*), and ritual obligations (Picard, 2023; Putra et al., 2023). The *banjar* is its principal sub-unit, an assembly of household heads convening regularly to manage collective affairs. *Awig-awig* (customary regulations) bind members and, through Provincial Regulation 4/2019, possess recognized legal standing within Bali. These institutions have proven adaptive—mediating land conflicts, organizing waste collection, and, increasingly, regulating short-term rentals and beachfront use (Picard, 2023; Putra et al., 2023).

Yet their integration into tourism governance is uneven. Some *desa adat*—notably in Penglipuran, Pemuteran, and parts of Nusa Penida—have asserted strong regulatory roles, while others have been bypassed by land-acquisition strategies that fragment customary jurisdiction (Cole, 2022; Wibawa & Antara, 2023). Understanding the conditions under which *desa adat* function as effective governance actors is therefore both theoretically and policy-relevant.

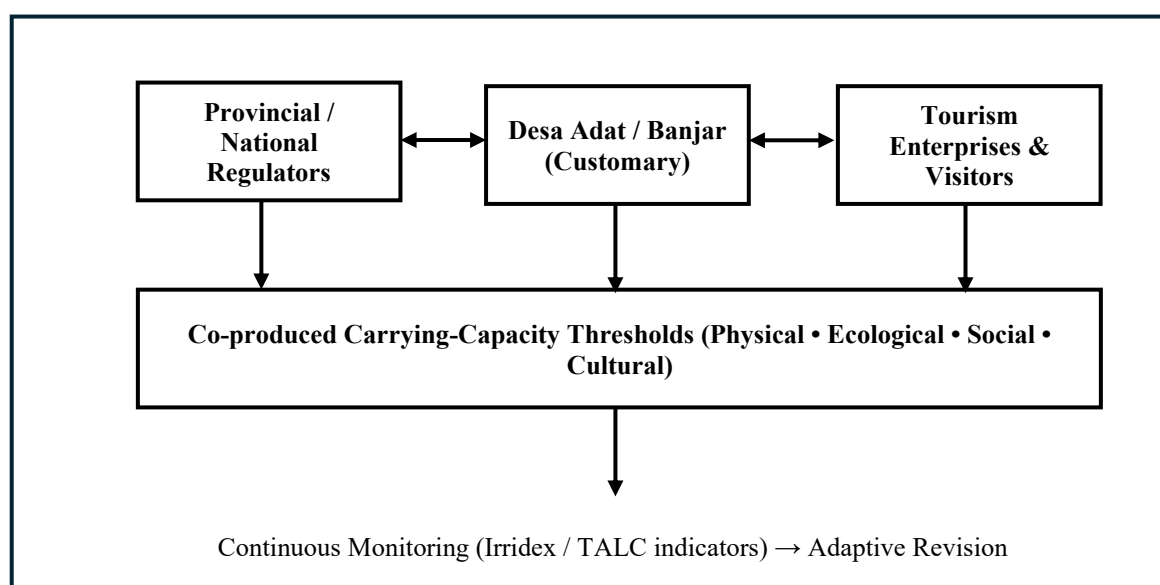
2.5 Theoretical Framework

This study integrates three theoretical lenses (Figure 1):

- **Stakeholder Theory** (Bertella & Vidmar, 2023; Maboloc, 2023) frames tourism governance as a multi-actor problem in which legitimacy depends on recognition of those who affect or are affected by tourism activities.
- **Polycentric Governance** (Boonstra & Joesse, 2023; Hall, 2023) provides a structural account of how multiple decision centers can coordinate without centralized hierarchy.
- **The Irridex and Tourism Area Life Cycle traditions** (Butler, 2024; Stylidis, 2022) supply a temporal account of how resident attitudes and destination dynamics evolve, signaling when reactive interventions are too late.

