Bulletin of Social Studies and Community Development

ISSN: 3025-6798 | Journal's DOI: 10.61436/bsscd

Homepage: https://imrecsjournal.com/journals/index.php/bsscd

Stakeholder Collaboration in Sustainable Marine Tourism Development at Pulau Merah Beach, Indonesia: A Literature Review

Lunariana Lubis[1], Tito Mariano Yesayabela[1,*], M. Husni Thamrin[1], Deasy Arieffiani[1], & Ahmad Haruna Abubakar[2]

[1]Department of Public Administration, Universitas Hang Tuah, Indonesia

[2]School of Business and Professional Studies, Management and Science University, Malaysia

ARTICLE INFO

Article History:

Received: 20 June 2026

Accepted: 25 July 2026

Published: 01 September 2026

Keywords:

Collaborative governance;
Marine tourism;
Destination management
Organization;
Carrying capacity.

Corresponding Author:

tito.fisip20@hangtuah.ac.id

ABSTRACT

This systematic literature review examines stakeholder collaboration in sustainable marine tourism development at Pulau Merah Beach, Banyuwangi, by identifying structural barriers to effective collaborative governance and proposing an integrated management model to ensure long-term socio-ecological sustainability. Employing a Systematic Literature Review (SLR) methodology guided by the PRISMA 2020 framework, this study synthesizes peer-reviewed literature published over the past decade (2014–2025). The data were synthesized through the theoretical lenses of Interpretive Structural Modeling (ISM) and Collaborative Governance Theory. The main findings reveal that Pulau Merah's current governance architecture is inherently multijurisdictional and highly fragmented into a complex, six-tier institutional hierarchy. This fragmentation creates overlapping authority among key entities such as DISBUDPAR, BAPPEDA, and Perhutani, exacerbated by a critical deficit of micro-level Standard Operating Procedures (SOPs). Consequently, this administrative friction inadvertently prioritizes mass tourism volume over necessary ecological carrying capacity limits. Furthermore, while strong facilitative executive leadership successfully accelerated initial tourism development, it has fostered a delegative democracy that weakens legislative checks and balances, thereby posing systemic risks to long-term institutional continuity. In conclusion, addressing these structural vulnerabilities requires a fundamental institutional reconfiguration. The study concludes that policymakers must establish an Integrated Destination Management Organization (DMO) to consolidate administrative mandates and eliminate jurisdictional overlaps. This must be accompanied by enforceable SOPs with strict ecological limits and a cross-sectoral trust fund mechanism to sustainably finance grassroots conservation efforts driven by local communities.

To cite this article:

Lubis, L., Yesayabela, T. M., Thamrin, M. H., Arieffiani, D., & Abubakar, A. H. (2026). Stakeholder collaboration in sustainable marine tourism development at pulau merah beach, indonesia: A literature review. *Bulletin of Social Studies and Community Development*, *5*(3), 312-326. doi: https://doi.org/10.61436/bsscd/v5i3.pp312-326

This is an open access article under the CC BY SA licence (https://creativecommons.org/licenses/by-sa/4.0).

■ INTRODUCTION

The global shift toward a Blue Economy framework has moved marine and coastal areas beyond their traditional role as resource-extraction zones, positioning them instead as sites of sustainable socio-economic development (Ahmadi et al., 2024). Marine tourism sits at the center of this shift: it draws on coastal biodiversity, coastal landscapes, and local cultural heritage to generate economic returns while requiring ecological integrity to be maintained over time (Dwi et al., 2024). Indonesia, an archipelagic nation with more than 16,000 islands and substantial marine biodiversity, has identified sustainable marine tourism as a key mechanism for regional development, poverty reduction, and conservation. This is reflected in national policy: the Ministry of Tourism and Creative Economy's 2020-2024 Strategic Plan and Presidential Regulation (Perpres) No. 80 of 2019 both call for accelerated, inclusive maritime economic development alongside strict marine spatial planning protections. The 2020-2024 National Medium-Term Development Plan (RPJMN), coordinated by the Coordinating Ministry for Maritime Affairs and Investment (Kemenko Marves) and Bappenas, positions the blue economy as central to national resilience (Mahrudin et al.,

2025; Prihantika et al., 2023).

Within this national push, Banyuwangi Regency in East Java has become a reference point for innovation in regional tourism governance (Rahman & Usman, 2022). Once a low-profile transit stop on Java's eastern tip, Banyuwangi built its current tourism profile through destination branding, community empowerment programs, and conservation-oriented policy (Fitroh et al., 2023). Pulau Merah Beach is the most prominent site in this portfolio. Its 200-meter coastal hill with red-brown soil, wide stretches of white sand, and internationally known surf breaks make it a socio-ecological system shaped by overlapping interests and users. The area's history includes the 1994 tsunami, which caused serious damage to both the coastline and the surrounding community and required years of physical and economic rebuilding. Today, Pulau Merah runs on a Community-Based Tourism (CBT) model, has hosted international surfing competitions with entrants from 15 countries, and draws local micro, small, and medium enterprises (MSMEs) into its tourism supply chain (Sumarmi et al., 2021).

A 2017 report from the Banyuwangi Regency Culture and Tourism Office (Disbudpar) recorded more than 402,017 visitors to the area annually before the pandemic, and this growth brought managerial and ecological strain. Much of that strain stems from fragmented destination governance. Marine tourism at Pulau Merah spans several jurisdictions: inland forest areas under the state-owned company Perhutani (Wahyuni & Sutedjo, 2018), marine zones under national and provincial regulation, and local administration split between village and district government. Research on sustainable tourism management points to multistakeholder collaboration as a requirement for balancing the Triple Bottom Line of environmental, economic, and social outcomes. In practice, collaborative governance in coastal destinations across developing countries often faces structural complexity, uneven power dynamics, overlapping institutional authority, and a shortage of Standard Operating Procedures (SOPs) (Parmawati et al., 2021; Rangkuti et al., 2025).

At Pulau Merah, tourism's economic benefits show up in the growing number of local homestays and in residents' entrepreneurial activity. However, questions about the ecosystem's carrying capacity and long-term resilience are growing more urgent. Unmanaged tourism can degrade coral reefs, increase marine pollution, and put conservation goals in direct tension with economic use of the area (Yahya et al., 2025). Without stronger coordination among institutions, the destination risks losing the natural assets that draw visitors in the first place, a pattern seen in other coastal areas that were overexploited once tourism scaled up. Mapping how stakeholders relate to one another, identifying where current collaborative arrangements fall short, and working out governance options to address this are therefore both research questions and practical priorities for Pulau Merah's management (Setiawan et al., 2017).

This review brings together existing research on stakeholder collaboration in marine tourism development at Pulau Merah. It maps the institutional hierarchy involved, reviews socio-economic and ecological impact data, and applies a collaborative governance framework to identify where synergy breaks down and to propose an integrated management model. The review also places Pulau Merah's situation alongside national and international cases, examining how decentralized stakeholder networks might be reorganized to support the destination's long-term viability. Two questions guide the analysis: (1) what institutional and structural barriers stand in the way of effective collaborative governance among Pulau Merah's stakeholders, and (2) how can the existing decentralized stakeholder networks be reconfigured into an integrated management model that supports the destination's socio-economic and ecological sustainability?

■ METHOD

Research Design

This study used a Systematic Literature Review (SLR) approach guided by the PRISMA 2020 protocol (Respati et al., 2025), chosen for its structured process of identifying, screening, and synthesizing prior research. The review was scoped to pull together four strands of evidence on Indonesian marine tourism at Pulau Merah Beach, Banyuwangi Regency: institutional governance arrangements, socio-economic impact data, ecological conservation practices, and collaborative theory (Suhendrinal et al., 2024).

Search and Selection Strategy

Literature was drawn from three databases: Scopus and Web of Science (WoS) for internationally peer-reviewed frameworks, and the Science and Technology Index (SINTA), Indonesia's national indexing system under the Ministry of Education, Culture, Research, and Technology, for locally grounded empirical work. Searches ran between January 15 and February 15, 2026. Journals accredited

SINTA 1 or SINTA 2 were prioritized to keep the domestic tourism-policy literature methodologically sound (Asmoro & Cahyadi, 2022; Dwi Puspita & Irsyadul Ibad, 2025; Rahman & Usman, 2022). Before any screening, this search returned 30 raw records.

