

Governing Maritime Borderlands in an Archipelagic Frontier: Institutional Fragmentation, Security Pressures, and Policy Integration in Indonesia's Kepulauan Riau Province

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ABSTRACT

This article examines maritime border governance in Indonesia's Kepulauan Riau Province as a multi-scalar archipelagic governance problem rather than as a narrowly defined security issue. The province combines intense cross-border exposure, strategic shipping routes, dispersed islands, fisheries and blue-economy potential, and a dense institutional landscape in which authority is distributed among security, border-control, sectoral, and subnational agencies. Using an integrative qualitative literature and document review of recent scholarship published from 2017 to 2026, the study synthesizes evidence on maritime security, border administration, institutional coordination, marine resource governance, and blue-economy justice. The analysis identifies four interlocking findings. First, institutional fragmentation is not simply a shortage of coordination but a structural condition created by overlapping mandates, organizational interests, and uneven vertical integration. Second, sovereignty and security pressures particularly illegal fishing, cross-border illicit mobility, and enforcement challenges become more consequential when information and operational coordination are fragmented. Third, border governance effectiveness depends on linking security with public services, livelihoods, marine spatial governance, and ecological sustainability across dispersed islands. Fourth, a sustainable blue economy requires distributive, procedural, and recognition dimensions of justice, not economic expansion alone. The article proposes an Integrated Maritime Border Governance framework organized around legal clarity, shared maritime-domain information, inter-agency coordination, border-island resilience, and inclusive blue-economy governance.

Keyword: Archipelagic Borderland, Integrated Governance, Institutional Fragmentation, Maritime Security



INTRODUCTION

Maritime borderlands are governance spaces in which sovereignty, mobility, economic exchange, environmental stewardship, and everyday public

administration intersect. In archipelagic states, those functions rarely follow a simple territorial logic because jurisdiction is dispersed across large sea areas and multiple islands. Contemporary maritime-security scholarship therefore increasingly treats security as a governance problem that combines state protection, law enforcement, economic activity, human mobility, and ecological risk rather than as a purely military problem (Bueger & Edmunds, 2017; Chapsos & Malcolm, 2017). For Indonesia, this broader perspective is especially relevant because the ambition to act as a maritime state requires the state to coordinate agencies, information, legal authority, and development policy across a highly complex maritime geography (Agastia & Perwita, 2018; Puspitawati, 2017).

The Kepulauan Riau Province is a particularly revealing case, and earlier assessments of Indonesia's Global Maritime Fulcrum already underscored the importance of linking domestic maritime capacity with wider Indo-Pacific positioning (Aufiya, 2017). Its administrative territory is predominantly maritime, its islands are located close to major international economic corridors, and several districts and cities are directly shaped by cross-border flows involving Singapore, Malaysia, and the wider South China Sea. Batam operates within a dense border-control environment, while Bintan, Karimun, and Natuna expose different combinations of economic connectivity, coastal livelihoods, marine pollution, fisheries, and sovereignty concerns. Recent studies consistently show that governance challenges in the province are not caused by the absence of institutions. Rather, they arise because institutional density is accompanied by fragmented mandates, unequal capabilities, sectoral priorities, and uneven coordination between central and local government (Lay & Astrina, 2020; Samin et al., 2024; Candra, 2025).

This institutional condition matters because maritime threats and development pressures cut across organizational boundaries. Illegal, unreported, and unregulated fishing combines enforcement, diplomacy, fisheries management, livelihood, and ecological dimensions. Smuggling and irregular mobility involve maritime patrol, customs, immigration, police functions, port governance, and local administrative capacity. Marine pollution in Bintan demonstrates how transboundary externalities require collaboration among public agencies and private maritime actors (Pratama & Akbar, 2020). At the same time, investment, tourism, fisheries, and marine biotechnology create strong incentives for blue-economy expansion. The governance question is therefore not how to maximize security at the expense of development, or growth at the expense of security, but how to integrate multiple objectives within a coherent border-governance architecture.

Existing Indonesian scholarship provides important but partially separated explanations of these problems. One stream focuses on maritime law enforcement and the institutional role of BAKAMLA, emphasizing overlapping functions and the need for clearer legal arrangements (Afriansyah et al., 2024; Dirhamsyah et al., 2022; Wibawa et al., 2021). A second stream examines border collaboration and institutional multiplicity in the Kepulauan Riau (Lay & Astrina, 2020; Muhammad et al., 2017). A third investigates subnational maritime governance, marine spatial utilization, blue-economy strategies, and local government capacity (Akbar et al., 2022; Darmawan et al., 2024; Samin & Poti, 2022). These literatures are complementary, but they are rarely synthesized around a single explanation of how security, institutional coordination, island development, and blue-economy justice interact.