These lenses are synthesized into a working proposition: *carrying-capacity thresholds gain legitimacy and enforceability when (a) co-produced with customary institutions, (b) embedded in polycentric arrangements aligning authority with impact scales, and (c) responsive to evolving resident attitudes documented through ongoing monitoring.* This proposition guides the empirical analysis.

Figure 1. Conceptual framework: Community-Anchored Visitor Governance (CAVG)



3. Methodology

3.1 Research Paradigm and Design

The study adopts an *interpretivist* paradigm, premised on the view that visitor-management problems are constituted through stakeholders' situated meanings rather than discoverable independently of them (Creswell & Plano Clark, 2023). A *qualitative multi-site case-study design* (Yin, 2024) was selected to enable cross-context comparison while preserving the depth required for understanding customary institutions. Four sub-regions were purposively selected to span the diversity of Bali's tourism geography:

- **Ubud** (Gianyar): cultural-tourism hub with high resident-visitor entanglement;

- **Canggu** (Badung): rapidly touristifying coastal area with extensive villa development;
- **Sanur** (Denpasar): mature destination with comparatively strong *desa adat* coordination;
- **Nusa Penida** (Klungkung): peripheral island experiencing rapid post-2018 visitor growth.

This selection follows a *most-different* logic, enabling identification of governance patterns that hold across heterogeneous contexts (Yin, 2024).

3.2 Data Collection

Fieldwork was conducted between April 2025 and March 2026 in three phases. Phase 1 (April–June 2025) consisted of scoping visits and document collection. Phase 2 (July–December 2025) involved primary interviews and observation. Phase 3 (January–March 2026) comprised follow-up interviews and member-checking.

Semi-structured interviews (n = 38) were conducted with five stakeholder categories:

Stakeholder Category	Number	Selection Rationale
Customary leaders (<i>bendesa adat, kelian banjar</i>)	11	Authority over customary domains
Provincial and regency officials	6	Statutory regulatory roles
Tourism business operators	9	Direct interface with visitor flows
Civil-society and NGO representatives	5	Advocacy and watchdog functions
Long-term residents (non-elite)	7	Lived experience of impacts

Participants were recruited through purposive and snowball sampling. Interviews ranged from 45 to 120 minutes, were conducted primarily in Indonesian with occasional Balinese passages translated by a bilingual research assistant, and were audio-recorded with consent. An interview protocol with open-ended prompts addressing perceptions of carrying capacity, *desa adat* roles, and governance challenges was used flexibly.

Participant observation was conducted at 14 *banjar* meetings, 6 destination-management forums, and informal site visits to beaches, temples, and homestay clusters. Field notes were produced within 24 hours.

Document analysis covered 47 documents, including provincial regulations (e.g., Perda 4/2019, Pergub 28/2020), *awig-awig* texts shared by participants, destination master plans, NGO reports, and selected media coverage from 2020 to early 2026.

3.3 Data Analysis

Data were analyzed thematically using NVivo 14, following Braun and Clarke's (2022) reflexive thematic analysis combined with framework analysis (Braun & Clarke, 2022). A *hybrid deductive–inductive* coding strategy was used: an initial code book derived from the theoretical framework (stakeholders, polycentric arrangements, capacity dimensions, Irridex stages) was complemented by inductive codes emerging from the data. Two coders

independently coded a 20% subset; intercoder agreement reached 0.81 (Cohen's κ), with discrepancies resolved through discussion. Themes were iteratively refined through analytic memoing.

3.4 Trustworthiness

Following established qualitative trustworthiness criteria as elaborated by Stahl and King (2023), trustworthiness was addressed through:

- **Credibility:** triangulation across interview, observation, and document data; member-checking with 12 participants;
- **Transferability:** thick description of each sub-region;
- **Dependability:** maintenance of an audit trail including field notes, coded extracts, and analytic memos;
- **Confirmability:** reflexive journaling by the researcher, who is Indonesian but non-Balinese, attending to outsider positionality.