The search string combined Boolean operators across four thematic axes: collaboration, marine tourism, conflict management, and location. Two query variants were applied: a) ("Stakeholder Collaboration" OR "Collaborative Governance" OR "Co-creation" OR "Conflict Management") AND ("Marine Tourism" OR "Coastal Tourism" OR "Ecotourism" OR "Surf Tourism" OR "Blue Economy") AND ("Indonesia" OR "Banyuwangi" OR "Pulau Merah") (Sari, 2024); b) ("Sustainable Tourism" OR "Pariwisata Berkelanjutan") AND ("Institutional Relationship" OR "Interpretive Structural Modeling") AND "Banyuwangi" (Rahman & Usman, 2022; suhendrinal et al., 2024).

Inclusion and Exclusion Criteria

The search window was limited to 2014–2025, a range chosen to align with two turning points in Banyuwangi's tourism sector: the 2014 agreement between Perhutani and the Regency Government that opened the area to organized development, and the subsequent uptake of sustainable-development frameworks in the coastal sector.

The systematic selection process, quantifying the literature from initial identification to final inclusion, is visualized in the PRISMA flow diagram below:

Data Analysis

Screening records the full count at each screening stage in Figure 1. The three databases together returned 36 records (Scopus, n = 12; Web of Science, n = 9; SINTA, n = 15). After removing 6 duplicates, 30 unique records remained. A title-and-abstract screen dropped 11 as off-topic, and full texts were sought for the remaining 19. Two could not be obtained, leaving 17 for full-text assessment. Reading those against the inclusion and exclusion criteria excluded a further 5: two did not address collaborative governance or stakeholder dynamics, two fell outside a coastal or marine setting, and one was grey literature or an abstract only, with too little methodological detail to assess. That left 12 studies for synthesis. From each, extraction covered five variables: the stakeholder taxonomy, structural barriers to collaboration, economic valuation metrics, indicators of environmental degradation or conservation, and the governance models proposed (Giffari et al., 2025; Suhendrinal et al., 2024).

As a systematic literature review, this study performs no original ISM analysis and builds no new ISM matrix. The ISM findings discussed later are drawn from the primary studies and credited to their original authors (notably Praswati et al., 2019; Parmawati et al., 2021). Three theoretical lenses from the retained literature were used to organize the synthesis: a) Interpretive Structural Modeling (ISM), which is commonly used in regional institutional analysis to map hierarchical relationships among regulatory bodies; ISM converts loosely defined mental models into a

Table 1. Inclusion and exclusion criteria

Criteria Category	Inclusion Criteria	Exclusion Criteria
Thematic Coverage	Studies that analyze stakeholder dynamics, institutional arrangements, ecotourism impacts, or coastal marine governance.	General tourism studies without a focus on coastal, marine, or collaborative governance management.
Geographic Focus	The main focus is on Pulau Merah, Banyuwangi, or highly relevant comparative coastal sites in Indonesia (e.g., Mentawai, Labuan Bajo) and globally.	Inland, urban, or non-coastal tourism destinations without marine tourism elements.
Methodological Rigor	Empirical research (qualitative, quantitative, mixed methods), systematic reviews, and government policy analysis.	Non-peer-reviewed non-scientific articles, opinion pieces, unverified blogs, or conference proceedings that are only abstracts.
Language and Indexing	Articles published in English or Indonesian, indexed in Scopus or SINTA (prioritized quartiles Q1-Q4/S1-S2).	Unindexed grey literature with unverifiable methodological rigor.

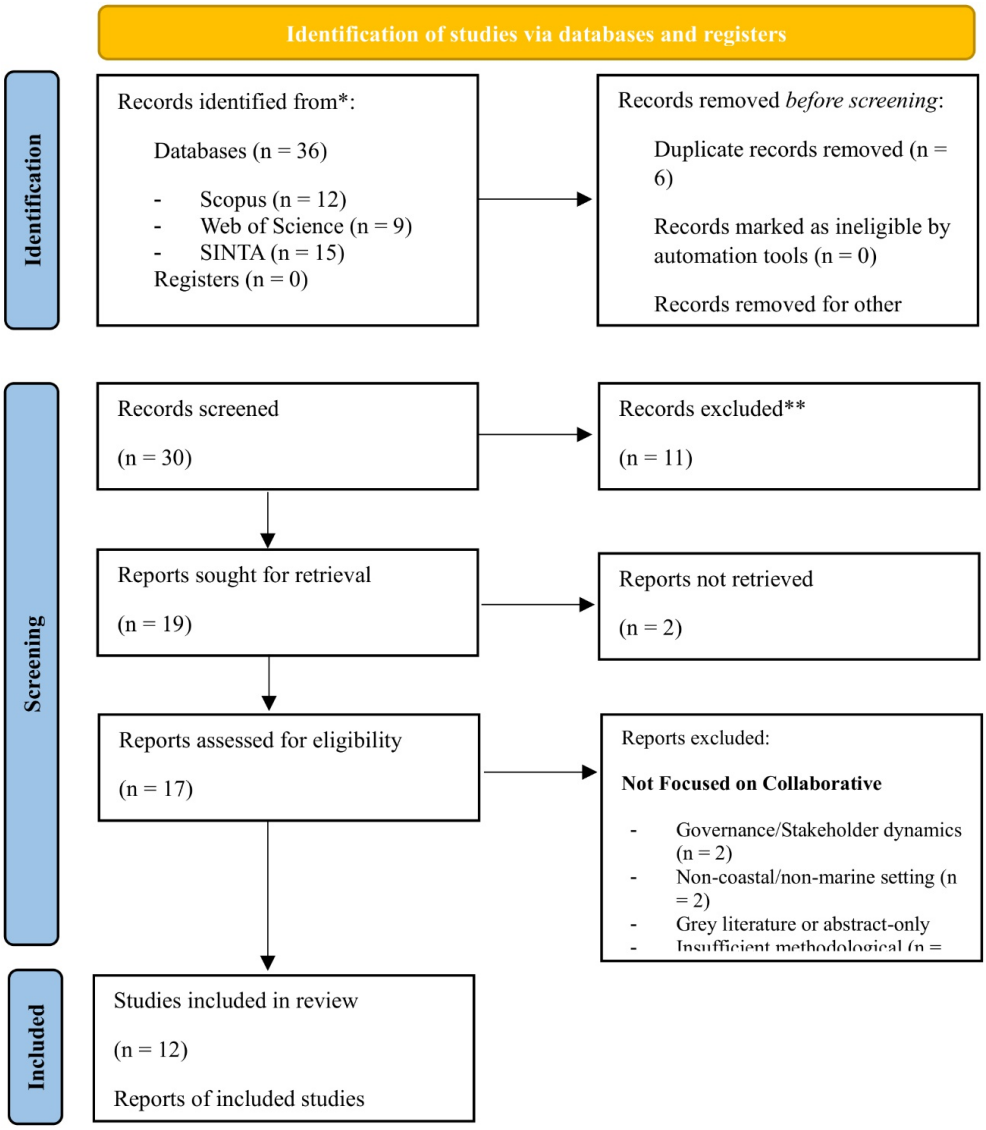


Figure 1. PRISMA flow diagram

structured hierarchy that separates driving elements from dependent variables in a tourism management system (Parmawati et al., 2021; Praswati et al., 2019); b) Collaborative Governance Theory, built on Ansell and Gash's (2008) four core dimensions, applied here to assess trust-building, facilitative leadership, institutional design, and the iterative collaborative process among actors in Indonesia's coastal sector (Mahadiansar et al., 2023; Sinaga, 2021); c) System Dynamics and Carrying Capacity, drawn from comparative studies such as Labuan Bajo, used to examine the ecological thresholds and feedback loops that determine how much tourist volume the site's biodiversity can sustain (Mahadiansar et al., 2023).