The international literature further suggests that ocean governance is inherently polycentric. Multiple institutions can contribute complementary expertise, but polycentric systems require integrating mechanisms if they are to avoid duplication, fragmentation, and contradictory incentives (Mahon & Fanning, 2019a, 2019b). Similarly, blue-economy scholarship warns that economic expansion cannot be treated as a sufficient governance outcome. Sustainable ocean development depends on social equity, ecological integrity, governance capacity, and meaningful participation by coastal communities (Cisneros-Montemayor et al., 2019, 2021; Voyer et al., 2018). These insights create a useful basis for reinterpreting the Kepulauan Riau not only as a geopolitical frontier but as an archipelagic borderland where institutional arrangements shape both security and distributive outcomes.

Accordingly, this article asks three questions: (1) What structural governance problems recur across recent studies of maritime borders and marine governance in the Kepulauan Riau? (2) How do security pressures, institutional fragmentation, and uneven island development interact? and (3) What policy architecture could integrate sovereignty protection, law enforcement, blue-economy development, and border-island resilience? The study contributes by proposing an Integrated Maritime Border Governance (IMBG) framework that links five dimensions: legal and jurisdictional clarity, maritime-domain information, inter-agency coordination, border-island services and resilience, and inclusive blue-economy governance. The framework is intended as an analytical and policy synthesis rather than a claim that one organizational model can solve every maritime problem.

Tabel 1. Research gaps and the contribution of the revised study

Literature stream	What it explains well	Remaining analytical gap	Contribution in this article
Maritime security and law enforcement	Overlapping enforcement roles; BAKAMLA; illegal fishing; maritime-domain awareness.	Often treats coordination mainly as an enforcement or legal-design problem.	Connects enforcement fragmentation to subnational governance, services, and blue-economy outcomes.
Border administration in Kepulauan Riau	Institutional density, Batam border control, collaboration deficits, border development.	Limited integration with ecological governance and maritime economic justice.	Reframes the province as an archipelagic borderland with security-development interdependence.
Blue economy and marine resources	Economic potential, sustainability, fisheries, tourism, spatial use.	Security and institutional fragmentation are often secondary.	Embeds blue economy within sovereignty, regulatory coordination, and justice.

Literature stream	What it explains well	Remaining analytical gap	Contribution in this article
Polycentric ocean governance	Explains why multiple institutions require integrating mechanisms.	Often developed at regional/global scale rather than Indonesian subnational borderlands.	Applies polycentric coordination logic to a province-level maritime border governance model.

Source: Author, 2026

The article also revises the historical emphasis of the original manuscript. Indonesia’s maritime identity remains relevant as a strategic narrative, but the central analytical problem in the contemporary Kepulauan Riau is the capacity of institutions to govern a mobile, transboundary, and economically contested sea space. Historical references are therefore used selectively to contextualize the maritime orientation, while the primary discussion focuses on governance processes documented in the last decade. This shift strengthens the manuscript’s contribution to current debates in public administration, ocean governance, maritime security, and border studies, and it avoids treating historical maritime identity as a substitute for causal analysis of contemporary institutional performance.

RESEARCH METHOD

This study uses an integrative qualitative literature and document review to reinterpret the original manuscript through a focused governance lens. An integrative review is suitable when a research problem spans multiple conceptual traditions and empirical domains and when the objective is to synthesize relationships rather than estimate a pooled effect. Literature reviews should be conducted as explicit research methods rather than as unsystematic background summaries (Snyder, 2019). In this article, the method is therefore designed to make the boundaries of the evidence base, selection logic, analytical categories, and limitations visible to readers.

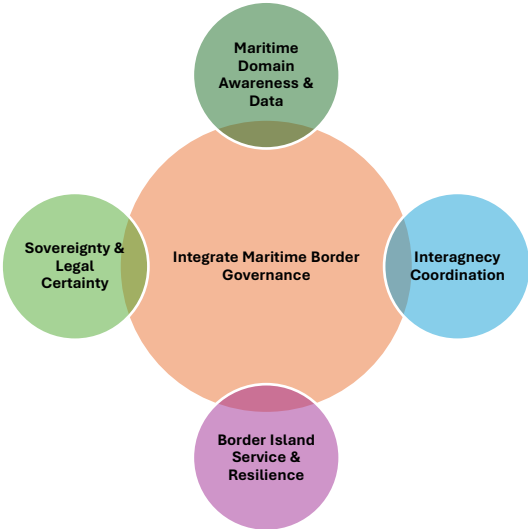


Figure 1. Integrated Maritime Border Governance (IMBG) analytical framework.
 Source: Authors’ conceptual synthesis, 2026

The temporal boundary was set at 2017–2026 to align the analysis with recent changes in Indonesian maritime governance and to maintain a contemporary ten-year evidence base. Sources were retained when they met at least one substantive criterion: direct analysis of the Kepulauan Riau or Natuna; examination of Indonesian maritime-security or border institutions; analysis of fisheries, marine spatial use, or blue-economy governance in Indonesia; or provision of transferable theoretical insight on polycentric ocean governance, maritime security, or blue justice. Peer-reviewed journal articles were prioritized, complemented by recent academic books and high-authority institutional publications where conceptually necessary. Older references from the original manuscript were removed from the core reference list, while the 2019 maritime-history book and its sectoral economic estimate were retained because both fall within the temporal window.