4. Findings

Four interrelated themes were identified: (1) the eroding legitimacy of numerical capacity logics; (2) *desa adat* as latent governance infrastructure; (3) friction zones in polycentric coordination; and (4) emerging hybrid practices of co-produced thresholds.

4.1 Theme 1: The Eroding Legitimacy of Numerical Capacity Logics

Across all four sites, numerical carrying-capacity statements—particularly those circulated through provincial communications and media—were viewed with skepticism by both residents and operators. Three sub-themes emerged.

4.1.1 Mismatch with Lived Experience

Residents repeatedly contrasted official figures with sensory and temporal experiences of saturation. As a *banjar* member in Canggu observed:

"They say the number is fine, the road can hold this many cars. But I cannot get to the temple on time anymore. My mother cannot get to the clinic. The number does not see me." (R-CG-04, resident, Canggu)

Across interviews, participants distinguished between *aggregate adequacy* and *peak-hour collapse*, suggesting that mean-based capacity statements obscure the temporal patterns that most affect daily life.

4.1.2 Spatial Aggregation Errors

Officials themselves acknowledged the limits of regency-scale capacity calculations. A district planner in Klungkung explained that island-level capacity figures for Nusa Penida were "useful for press releases, not for managing Crystal Bay on a Saturday morning" (O-NP-02). This pattern aligns with the literature on scale mismatches (Boonstra & Joose, 2023; Hall, 2023).

4.1.3 Capacity as Post-Hoc Justification

A recurring observation was that capacity figures were generated *after* development decisions, not before. Several participants described capacity reports being commissioned to legitimize already-approved hotel licenses. This perception, regardless of its empirical accuracy in particular cases, materially undermined trust in capacity-based governance.

4.2 Theme 2: *Desa Adat* as Latent Governance Infrastructure

Customary institutions emerged as the most consistently identified—yet structurally underutilized—governance asset.

4.2.1 Existing Regulatory Reach

In all four sites, *desa adat* exercised tangible regulatory authority over specific domains: temple-area dress codes, ritual-day road closures, beach access, and increasingly, short-term rental approvals. Sanur's *desa adat* federation has issued unified *awig-awig* on visitor conduct in temple zones since 2022. Penida's *desa adat* in several locations restrict access to sacred sites and have negotiated visitor caps with tour operators independent of provincial frameworks.

4.2.2 Capacity Gaps and Resource Asymmetries

Yet customary leaders consistently reported being under-resourced for the regulatory expectations placed on them. A *bendesa adat* in Ubud noted:

"They give us responsibility, but not money, not training, not data. We do everything from our own pockets and our own time, while villas charge ten million rupiah a night." (C-UB-03, customary leader, Ubud)

The asymmetry between commercial scale and customary resources was a structural concern across sites.

4.2.3 Internal Heterogeneity

Customary institutions are not monolithic. In Canggu, several customary leaders had themselves entered tourism-related land transactions, complicating their regulatory posture. In Nusa Penida, intergenerational tensions surfaced between older leaders cautious of rapid change and younger members seeking livelihood opportunities. These dynamics suggest that romanticizing *desa adat* as uniformly conservation-oriented is empirically untenable.

4.3 Theme 3: Friction Zones in Polycentric Coordination

Three friction zones structured the relationship between customary, statutory, and corporate authority.

4.3.1 Land-Use Permitting

Statutory zoning and licensing decisions are issued at the regency or provincial level, often without binding consultation with *desa adat*. This produced repeated conflicts in Canggu and Nusa Penida, where customary objections to specific developments were procedurally acknowledged but rarely consequential. A regency planner conceded: "*We hear them, but our framework does not require us to act on what we hear*" (O-BD-01).

4.3.2 Water and Waste Infrastructure

Watershed management for Bali's southern aquifers and beach-waste regimes for the south coast extend across multiple administrative units. Customary institutions tend to operate at the village scale, while pressures arise at the watershed and coastal-cell scales. This *cross-scale mismatch* (Boonstra & Joesse, 2023) produces both gaps and overlaps.