Data synthesis followed a qualitative-descriptive approach: extracted material was coded into recurring themes (government-community interaction, spatial regulation, and industry impact) to build a picture of how Pulau Merah's tourism ecosystem actually operates and what it needs going forward (Handini et al., 2025).

■ RESULT AND DISCUSSION

Applying the PRISMA extraction protocol produced a detailed picture of who governs Pulau Merah and how the different actors relate to one another. The findings from this literature review fall into three groups: the mapping of stakeholders and their institutional hierarchies, the key moments of collaboration between them, and the socio-economic and ecological outcomes tied to the current governance arrangement.

Stakeholder Ecosystem Mapping and Institutional Hierarchy

Sustainable marine tourism does not run on a single chain of command; it depends on a decentralized network of actors usually described through the Penta-helix model, which brings together government, the private sector, communities, academia, and the media (Fatina et al., 2023; Prihantika et al., 2023; I. Sentanu et al., 2022). In this arrangement, each group has a different role: government regulates and facilitates, the private sector accelerates investment and development, communities handle on-the-ground implementation, academia contributes research and innovation, and the media promotes and publicizes the destination.

Taken together, the literature reviewed here paints tourism governance in Pulau Merah as fragmented across many agencies but still tightly interlinked. Rather than following one rigid chain of command, several studies show that governance here works through layers: macro-regulatory bodies at the top, operational agencies handling day-to-day matters, private facilitators supporting industry needs, and grassroots implementers on the ground. These layers can be grouped into four thematic domains: (1) Macro-Regulatory and Strategic Guardians: The literature repeatedly points to the Department of Culture and Tourism (DISBUDPAR) as the highest legal authority for regulating and marketing regional cultural assets. Several studies are careful to note, however, that DISBUDPAR cannot manage the area sustainably on its own; its effectiveness depends on coordinating with strategic planners such as the Regional Development Planning Agency (BAPPEDA) and land custodians like the State Forestry Public Company (Perum Perhutani), which holds legal authority over the neighboring coastal forest (Mahadiansar et al., 2023; Parmawati et al., 2021; Praswati et al., 2019). Central and Provincial Government bodies further shape this domain, mainly through top-down policies that set the boundaries within which local agencies operate. (2) Administrative and Operational Infrastructure: Carrying out and monitoring tourism policy is spread across several specialized agencies rather than concentrated in one office. The literature singles out the Integrated Licensing Service Agency (BPT) as the main gatekeeper for commercial investment (Parmawati et al., 2021). Day-to-day operations, meanwhile, depend on a network of supporting agencies: the Environmental Agency (DLH) handles ecological conservation, the Transportation Agency (DLLAJ) manages traffic and logistics access, and the Civil Service Police Unit (SATPOL PP), working alongside the National Police, covers local law enforcement (I. Sentanu et al., 2022; I. G. E. P. S. Sentanu et al., 2024). (3) Industry and Civil Society Facilitators: Government agencies are not the only actors involved; the tourism ecosystem also runs on organized non-governmental networks. Associations such as ASITA (route development) and PHRI (accommodation standards) show up repeatedly in the literature, alongside financial institutions that supply capital and NGOs that focus on environmental and social advocacy. Together, these groups fill the space between policy and everyday industry practice (Parmawati et al., 2021). (4) Community-Based Implementers (Grassroots): At the base of this ecosystem, recent studies focus heavily on Community-Based Tourism (CBT) actors as the ones actually running day-to-day operations. Sub-district and Village Governments work alongside local entities such as Tourism Awareness Groups (POKDARWIS) to advance grassroots development, while Community Monitoring Groups (POKMASWAS) monitor the aquatic environment. The Pulau Merah Beach Community Group (Pokmas) comes up again and again in recent literature, generally described as managing local tourism assets in an active and accountable way; several authors treat this as evidence that grassroots involvement carries real weight in the area's sustainable tourism model (Kurniawati et al., 2022; I. Sentanu et al., 2022; Yahya et al., 2025).

None of this, though, means the four domains operate as separate silos. The Penta-helix actors described above overlap and depend on one another in ways that a simple hierarchy chart cannot really capture. To show these overlapping relationships and cross-sectoral authorities more clearly, the governance structure synthesized here is presented as a concept map (Fig. 2), cross-referencing each actor against its authority within the four thematic domains.

Figure 2 cross-maps the five Penta-helix groups against the four thematic domains of tourism governance. On the left are the Penta-helix groups: Government, Academia, Communities, Private sector, and Media. On the right are the operational agencies, sorted into four functional domains: Regulatory, Operational, Facilitators, and Community. Solid blue lines show formal authority or regulatory ties; these connect Government to all four domains and Communities to Domain 4. Dashed green lines show advisory or supportive ties, linking Academia, the Private

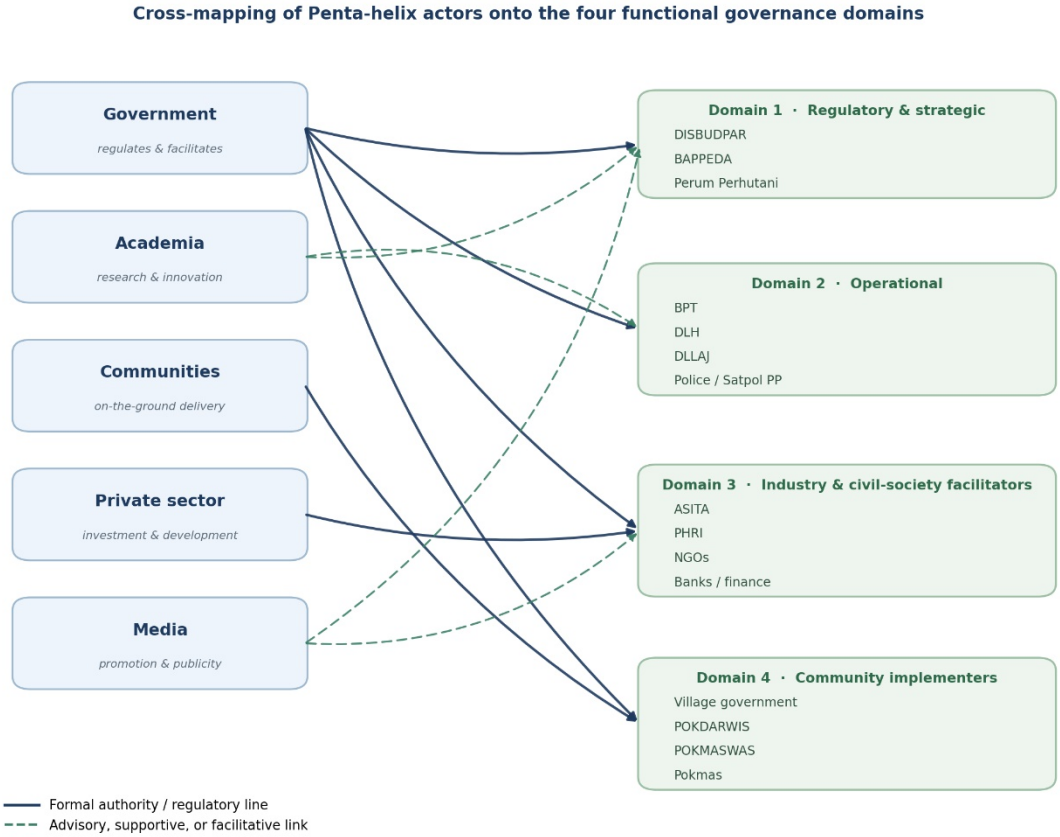


Figure 2. Stakeholder ecosystem mapping and institutional hierarchy

sector, and Media each to the domain it influences.

Figure 2 shows how the actors connect, but not how power sits among them. Figure 3 re-plots the same stakeholders on an Influence-Interest grid, with the horizontal axis capturing each actor's stake in tourism outcomes and the vertical axis its capacity to drive or block change. Reading the quadrants gives three practical groupings. Actors high on both axes are the Key Players, who have to be managed closely. Those with high power but limited interest need to be kept satisfied, while those with strong interest but little power need to be kept informed and actively empowered.