Table 2. Analytical dimensions and evidence used in the IMBG framework

Dimension	Core analytical question	Indicative evidence in reviewed literature	Expected governance outcome
Legal and jurisdictional clarity	Are mandates and escalation rules sufficiently clear?	Overlap among maritime law-enforcement institutions; regulatory misalignment; border-control design.	Lower duplication and fewer coordination failures.
Maritime-domain information	Can agencies construct and share a common operational picture?	Maritime-domain awareness, monitoring, licensing and enforcement information.	Faster detection, joint prioritization, evidence-based decisions.
Inter-agency and vertical coordination	Do national, sectoral, and subnational actors cooperate routinely?	Collaboration studies; institutional interaction; provincial and district border-management roles.	Coherent planning and implementation across scales.
Border-island services and resilience	Does governance improve the capacity of dispersed communities to remain connected and secure?	Transport, public-service gaps, livelihoods, infrastructure, local administrative presence.	Reduced territorial inequality and stronger social resilience.
Inclusive blue economy and justice	Are economic benefits ecologically sustainable and socially inclusive?	Fisheries, tourism, marine spatial use, tenure, participation, blue-justice literature.	Sustainable resource use with distributive and procedural fairness.

Source: Authors, 2026

The final analytical corpus consists of more than forty recent scholarly and institutional sources. Selection was purposive and iterative rather than a database-exhaustive systematic review; consequently, the article does not claim PRISMA-level comprehensiveness. The purpose is analytical saturation across the key governance themes rather than statistical representativeness of a literature population. This distinction is important because a transparent integrative review can be rigorous without overstating the reproducibility or completeness of a formal systematic search. The corpus combines international ocean-governance scholarship with Indonesia-specific and Kepulauan Riau-specific studies so that conceptual claims remain connected to the provincial case.

The analysis followed a thematic synthesis procedure. First, sources were read for explicit findings about authority, coordination, information, maritime threats, public services, economic development, ecological sustainability, participation, and policy recommendations. Second, these findings were coded into an initial set of categories. Third, categories were compared across sources and consolidated into the five IMBG dimensions. Fourth, contradictory or competing interpretations were retained rather than eliminated; for example, institutional consolidation and polycentric coordination are treated as alternative governance logics whose usefulness depends on the problem being addressed. The procedure follows the general logic of qualitative thematic analysis, which requires explicit coding decisions, systematic comparison, and a clear link between evidence and themes (Nowell et al., 2017; Braun & Clarke, 2021).

RESULTS AND DISCUSSION

1. Kepulauan Riau as an archipelagic borderland

The literature indicates that the Kepulauan Riau should be understood as an archipelagic borderland rather than as a peripheral administrative territory. Its islands are embedded in transnational maritime flows, strategic shipping routes, fisheries zones, tourism circuits, port economies, and security concerns. The predominantly maritime character of the province is accompanied by persistent constraints related to infrastructure, human resources, and law enforcement (Candra, 2025). Policy and governance problems in maritime-resource management also remain closely connected to the province's broader maritime-development agenda (Samin et al., 2024; Sholeh et al., 2023). This geographic condition creates a distinctive administrative challenge: government must simultaneously regulate mobility across borders, protect national jurisdiction, facilitate economic exchange, provide public services across islands, and manage marine ecosystems whose processes do not align neatly with administrative boundaries.

The borderland concept also helps explain why the same provincial space contains very different governance pressures. Batam is marked by high institutional density, port and industrial activity, and close integration with the Singapore–Johor–Riau economic environment. Bintan combines tourism, fisheries, pollution risks, and marine-resource use. Karimun is shaped by shipping and cross-border economic flows. Natuna carries stronger sovereignty and fisheries-security implications because of its location and recurring boundary-related tensions (Fauzan et al., 2019). A uniform policy model is therefore unlikely to work equally well across the province. Integration should provide shared principles and interoperable systems while allowing place-specific implementation.