4.3.3 Digital-Platform Mediation

Short-term rental platforms and social-media-driven visitor flows operate transnationally, with regulatory levers held neither by *desa adat* nor by provincial agencies in any consistent manner. Several participants described feeling "regulated by Instagram rather than by anyone we elected" (B-CG-02).

4.4 Theme 4: Emerging Hybrid Practices of Co-produced Thresholds

Despite frictions, the data revealed concrete instances of co-produced thresholds with promising legitimacy and enforceability.

4.4.1 The Sanur Beach Federation Model

Eleven *desa adat* in greater Sanur have jointly negotiated daily visitor limits at three high-pressure beach zones, paired with hourly throughput indicators co-monitored by *pecalang* (customary security) and tourism-office staff. Thresholds are revised quarterly. While imperfect, the model couples a quantitative cap with a relational governance process that lends it traction.

4.4.2 Penida's Sacred-Site Visitor Booking

In Nusa Penida, two *desa adat* have implemented advance-booking systems for sacred sites, with revenues circulating into village funds for ritual maintenance and waste management. The capacity figure (e.g., 600 visitors/day at one site) is published and enforced; revenues create stakes for compliance.

4.4.3 Ubud's Cultural-Performance Calendar

Performing-arts venues coordinated with *banjar* schedules to manage co-occurrence of ritual and tourist performances. Where calendars conflicted, customary obligations took precedence; where they aligned, cross-promotion enhanced both. This temporal capacity tool—largely invisible in formal capacity literature—proved more influential on visitor distribution than zoning maps.

These cases, summarized in Table 1, illustrate that effective thresholds are typically *bundled* with relational, financial, and informational mechanisms rather than standing alone.

Table 1. *Comparative summary of co-produced threshold practices across four sub-regions*

Sub-region	Threshold type	Customary actor	Statutory partner	Enforcement mechanism	Observed legitimacy
Sanur	Daily beach visitor caps	11 <i>desa adat</i> federation	Denpasar tourism office	Joint <i>pecalang</i> + officer patrols	High
Nusa Penida	Sacred-site daily quotas	2 <i>desa adat</i>	Klungkung regency tourism unit	Booking system + village fund	Medium-High
Ubud	Temporal performance calendar	<i>Banjar</i> network	Gianyar cultural office	Reputational + scheduling	Medium
Canggu	(Emerging) villa moratorium discussions	Selected <i>banjar</i>	Badung regency (limited)	Weak; under negotiation	Low-Medium

5. Discussion

The findings substantiate and extend three lines of argument in sustainable tourism scholarship.

5.1 Carrying Capacity as Relational, Not Engineering, Construct

The data corroborate longstanding critiques that carrying capacity, when treated as an objective number, fails to capture the temporal, spatial, and value-laden dimensions of tourism impacts (Butler, 2024; Manning, 2022). Yet the findings also resist a wholesale rejection of capacity logic. In all four study sites, stakeholders—including customary leaders—actively used numerical thresholds as communicative and operational tools. The decisive question is not whether to quantify, but *who* quantifies, *with whom*, and *for what relational purpose*.

This reframes carrying capacity as a *relational construct*: thresholds gain legitimacy and enforceability through processes of co-production rather than through methodological sophistication alone. The Sanur Beach Federation case illustrates that a relatively simple cap, anchored in customary deliberation and joint enforcement, achieves more than methodologically elegant figures imposed unilaterally. This finding aligns with Sæþórsdóttir et al.'s (2022) and Manning's (2022) emphasis on social acceptability as integral to capacity-based management, and extends them by foregrounding customary—rather than merely "community"—institutions.