The grid highlights the site's core governance tension. A small set of Key Players holds formal power: the Regency Government, Perum Perhutani, and DISBUDPAR. Their mandates overlap, and that overlap is the main source of jurisdictional friction. The day-to-day interest in sustainable outcomes, by contrast, concentrates in the Keep Informed quadrant, where POKDARWIS, Pokmas, and local MSMEs shoulder much of the operational work while holding comparatively little authority. Higher-tier bodies fall into Keep Satisfied: BAPPEDA and the provincial and central government carry strong influence over budgets and spatial policy but stay at arm's length from daily management. This split helps explain a recurring pattern: broad agreements struck at the top seldom become enforceable action on the ground. It also shows what an integrated Destination Management Organization would have to fix: the gap between where power sits and where interest runs highest.

Monumental Collaborative Paradigm: Banyuwangi Regency Government and Perhutani

The 2014 collaboration between the Banyuwangi Regency Government (Pemkab) and Perum Perhutani opened the way for Pulau Merah's tourism development, releasing coastal assets previously locked behind forestry regulations. This agreement is often treated as the origin story of the site's growth, but recent studies covering the past decade complicate that picture. Rather than describing a single settled arrangement, this body of work traces how the original agreement has been revised repeatedly, with periods of adjustment and periods when the underlying governance structure visibly weakened.

Later research describes the partnership less as a fixed, top-down success and more as

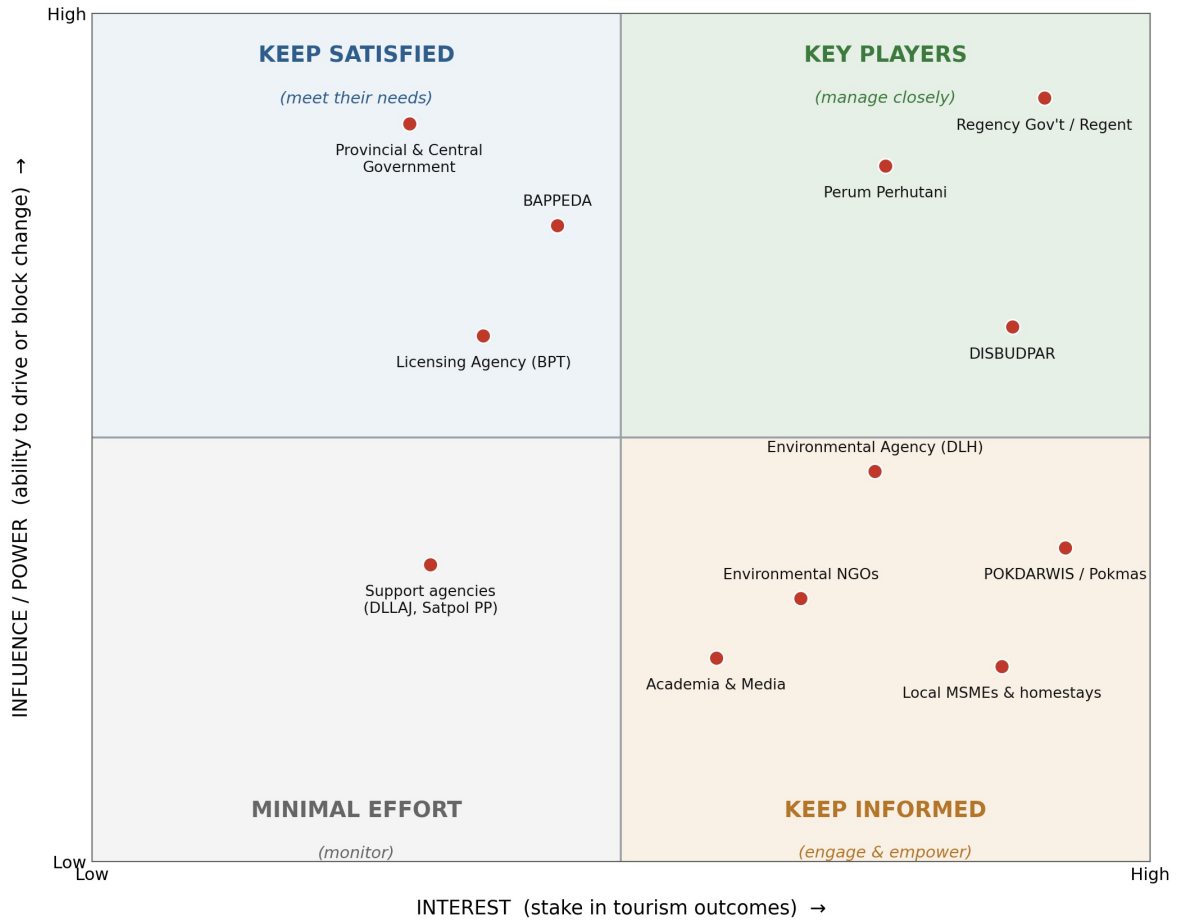


Figure 3. Stakeholder influence–interest grid for pulau merah tourism governance

something under continuous strain. On one side, the agreement had to adapt: management shifted from centralized bureaucratic control toward a more distributed model that made room for Community-Based Tourism (CBT) groups as their influence grew. On the other side, several studies point to a gradual erosion of coordination between Pemkab and Perhutani at the macro level. Cooperation that once ran fairly smoothly gave way over time to bureaucratic friction, overlapping jurisdictional claims, and shifting national regulations. As these frictions built up, the daily work of resolving conflicts and keeping tourism activity sustainable shifted away from the original signatories and landed increasingly on grassroots actors, particularly the local community groups known as Pokmas.

The MoU itself was significant in a narrower, more technical sense as well: it was the first case in Indonesia in which a local government, the Directorate General of Forest Protection and Nature Conservation (PHKA), and Perhutani agreed, within a legal framework, to develop ecotourism inside a Forest Management Unit (KPH) without violating nature conservation law. Its scope covered protecting forest resources, jointly developing a tourism information system, coordinating promotion, and building infrastructure to support local communities directly. In practical terms, the agreement removed bureaucratic barriers that had kept the coastal area's tourism potential largely untapped, and gave visitor numbers room to grow quickly once those barriers were gone.

That growth is visible in the numbers. A joint management report from mid-2019 recorded 64,200 visitors to Pulau Merah in June alone, 25 percent above Perhutani's regional target for the month, bringing the cumulative total for the first six months of the year to 131,670 visitors.

Socio-Economic Impact and Fulfillment Needs

Pulau Merah's development trajectory reflects a deliberate choice to build tourism around the community rather than around it. Through the Community-Based Tourism (CBT) model and a "Local Wisdom-Based Tourism Development" approach, planners wove the

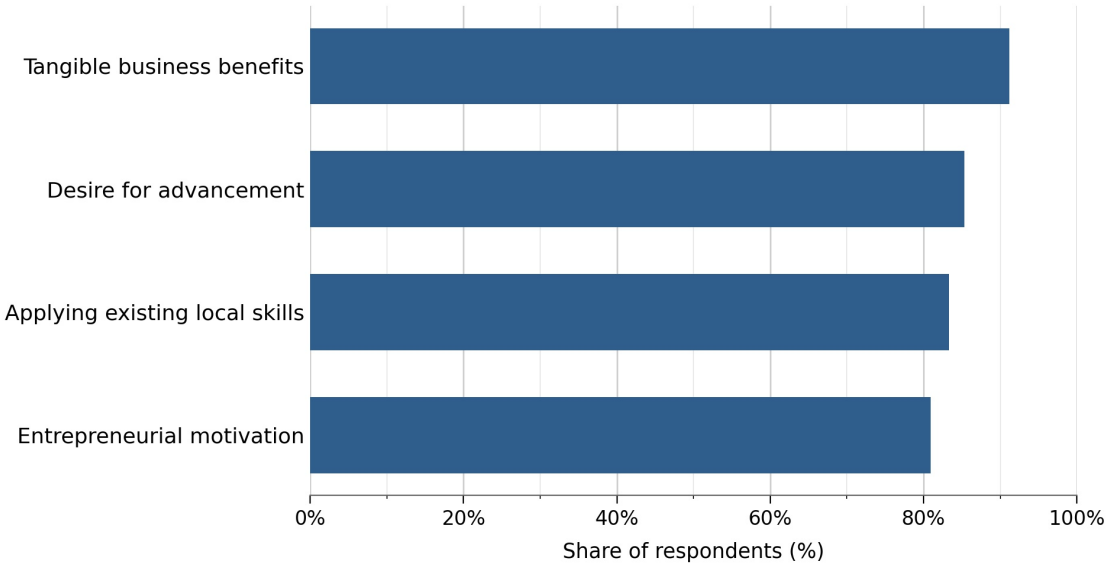


Figure 4. Drivers of local entrepreneurial motivation in Pulau Merah

Gandrung dance, a distinctly local cultural form, directly into the destination's branding instead of treating it as a side attraction. The approach does two things at once: it keeps an intangible cultural practice in active use, and it gives the destination something a generic beach cannot offer (Sumarmi et al., 2021).

Banyuwangi's domestic tourist arrivals rose 185% once these collaborative interventions took hold, a jump large enough that Pulau Merah now gets mentioned in the same breath as Bali's Tanah Lot. What sets this case apart from many tourism booms, though, is where the money actually landed. Local households moved out of small-scale farming and fishing and into a wider service economy: running homestays, opening cafes, renting beach umbrellas, guiding surf tours. A closer look at who is doing this work shows a workforce shifting toward tourism entrepreneurship at real scale. Figure 3 breaks down the specific motivations behind that shift (Setiawan et al., 2017; Sumarmi et al., 2021; Yahya et al., 2025).

Among these drivers, tangible business benefits rank highest at 91.20%, ahead of the desire for advancement at 85.30% and the wish to apply existing local skills at 83.30%. Entrepreneurial motivation comes in lowest at 80.90%, still substantial, but the smallest share of the four. Ranked from highest to lowest, the figures give a fairly clear read on what is actually pulling people into the tourism trade, as distinct from what simply follows once they are already in it.

Environmental Management and Ecological Carrying Capacity

Beneath the encouraging socioeconomic figures, the environmental side of this stakeholder collaboration is far messier. Pulau Merah carries two identities at once: a stretch of coastline that has largely kept its natural character, and an international surfing venue that has drawn competitors from as many as 15 countries since 2013 (Sumarmi et al., 2021). These two identities pull in different directions. The very competitions that put Pulau Merah on the map also bring the crowds, vehicles, and infrastructure that chip away at the coastline they were built to showcase.

At the grassroots level, the collaboration looks more encouraging. Community watch groups (POKMASWAS) patrol the waters regularly, and various stakeholders have taken up coral cultivation and pushed fishers toward methods that skip fish bombs and potassium poison. These are tangible efforts, not just paperwork commitments. However, zoom out to the wider literature on tourism destinations and a familiar warning keeps surfacing: carrying capacity, or rather the lack of any real ceiling on how much traffic a fragile coastal ecosystem can absorb before it starts to break down (Mahrudin et al., 2025; Priambodo et al., 2021; Sumarmi et al., 2021; Yahya et al., 2025).

The trouble is timing. Visitor numbers climbed fast once social media promotion and improved road access made the site easy to reach, and the safeguards needed to manage that traffic never caught up. Coastal erosion, growing piles of solid waste, and disrupted marine habitats are not distant hypotheticals here; they are the likely outcome if the managing agency keeps chasing visitor counts and revenue ahead of ecological limits. The

Perhutani-Pemkab agreement borrows the word "ecotourism," but the label does little on its own. What the agency's standard operating procedures lack is a genuine, science-based ceiling on how much tourism the site can absorb (Nurhayati et al., 2019; Sukran et al., 2025).

Put the evidence and the theory side by side, and a mixed picture emerges. By most economic measures, Pulau Merah is a genuine success story in reviving a coastal region through marine tourism. Its staying power is another matter. Friction between the institutions involved, and the absence of any coordinated approach to carrying capacity, leave the long-term outlook uncertain. Reading these dynamics through a collaborative governance lens, and setting them against comparable cases elsewhere, clarifies where this stakeholder arrangement is headed.

Deconstructing the Collaborative Governance Deficit

Ansell & Gash's (2008) framework for collaborative governance, built around initial conditions, facilitative leadership, institutional design, and the collaborative process itself, offers a useful lens for examining where Pulau Merah's tourism administration runs into trouble. Coastal governance elsewhere in Indonesia has often struggled to meet the full standard of collaborative principles, largely because trust between actors was never properly established at the outset. On initial conditions specifically, developing coastal destinations tend to start from a position of uneven power and layered institutional complexity. Pulau Merah, though, appears to have cleared some of these early hurdles better than most: rather than the deep social polarization documented in the Mentawai Islands, it avoided serious conflicts of interest by folding local micro, small, and medium enterprises into the destination's development through an active Community-Based Tourism (CBT) approach (Mahadiansar et al., 2023; Sinaga, 2021).

That said, the favorable starting point does not carry through cleanly into the rest of the framework. Much of the early momentum came down to one person: the local executive, whose facilitative leadership pushed the destination forward by mobilizing cooperation and keeping stakeholders motivated. The trouble is that this kind of centralized push tends to produce what the literature calls "delegative democracy," a pattern in which the executive branch dominates decision-making so thoroughly that legislative oversight is left thin, and the whole arrangement becomes fragile the moment leadership changes. This overreliance on one figure is compounded by weak institutional design underneath it. Interpretive Structural Modeling (ISM), as reported in the primary studies reviewed (Parmawati et al., 2021; Praswati et al., 2019), points to a near-total absence of operating procedures at the micro level, across what is otherwise a six-tier institutional hierarchy. Broad agreements at the top were never translated into rules people could follow day-to-day, leaving vertical national bodies like Perhutani and horizontal regional agencies like the Department of Culture and Tourism (DISBUDPAR) stepping on each other's jurisdiction. DISBUDPAR ends up setting policy without having any real territorial authority to enforce it, which dulls the teeth of environmental and spatial planning rules that exist mostly on paper.

The collaborative process itself has not held up well over time, either. The 2014 partnership was a genuine turning point when it happened. However, coordination that started cohesive has, according to more recent research, given way to bureaucratic friction and a shifting national regulatory backdrop over the past decade. Government agencies tend to pull back from direct involvement once a project moves past its initiation phase, which opens communication gaps that never quite close. In practice, grassroots groups like the Tourism Awareness Groups (POKDARWIS) fill that gap, carrying nearly the entire burden of keeping governance running day to day. These groups are chronically under-resourced, so asking them to manage large-scale conservation work and infrastructure on their own reveals a basic imbalance: the workload keeps growing while the support behind it does not, and that imbalance is what keeps the collaboration from becoming genuinely reciprocal.

Zooming out to the regional level, Banyuwangi's broader tourism success traces back to the same facilitative leadership style, this time embodied by the Regent. The literature breaks this style down into three recognizable moves: pushing for innovation in public policy, building synergy across different actors, and keeping people motivated toward a shared goal. The cost of that style shows up in the numbers, however. The executive branch aligns with the regional legislature (DPRD) at a striking 72 percent, a figure that signals just how much decision-making power has concentrated in one office rather than being checked by the legislative branch. This centralized approach undeniably sped up early development and cleared bureaucratic bottlenecks that would otherwise have slowed

things down. However, leaning so heavily on one charismatic figure is a gamble: when leadership changes, the risk to everything built under it does too (Rahman & Usman, 2022).

Digging further into the institutional side, the ISM-based primary studies reviewed here include Praswati et al. (2019) and Parmawati et al. (2021). The biggest one, by a wide margin, is the absence of clear standard operating procedures for how the six layers of the institutional hierarchy are supposed to interact on a day-to-day basis. The memorandum of understanding between the Regency Government and Perhutani was a real milestone at the macro level, no question. However, it never made it down to the ground level in any usable form. What's left is a tangle of overlapping authority between horizontal district agencies, DISBUDPAR and the Environmental Agency (DLH) among them, and vertical national bodies like Perhutani, each with a legitimate claim to jurisdiction and no clear mechanism for sorting out whose call it actually is (Parmawati et al., 2021; Praswati et al., 2019).