5.2 Polycentric Governance and Scale Alignment

The friction zones identified in Section 4.3 are recognizable as *cross-scale mismatches* in the sense developed by Boonstra and Joosse (2023) and applied to tourism by Hall (2023) and Nunkoo et al. (2024). The mismatch operates in both directions: customary institutions

sometimes operate at scales narrower than the relevant impact domain (e.g., watersheds), while provincial frameworks operate at scales broader than the relevant social fabric (e.g., a single beach access point).

Polycentric governance offers a structural response by enabling *partially nested* decision centers, each with authority calibrated to a particular scale and domain (Dredge & Saarinen, 2023; Hall, 2023). The Sanur federation approximates this design at the inter-*desa-adat* scale; Penida's booking system approximates it at the village-domain scale. The CAVG framework introduced in Section 2.5 generalizes these patterns.

A critical caveat is that polycentricity is not self-organizing. The findings show that effective polycentric arrangements emerge where (i) statutory actors actively cede operational space to customary actors; (ii) financial mechanisms (e.g., visitor fees, village funds) align incentives across centers; and (iii) intermediary actors—NGOs, universities, destination management organizations—facilitate translation across normative vocabularies. Where any of these conditions is absent, polycentricity risks devolving into fragmentation, as observed in Canggu.

5.3 Re-positioning Customary Institutions in Tourism Governance

The findings caution against two opposing simplifications. The first romanticizes *desa adat* as inherently sustainability-aligned; the second dismisses them as ceremonial residues unsuited to managing modern tourism economies. Neither survives empirical contact. Customary institutions in Bali are heterogeneous, internally contested, and increasingly embedded in tourism markets—but they are also operationally consequential and capable of generating thresholds with high local legitimacy.

This empirical complexity carries theoretical weight. It suggests that stakeholder theory, when applied to settings of legal pluralism, must move beyond cataloguing actor categories toward analyzing *normative infrastructures*—the rule systems, sanctions, and rituals through which authority is enacted (Khoiriati et al., 2023; Putra et al., 2023). The Irridex tradition retains diagnostic value but underspecifies the institutional channels through which resident discontent translates into governance change. The CAVG framework explicitly couples Irridex-style monitoring with polycentric institutional design, addressing this gap.

5.4 Sustainability Pillars and SDG Alignment

The findings traverse all three sustainability pillars. *Environmentally*, co-produced thresholds in Sanur and Penida have demonstrably reduced peak-hour pressures on beach and reef ecosystems, contributing to SDG 14 indicators. *Socio-culturally*, the centring of customary calendars in Ubud preserves the integrity of ritual life under tourism pressure, advancing SDG 11.4 on safeguarding cultural heritage. *Economically*, village-fund mechanisms recirculate visitor revenues into community-controlled infrastructure, supporting SDG 8.9 on sustainable tourism that creates jobs and promotes local culture.

A critical tension nonetheless remains. Stronger customary regulation in some sub-regions has not noticeably reduced aggregate visitor pressures at the provincial scale, where market and infrastructural forces continue to expand carrying loads. This points to a *vertical scale-up problem*: localized governance achievements can be diluted by macro-scale dynamics unless complemented by provincial-level instruments such as accommodation moratoria,

infrastructure-impact fees, and platform regulation. The CAVG framework explicitly retains a provincial-national tier for precisely this reason.

5.5 Trade-offs, Contradictions, and Reflexive Considerations

Three trade-offs warrant explicit acknowledgement. First, strengthening *desa adat* governance can intensify *intra-customary* inequalities if elite capture is not addressed; participatory protocols within *banjar* are therefore not optional embellishments but core design requirements. Second, visitor-fee mechanisms generate revenues but may also commodify access to sacred space—a dilemma on which interviewed customary leaders differed substantively. Third, scale alignment in one domain (e.g., beach use) may misalign with another (e.g., labor mobility), suggesting that no single governance configuration optimizes across all dimensions.