The core problem comes back to the same mismatch between authority and responsibility. DISBUDPAR sets tourism policy but has no real jurisdiction over the land itself, so enforcing environmental and coastal spatial planning rules becomes an exercise in asking nicely rather than requiring compliance. That mismatch trickles down into a lack of clear standards or measurement tools for judging whether sustainable practices are actually being followed. Government involvement also tends to fade once a project clears its initial launch phase, leaving grassroots groups like POKDARWIS to fill the gap with far fewer resources than the job requires. Comparative figures from elsewhere in Banyuwangi put some of these groups' annual budgets around IDR 200 million, barely enough to cover promotional events, let alone fund conservation programs or maintain infrastructure on their own. The gap between what communities are expected to do and what they are actually given to do it with is the clearest evidence of how lopsided this governance arrangement has become (Handini et al., 2025; Praswati et al., 2019; I. Sentanu et al., 2022).

To place Pulau Merah's governance challenges in a broader context, it helps to compare its trajectory with other marine and surf tourism destinations, both in Indonesia and abroad. Mentawai, another major Indonesian surf destination with a similar profile, shows how deep this kind of divide can run. Foreign resort operators there treat their closed-enclave model as environmentally sound. In contrast, charter boat operators and local communities push back, arguing that the economic benefits rarely reach beyond the resort gates. That failure to collaborate has produced open conflicts of interest, along with lingering unease about foreign cultural influence displacing traditional community life. Pulau Merah has largely sidestepped this polarization by leaning hard into Community-Based Tourism (CBT), pulling local MSMEs directly into the tourism value chain rather than building isolated luxury enclaves. Wakatobi offers a similar cautionary tale: weak coordination between government bodies and thin community participation there routinely leave residents on the sidelines, which is precisely why equitable collaboration platforms matter so much (Towner & Milne, 2017; Yahya et al., 2025).

Even so, Pulau Merah's governance still trails the more rigorous, data-driven methods used in super-priority destinations such as Labuan Bajo. There, researchers and policymakers have turned to System Dynamics modeling, building Causal-Loop Diagrams (CLD) and Stock-and-Flow Diagrams (SFD) to work out the carrying capacity of the ecologically sensitive Komodo Biosphere. These models tie together variables such as visitor numbers, freshwater availability, waste output, regional economic growth, and pressure on endemic species. Pulau Merah has no equivalent framework. Management there still leans on cleanup after the fact, community beach cleanups being the main example, rather than the kind of preventative, science-based spatial modeling (Fig. 4) that could flag problems before they show up on the sand (Fatina et al., 2023; Sumarmi et al., 2021).

Surf-centric coastal zone management abroad has moved toward frameworks that are both legally binding and ecologically grounded. Noosa World Surfing Reserve in Australia and several coastal zones in Costa Rica illustrate what collaborative governance can look like in practice. In Noosa, economic valuation studies put surfer spending at roughly AUD 3,350 per person per year, a figure local governments have used directly to justify public spending on coastal preservation and to write zoning rules that cap hotel construction. Reading this alongside the tourism area life cycle model (the Kuznets curve applied to destinations) gives planners a way to see where a region sits in its growth trajectory and what that implies for long-term management (Mach et al., 2023; Manero & Mach, 2023; Martens, 2022).

Peru and New Zealand have gone further, writing surf ecosystem protection into national law so breakpoints and the surrounding marine

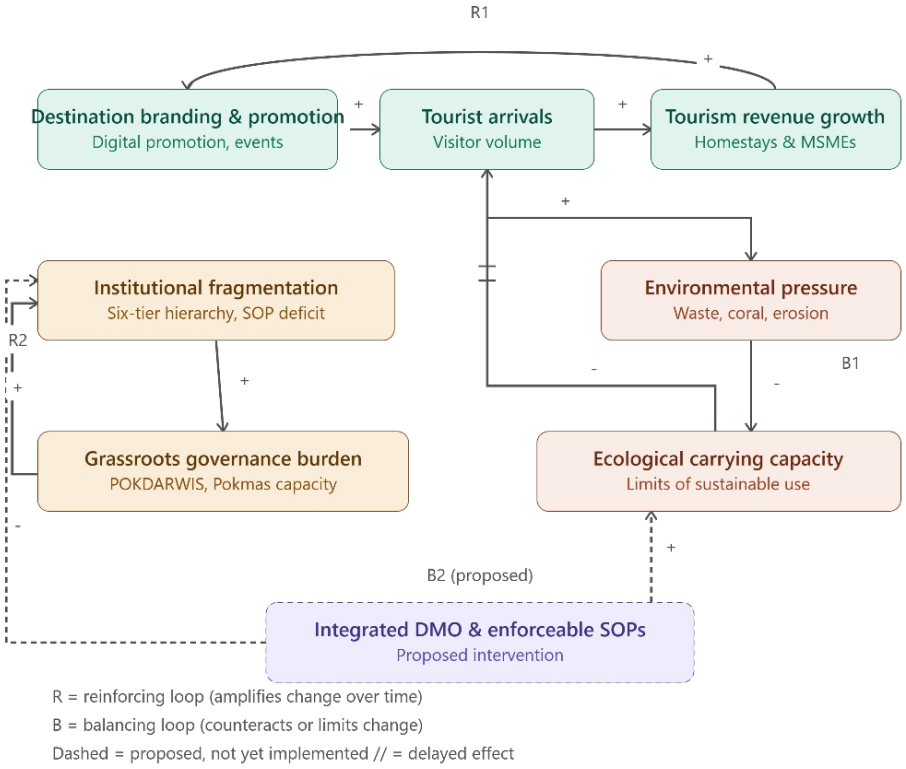


Figure 5. Hypothetical causal-loop visual diagram of the Pulau Merah ecosystem

environment count as protected biocultural assets, not just scenery. Research on surf conservation in West Africa shows something similar from a different angle: where surf spots and Marine Protected Areas physically overlap, that overlap becomes leverage for community-led conservation work. Indonesia's coastal legal framework, despite being extensive on paper, still treats places like Pulau Merah as ordinary public recreation space or forest fringe, with no category for a dedicated surf reserve. Getting Pulau Merah recognized as a Surf Protected Area, possibly through international partners such as the Save the Waves Coalition or Conservation International's Surf Conservation program (already active in parts of Indonesia), would give local government a reason to enforce environmental standards that currently sit unused on the shelf (Mach et al., 2023; Manero, 2023).

Strategic Path to Systemic Optimization

To close the gap between mass tourism's short-term revenue and the long-term health of Pulau Merah's ecosystem and community, the literature points to concrete governance interventions. Drawing on the Interpretive Structural Modeling (ISM) results reported in the reviewed literature (Praswati et al., 2019; Parmawati et al., 2021), the Blue Economy framework, and collaborative governance theory, at least eight programmatic steps emerge from the analysis:

1. Build a single, integrated Destination Management Organization (DMO). The current six-tier structure is too fragmented to manage the site coherently. A dedicated body responsible for the tourism area as a whole is needed (Parmawati et al., 2021). In practice, this means the DMO would sit above the separate mandates of the Culture, Tourism, and Tourism Office (DISBUDPAR), the Regional Development Planning Agency (BAPPEDA), the Village Government, and Perhutani, not replacing them, but giving them a shared point of coordination. As a result, their overlapping jurisdictions stop working against each other (Praswati et al., 2019).
2. Turn high-level agreements into working SOPs on the ground. Once a DMO exists, its first job is to align vision, mission, and targets across sectors, then translate the macro-level MoUs that currently exist only on paper into Standard Operating Procedures that field staff can actually follow. That includes hard numbers for carrying capacity, a workable zero-waste

protocol, and building codes for homestays, so growth does not just sprawl along the beachfront and quietly wreck the view that draws people there (Parmawati et al., 2021; Praswati et al., 2019).

3. Set up a cross-sectoral funding pool. Grassroots groups like POKDARWIS (tourism awareness groups) and POKMASWAS (marine surveillance groups) are carrying out conservation and maintenance work on budgets that do not match the job. A shared trust fund, pooling local government grants, private CSR money, and visitor fees modeled on the entrance charges used at national marine parks, would provide funding for patrols and infrastructure upkeep that does not reset every time local elections change who is in charge (Handini et al., 2025; Parmawati et al., 2021).
4. Build a real data baseline and evaluate policy against it. Shifting toward a blue economy model only works if the underlying data is good. That means an ongoing inventory of the coast's physical, biological, and socio-economic conditions, feeding into a dynamic carrying-capacity model, similar to the systems-dynamics approach already used in Labuan Bajo. Existing tourism and spatial plans should then be checked against those numbers regularly, rather than assumed to still be valid, so visitor volume does not quietly cross the point where it starts damaging the ecosystem it depends on (Fatina et al., 2023; Parmawati et al., 2021).
5. Get local MSMEs actually using digital tools. Digital adoption among small tourism operators is one of the more practical levers here. An interactive MSME digital ecosystem model has worked elsewhere to widen who benefits from the local economy. For Banyuwangi specifically, that means the DMO managing a "POSE" promotional mix, Providers (outside media), Owned channels (the district government's own platforms), Social media, and Endorsers as one coordinated effort, which could help move Pulau Merah's image away from cheap mass tourism and toward higher-value niches like low-impact ecotourism and dedicated surf tourism (Rahman & Usman, 2022; Walewangko et al., 2026).
6. Invest in the people running all of this. None of the above works without better-trained staff and communities. Institutions and coastal residents involved in tourism management need real capacity building, moving away from an older mindset focused purely on sales volume, toward management that treats the marine environment as something to be looked after for the long run, not just monetized this season (Parmawati et al., 2021).

Theoretical Discourse and Practical Implications for Marine Tourism Governance

This study adds to the literature on collaborative governance and the Penta-helix model in sustainable marine tourism. Using the analytical lenses of Interpretive Structural Modeling (ISM) alongside Collaborative Governance Theory, it shows how fragmented, multijurisdictional governance leaves developing coastal destinations exposed to the same coordination failures seen at Pulau Merah. The findings extend Ansell and Gash's model: facilitative executive leadership speeds up early-stage tourism development, but leaning on it too heavily produces something closer to a "delegative democracy," a setup that works under one leader and falls apart the moment that leader changes. The review also flags a real gap in local coastal management research around ecological carrying capacity, and argues that System Dynamics tools, particularly Causal-Loop Diagrams, are what is actually needed to model how biodiversity resilience holds up against a surge in mass tourism, rather than just noting that a tradeoff exists.

On the practical side, the findings give policymakers and local stakeholders a starting point for restructuring governance and keeping the coastal tourism ecosystem at Pulau Merah viable long term. The most immediate need is an Integrated Destination Management Organization (DMO) to pull together the six overlapping layers of administration currently in play. DISBUDPAR, BAPPEDA, the Village Government, and Perhutani all have a stake in the same jurisdiction, and that overlap is exactly where coordination tends to break down. Beyond that, agencies need to turn broad, macro-level agreements into SOPs that hold at the ground level: firm carrying-capacity limits, zero-waste protocols, and building standards that cannot be quietly worked around. To make the destination sustainable from the bottom up as well as the top down, a cross-sectoral trust fund could give groups like POKDARWIS real financial footing, build local human resource capacity, and support an integrated MSME digital ecosystem, the kind of groundwork that would let Pulau Merah shift its branding from high-volume mass tourism toward higher-value ecotourism.

■ CONCLUSION

Marine tourism at Pulau Merah sits at an odd crossroads: real economic gains on one side, mounting ecological strain on the other. The 2014 agreement between the Banyuwangi Regency Government and Perhutani opened the site to formal management, and visitor numbers grew fast once the Community-Based Tourism (CBT) model gave local groups a stake in running it. However, six layers of governance now sit on top of that success, each with its own mandate and none of them talking to each other consistently. No shared SOPs exist to bridge them, so what gets prioritized, almost by default, is visitor volume rather than the coastline's actual carrying capacity. As long as coordination depends on individual leaders being willing to facilitate across these layers rather than on any fixed institutional structure, the reef, the dunes, and the surf break itself stay exposed to slow, cumulative damage.

Answering the research questions means looking at what the literature says would actually fix this fragmentation. One recurring proposal is an Integrated Destination Management Organization (DMO). This single body could pull DISBUDPAR, BAPPEDA, and Perhutani's separate mandates into one working framework instead of three parallel ones. Several studies also point out that broad inter-agency agreements mean little until they are written down as enforceable, ground-level SOPs, covering things like hard caps on daily visitor numbers, waste-handling rules, and limits on what can be built near the shore. Beyond that, the literature keeps returning to the idea of a cross-sectoral trust fund, something that could pay for grassroots groups like POKDARWIS and POKMASWAS directly rather than leaving them dependent on ad hoc funding. Combine that financing with real capacity-building for local staff and a working digital ecosystem for the area's MSMEs, and the studies suggest that is roughly the path from mass tourism toward something closer to genuine ecotourism.

What is still missing from the research is any real attempt to measure the coastline's ecological carrying capacity in hard numbers. Future work should probably borrow the modeling tools already used in places like Labuan Bajo- System Dynamics simulations and Causal-Loop Diagrams- to actually map how much tourist pressure the reef and surrounding ecosystem can absorb before it degrades. It is also worth exploring, seriously, whether Pulau Merah could be formally designated a Surf Protected Area under an international conservation framework. That kind of legal status might be the only thing that gives environmental limits real teeth instead of leaving them as recommendations nobody is required to follow.

■ DECLARATION ON THE USE OF GENERATIVE AI

During the preparation of this manuscript, the author used Claude AI and DeepL Translator for sentence refinement, image concept generation, and translation. The author has reviewed and revised the output from these tools and bears full responsibility for the final content of this article.

■ REFERENCES

Ahmadi, N., Suwito, S. R., Christian, Y., & Hasriningtyas, S. (2024). Global and Indonesia Blue Economy Knowledge Map. *BIO Web of Conferences*, *92*, 1–15. https://doi.org/10.1051/bioconf/20249201033

Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, *18*(4), 543–571. https://doi.org/10.1093/jopart/mum032

Asmoro, A. Y., & Cahyadi, H. S. (2022). Sustainable tourism: analysis of methods and applications in the Indonesian tourism journals. *International Journal of Applied Sciences in Tourism and Events*, *6*(2), 194–218. https://doi.org/10.31940/ijaste.v6i2.194-218

Dwi, M. B., Citalada, A., Nugroho, D., Seputro, D., Kurniasari, I., Saputra, V. A., Maghfiroh, R. D., Utomo, S. S., Majid, N., & Ulya, A. H. (2024). The Role of Blue Economy On Indonesia Eco-Tourism By Empowering Local Communities: A Literature Review. *Prosenama 2024*, *4*, 90–96.

Dwi Puspita, A., & Irsyadul Ibad. (2025). Collaborative Management in Ecotourism Business: Evidence from Perum Perhutani and Guci Ashafana Partnership. *PROCURATIO: Jurnal Manajemen & Bisnis*, *4*(1), 13–30. https://doi.org/10.62394/projmb.v4i1.192

Fatina, S., Soesilo, T. E. B., & Tambunan, R. P. (2023). Collaborative integrated sustainable tourism management model using system dynamics: A case of Labuan Bajo, Indonesia. *Sustainability*, *15*(15), 11937.