The researcher's positionality also shaped the analysis. As an Indonesian non-Balinese scholar based in Jakarta, the author benefited from linguistic and contextual proximity but lacked the embedded vantage of Balinese-born researchers. Triangulation, bilingual research assistance, and member-checking partially mitigated this distance. The findings are nonetheless an *outsider-with-proximity* account and should be read alongside Balinese-authored scholarship (e.g., Putra et al., 2023; Wibawa & Antara, 2023).

6. Conclusion

This study set out to interrogate the limits of carrying-capacity logics in Bali's overtourism crisis and to examine how community-based governance, anchored in customary institutions, might reconfigure visitor management. Drawing on a multi-site qualitative case study across Ubud, Canggu, Sanur, and Nusa Penida, three findings stand out. First, numerical carrying-capacity statements have lost legitimacy when produced unilaterally by statutory actors, but they retain operational value when co-produced with customary institutions. Second, *desa adat* and their *banjar* sub-units constitute latent governance infrastructure capable of generating context-sensitive thresholds, though they are structurally under-resourced. Third, polycentric arrangements that align decision authority with the spatial and cultural scale of impacts—exemplified by the Sanur Beach Federation and Penida's sacred-site booking systems—offer the most promising path beyond the current impasse.

The article's *theoretical contribution* lies in re-conceptualizing carrying capacity as a relational, co-produced construct nested within polycentric governance, rather than as a stand-alone engineering parameter. The *Community-Anchored Visitor Governance* (CAVG) framework operationalizes this re-conceptualization, integrating stakeholder theory, polycentric governance, and Irridex/TALC monitoring into a single analytic and design instrument applicable beyond Bali.

Practical and policy implications include: (i) statutory recognition of *desa adat* roles in tourism licensing and visitor-flow regulation, with corresponding budget transfers; (ii) institutionalization of inter-village federations to address watershed- and coastal-scale impacts; (iii) mandatory co-production protocols for capacity assessments, including customary participation from inception; (iv) provincial-level instruments—accommodation moratoria, platform-rental regulation, infrastructure-impact fees—to address macro-scale dynamics; and

(v) capacity-building investments enabling *desa adat* to access data, legal advice, and monitoring technology.

Limitations include the qualitative case-study design's inherent constraints on statistical generalization and the specific window of post-pandemic recovery during which fieldwork occurred. The four sites, while diverse, do not exhaust Bali's heterogeneity, and tourism-dependent districts in northern and western Bali remain underexplored. The study did not include systematic visitor-side data, focusing instead on stakeholders shaping governance.

Future research should pursue four directions. First, longitudinal studies tracking the durability of co-produced thresholds across multiple seasons and political cycles. Second, comparative work across Southeast Asian island destinations (e.g., Boracay, Phuket, Lombok) to test the CAVG framework's transferability. Third, quantitative modeling that integrates customary-rule variables into carrying-capacity simulations. Fourth, deeper engagement with intra-customary inequalities, particularly along gender and generational lines, to ensure community-based governance models do not reproduce internal exclusions.

Bali's overtourism crisis is unlikely to be resolved by better numbers alone. It calls for governance imagination capable of holding together quantitative thresholds and relational legitimacy, statutory authority and customary jurisdiction, global mobility and local agency. The communities that have shaped Bali's landscape over centuries are not obstacles to sustainable tourism; they are, on the evidence presented here, indispensable to it.

References

Bali Provincial Tourism Office. (2026). *Annual tourism statistics report 2025*. Denpasar: Dinas Pariwisata Provinsi Bali.

Bertella, G., & Vidmar, B. (2023). Stakeholder theory in sustainable tourism: A critical revisit. *Tourism Management Perspectives*, 47, 101133.
<https://doi.org/10.1016/j.tmp.2023.101133>

Boonstra, W. J., & Joosse, S. (2023). The social dynamics of cross-scale governance in marine and coastal contexts. *Ecology and Society*, 28(2), 20. <https://doi.org/10.5751/ES-14068-280220>

Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE.

Butler, R. W. (2024). Tourism, planning and place: Reflections after fifty years. *Tourism Geographies*, 26(1), 1–14. <https://doi.org/10.1080/14616688.2023.2270571>

Cheer, J. M., Milano, C., & Novelli, M. (2023). Overtourism revisited: Pandemic interruption and the politics of recovery. *Annals of Tourism Research*, 99, 103534.
<https://doi.org/10.1016/j.annals.2023.103534>

Cole, S. (2022). Water and tourism in Bali: A political ecology of dispossession. *Annals of Tourism Research*, 96, 103447. <https://doi.org/10.1016/j.annals.2022.103447>

- Creswell, J. W., & Plano Clark, V. L. (2023). *Designing and conducting mixed methods research* (4th ed.). SAGE.
- Dredge, D., & Saarinen, J. (2023). Tourism governance: New directions and continuing challenges. *Journal of Sustainable Tourism*, 31(8), 1791–1808.
<https://doi.org/10.1080/09669582.2023.2214138>
- Hall, C. M. (2023). Tourism, the Anthropocene and the SDGs: Beyond the 2030 horizon. *Journal of Sustainable Tourism*, 31(8), 1845–1862.
<https://doi.org/10.1080/09669582.2023.2218351>
- Hampton, M. P., & Jeyacheya, J. (2024). Power, ownership and tourism in small islands. *Annals of Tourism Research*, 104, 103692. <https://doi.org/10.1016/j.annals.2023.103692>
- Hampton, M. P., Jeyacheya, J., & Lopa, A. R. M. (2022). Tourism, governance and small islands. *Tourism Geographies*, 24(1), 1–22. <https://doi.org/10.1080/14616688.2021.2008010>
- Higgins-Desbiolles, F., Bigby, B. C., & Doering, A. (2022). Socialising tourism after COVID-19: Reclaiming tourism as a social force. *Journal of Tourism Futures*, 8(2), 208–219. <https://doi.org/10.1108/JTF-03-2021-0058>
- Khoiriati, S. D., Krisnajaya, I. M., & Yuniarti, R. (2023). Customary institutions and rural tourism governance in Eastern Indonesia. *Journal of Rural Studies*, 102, 103098.
<https://doi.org/10.1016/j.jrurstud.2023.103098>
- Koens, K., Klijs, J., & Weber-Sabil, J. (2022). Reframing the visitor pressure narrative: Beyond overtourism. *Tourism Geographies*, 24(2-3), 363–384.
<https://doi.org/10.1080/14616688.2021.1985694>
- Lasso, A. H., & Dahles, H. (2023). A community perspective on local ecotourism development: Lessons from Komodo National Park, Indonesia. *Tourism Geographies*, 25(2–3), 537–559. <https://doi.org/10.1080/14616688.2021.1953123>
- Maboloc, C. R. (2023). Stakeholder theory revisited: A critique on tourism's value capture. *Journal of Sustainable Tourism*, 31(11), 2452–2467.
<https://doi.org/10.1080/09669582.2022.2107669>
- Manning, R. E. (2022). *Studies in outdoor recreation: Search and research for satisfaction* (4th ed.). Oregon State University Press.
- Milano, C., Cheer, J. M., & Novelli, M. (2023). Overtourism, place attachment and the politics of place: A research agenda. *Annals of Tourism Research*, 100, 103569.
<https://doi.org/10.1016/j.annals.2023.103569>
- Mtapuri, O., & Giampiccoli, A. (2023). Community-based tourism: A new conceptualization. *Tourism, Culture & Communication*, 23(2-3), 121–136.
<https://doi.org/10.3727/109830422X16600594683607>