Fitroh, I., Disman, D., Komalasari, K., & Rosidi, M. I. (2023). Banyuwangi Rebound: A Tourism Portrait at the Eastern Tip of Java Island. *European Online Journal of Natural and Social Sciences*, *12*(3), 313–328. https://european-science.com/eojnss/article/

view/6811

Giffari, M. Al, Febriamansyah, R., & Yuerlita. (2025). The Creative Economy Development Strategy on Marine Tourism: A Systematic Literature Review and Future Agenda. *Tourism in Marine Environments*, *20*(1), 51–67. https://doi.org/10.3727/216901925X17367756790656

Handini, Y. D., Negoro, A. H. S., Prabhawati, A., Yoseka, J., Tamami, A. A., & Muflikhin, M. N. (2025). Stakeholder Collaboration in Tourism Village Branding: The Case of Gombengsari. *E-Journal of Tourism*, 298–317. https://doi.org/10.24922/eot.v12i2.2195

Kurniawati, R. A., Shaherani, N., & Leopold, B. L. (2022). *Peran Stakeholder dalam Pengembangan Pantai Pulau Merah, Kabupaten Banyuwangi, sebagai Destinasi Wisata Bahari* [The Role of Stakeholders in the Development of Pulau Merah Beach, Banyuwangi Regency, as a Marine Tourism Destination]. *Jurnal Kepariwisataan Indonesia*, *16*(1), 52–60.

Mach, L., Rothrock, E., Stark, S., & Nahmias, J. (2023). *Conservation in Surf Destination Communities*. *November*.

Mahadiansar, M., Alfiandri, A., & Syuzairi, M. (2023). *Analysis of Collaborative Governance in Tourism Based on Coastal Community Empowerment in Indonesia* (Issue Shimba). Atlantis Press SARL. https://doi.org/10.2991/978-2-38476-150-0_2

Mahrudin, Purwanto, Astuti, R. S., & Dwimawanti, I. H. (2025). Stakeholder Collaboration in the Development of Sustainable Marine Tourism in Wakatobi Regency, Indonesia. *International Journal of Research and Innovation in Social Science (IJRISS)*, *VII*(2454), 1175–1189. https://doi.org/10.47772/IJRISS

Manero, A. (2023). A case for protecting the value of 'surfing ecosystems.' *NPJ Ocean Sustainability*, *2*(1), 1–3. https://doi.org/10.1038/s44183-023-00014-w

Manero, A., & Mach, L. (2023). Valuing surfing ecosystems: an environmental economics and natural resources management perspective. *Tourism Geographies*, *25*(6), 1602–1629. https://doi.org/10.1080/14616688.2023.2261909

Martens, D. (2022). *The Understanding and Practice of Sustainable Surf Tourism*.

Nurhayati, A., Aisah, I., & Supriatna, A. K. (2019). Model development of a synergistic sustainable marine ecotourism-A case study in Pangandaran Region, West Java Province, Indonesia. *Sustainability (Switzerland)*, *11*(12). https://doi.org/10.3390/SU11123418

Parmawati, R., Wike, W., Nurani, F., & Hardyansah, R. (2021). *Institutional relationship model to realize a sustainable tourism management in Pulau Merah Banyuwangi.*

Praswati, aflit nuryulia, Wardani, nanda martiya, & Rohim, M. (2019). *Journal of Indonesian Tourism and Chief Editor*.

Priambodo, M. P., Istiqomah, N., Yunikawati, N. A., Puspasari, E. Y., & Sidi, F. (2021). Ecotourism Strategy for Indigenous Community to Contribute Socioeconomic Resilient in Pulau Merah Area. *Proceedings of the Sixth Padang International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA 2020)*, *179*(PICEEBA, 2020), 612–618. https://doi.org/10.2991/aebmr.k.210616.094

Prihantika, I., Sulistiowati, R., Lestari, B. M., Atika, D. B., & Rahmadhani, T. P. (2023). The role of stakeholders in the development of Indonesia marine tourism: A scoping review. *AIP Conference Proceedings*, *2621*(1). https://doi.org/10.1063/5.0142454

Rahman, A., & Usman, I. (2022). Stakeholder Collaboration in Sustainable Tourism Development in Banyuwangi District. *JKAP (Jurnal Kebijakan dan Administrasi Publik)*, *26*(1), 72–84.

Rangkuti, Y. A., Bangun, A. K., Kurniawan, R., Ilham, Z., Hasibuan, S., Tambunan, T. M. B., & Silitonga, D. F. (2025). Cultural heritage and sports tourism: A systematic literature review of sustainable destination management practices. *Frontiers in Sports and Active Living*, *7*(October), 1–15. https://doi.org/10.3389/fspor.2025.1680229

Respati, A., Kusumawati, A., Yulianto, E., & Fahrudi, A. N. L. I. (2025). Exploring Determinants and Theoretical Underpinnings of Revisit Intention in Tourism: A PRISMA-Based Systematic Literature Review. *Sustainability (Switzerland)*, *17*(24), 1–27. https://doi.org/10.3390/su172411044

Sentanu, I. G. E. P. S., Prabowo, A., Kumalasari, K., Aulia, Puspaning, G., & Wismanu, R. E. (2024). Stakeholder Collaboration Model for Ecotourism Development: A Case Study from Batu City, East Java Province. *Journal of Government and Civil Society*, *5*. https://doi.org/https://doi.org/10.31000/jgcs.v5i2.4420

Sentanu, I., Galih, A. P., & ... (2022). The Role of Stakeholders in the Collaborative Development of Bawean Island Tourism. *... -Journal (BIRCI-Journal)*, 48–61. https://bircu-journal.com/index.php/birci/article/view/3578

Setiawan, K. U., Nugroho, I., & Hanafie, R. (2017). Factors Influencing Motivation of the Tourism Actors in the Pulau Merah Banyuwangi, East Java, Indonesia. *Journal of Indonesian Tourism and Development Studies*, *5*(3), 195–200. https://doi.org/10.21776/ub.jitode.2017.005.03.08

Sinaga, I. C. (2021). Collaborative Governance in Tourism Development in Indonesia: Study of South Sumatera Province. *Journal of Public Administration and Governance*, *11*(3), 16. https://doi.org/10.5296/jpag.v11i3.18747

suhendrinal, S., Insani, M., Syah, N., Heldi, H., Catri, I., & Sholichin, M. (2024). Integrated Strategies for Sustainable Coastal Area Management: A Systematic Literature Review. *Science and Environmental Journal for Postgraduate*, *7*(1), 74–82. https://senjop.ppj.unp.ac.id/index.php/senjop/article/view/259

Sukran, M. A., Kurniawan, T., Basri, H., & Furqan, A. (2025). Exploring Marine Tourism on Sustainable Development Segment in Indonesia: Spar-4-Slr. *Geojournal of Tourism and Geosites*, *58*(1), 243–256. https://doi.org/10.30892/gtg.58121-1406

Sumarmi, Bachri, S., Irawan, L. Y., Sholeha, A. W., & Aliman, M. (2021). Ecotourism Development Strategies of Pulau Merah Beach, Banyuwangi, Indonesia. *IOP Conference Series: Earth and Environmental Science*, *747*(1). https://doi.org/10.1088/1755-1315/747/1/012006

Towner, N., & Milne, S. (2017). Sustainable Surfing Tourism Development in the Mentawai Islands, Indonesia: Local Stakeholder Perspectives. *Tourism Planning & Development, 14 (4), 503–526*.

Wahyuni, D. A., & Santoso, A. (2018). *Kajian Perbedaan Jumlah Pengunjung Objek Wisata Pantai Pulau Merah dan Pantai Wedi Ireng Di Desa Sumberagung Kecamatan Pesanggaran Kabupaten Banyuwangi* [Study of the Difference in the Number of Visitors to the Pulau Merah Beach and Wedi Ireng Beach Tourist Attractions in Sumberagung Village, Pesanggaran District, Banyuwangi Regency], *Swara Bhumi*, *5*(8).

Walewangko, E. N., Lapian, A. L. C. P., Mandagie, Y., & Sondakh, D. S. I. (2026). SME Digitalization and Marine Ecotourism as Levers for Coastal Community Welfare: The Role of Local Economic Empowerment in North Minahasa Regency, Indonesia. *Tourism and Hospitality*, *7*(1), 26. https://doi.org/10.3390/tourhosp7010026

Yahya, N. F., Sahabuddin, R., Amin, A. N., & Sulolipu, A. A. (2025). Analysis of Coastal Tourism Development Strategy in Indonesia to Improve Community Economy. *Economics and Business Journal (ECBIS)*, *2*(6), 513–522. https://doi.org/10.47353/ecbis.v2i6.199