- Nguyen, T. Q. T., Young, T., Johnson, P., & Wearing, S. (2022). Conceptualising networks of community-based tourism. *Journal of Sustainable Tourism*, 30(11), 2519–2539. <https://doi.org/10.1080/09669582.2021.1995398>
- Niewiadomski, P. (2022). Tourism and the post-pandemic order: Continuities, discontinuities and the question of recovery. *Tourism Geographies*, 24(4-5), 644–663. <https://doi.org/10.1080/14616688.2022.2082514>
- Nunkoo, R., Bhatia, V., & Lee, V. (2024). Trust, governance and sustainable tourism: A multilevel analysis. *Tourism Management*, 100, 104826. <https://doi.org/10.1016/j.tourman.2023.104826>
- Picard, M. (2023). Re-staging Balinese identity: Tourism, ritual and the politics of culture. *Asia Pacific Journal of Anthropology*, 24(5), 537–559. <https://doi.org/10.1080/14442213.2023.2247809>
- Pratt, S., & Higgins-Desbiolles, F. (2024). Indigenous tourism, sovereignty and self-determination. *Tourism Management*, 102, 104883. <https://doi.org/10.1016/j.tourman.2024.104883>
- Putra, I. N. D., Verheijen, B., Ardika, I. W., & Yanthy, P. S. (2023). Indigenous communities and tourism governance in eastern Indonesia. *Asia Pacific Journal of Anthropology*, 24(3), 245–263. <https://doi.org/10.1080/14442213.2023.2202417>
- Sæþórsdóttir, A. D., Hall, C. M., & Wendt, M. (2022). Iceland's tourism: Re-evaluating overtourism in the post-pandemic period. *Sustainability*, 14(8), 4506. <https://doi.org/10.3390/su14084506>
- Sequera, J., & Nofre, J. (2022). Touristification, gentrification and urban transformation in southern European cities. *Urban Studies*, 59(15), 3092–3111. <https://doi.org/10.1177/00420980211038833>
- Sharpley, R. (2023). Tourism and sustainability: Foundations and futures. *Tourism Recreation Research*, 48(3), 311–325. <https://doi.org/10.1080/02508281.2023.2186620>
- Stahl, N. A., & King, J. R. (2023). Expanding approaches for trustworthiness in qualitative research. *Journal of Developmental Education*, 46(1), 26–28.
- Stylidis, D. (2022). Residents' destination image and place attachment: Examining their inter-relationships and their effect on residents' support for tourism. *International Journal of Tourism Research*, 24(5), 727–742. <https://doi.org/10.1002/jtr.2541>
- Suriyani, L. D. (2024). Bali's tourism levy and code of conduct: Early lessons from policy implementation. *Bali Studies Journal*, 14(2), 211–230.
- Sutawa, G. K. (2023). Issues and prospects of community-based tourism development in Bali. *Journal of Tourism, Culinary and Entrepreneurship*, 3(1), 49–66.

UNWTO. (2024). *International tourism highlights, 2024 edition*. World Tourism Organization. <https://doi.org/10.18111/9789284425273>

Veríssimo, M., Costa, C., & Breda, Z. (2023). Overtourism and tourismphobia: An updated systematic review. *Current Issues in Tourism*, 26(13), 2173–2190. <https://doi.org/10.1080/13683500.2022.2086455>

Wibawa, I. P. S., & Antara, M. (2023). Customary village governance and tourism: Reassessing the role of *desa adat* in Bali's destination management. *Asia Pacific Journal of Tourism Research*, 28(7), 691–708. <https://doi.org/10.1080/10941665.2023.2241125>

Wijesinghe, S. N. R., Mura, P., & Tavakoli, R. (2024). Indigenous epistemologies in tourism research. *Tourism Recreation Research*, 49(1), 21–36. <https://doi.org/10.1080/02508281.2023.2186629>

Yin, R. K. (2024). *Case study research and applications: Design and methods* (7th ed.). SAGE.

Zacarias, D., Loyola, R., & Williams, A. (2023). Visitor flow management on small islands: A systematic review. *Tourism Review*, 78(4), 1085–1104. <https://doi.org/10.1108/TR-09-2022-0431>