This heterogeneity also changes the meaning of territorial resilience. In a continental setting, border security may be concentrated at fixed crossing points. In an archipelagic borderland, mobility is distributed across water, small ports, fishing grounds, and informal community networks. State presence is consequently

experienced through a combination of enforcement, connectivity, public services, market access, and administrative accessibility. Where inhabited islands face weak transport or service access, the effectiveness of border governance cannot be measured solely through maritime patrol performance. The capacity of communities to sustain livelihoods and access government services is part of the state's everyday territorial presence.

2. Institutional fragmentation is a structural governance problem

Across the reviewed literature, institutional fragmentation emerges as the most consistent governance mechanism linking otherwise different maritime problems. Indonesia has numerous institutions with maritime responsibilities, and this creates valuable specialization. However, specialization becomes fragmentation when mandates overlap, coordination depends on ad hoc relationships, information is not interoperable, or organizational incentives privilege agency-specific objectives. Evidence from Batam shows that institutional density can coexist with persistent illicit practices (Lay & Astrina, 2020). At the national scale, continuing difficulties are also evident in maritime law-enforcement arrangements (Dirhamsyah et al., 2022; Wibawa et al., 2021; Afriansyah et al., 2024). The problem is thus not institutional scarcity but the quality of institutional coupling.

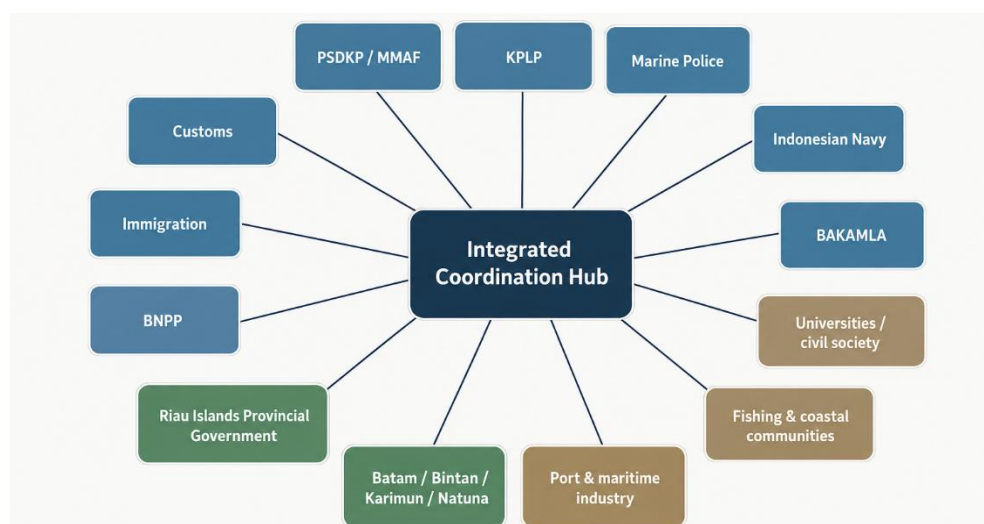


Figure 2. Conceptual institutional coordination network for maritime border governance in the Kepulauan Riau.

Fragmentation has horizontal and vertical forms. Horizontal fragmentation occurs among agencies operating at similar governmental levels, for example when enforcement, immigration, customs, fisheries, and transport authorities handle connected aspects of a single cross-border event. Vertical fragmentation occurs when national priorities are weakly connected to provincial or district implementation, or when local development consequences are not incorporated into security decisions. In the Kepulauan Riau, this second form is especially important because local governments manage many dimensions of welfare and spatial development even though border security and several maritime functions remain strongly centralized. A stronger subnational role and differentiated arrangements have therefore been proposed for border management (Samin & Poti, 2022; Indra, 2021).

The literature therefore supports a shift from agency-centered coordination to problem-centered coordination. Under an agency-centered model, each institution begins with its legal mandate and cooperates only when necessary.

Under a problem-centered model, recurring cross-sectoral risks are mapped first and participating institutions are assigned predictable roles, information responsibilities, and escalation procedures. IUU fishing, for instance, should connect detection, fisheries enforcement, evidence, diplomacy, livelihood impacts, and community information. Marine pollution should connect environmental response, shipping oversight, local government, industry responsibility, and coastal-community protection. A problem-centered model does not erase legal mandates; it creates a shared operational architecture around them.

3. Security pressures are amplified by coordination complexity

The second major finding is that maritime-security pressures become more difficult to manage when they combine high cross-border exposure with high coordination complexity. Natuna-related boundary and fishing issues illustrate high exposure because they involve foreign vessels, sovereign rights, fisheries resources, and diplomacy (Fauzan et al., 2019). IUU fishing is similarly complex because it is not only an enforcement problem: it is connected to sustainability, local livelihoods, human rights, and market regulation. Community participation is important in anti-IUU policy, while fisheries governance can also intersect with human-rights certification and foreign-policy strategy (Chapsos et al., 2019; Karim & Raharja, 2026).

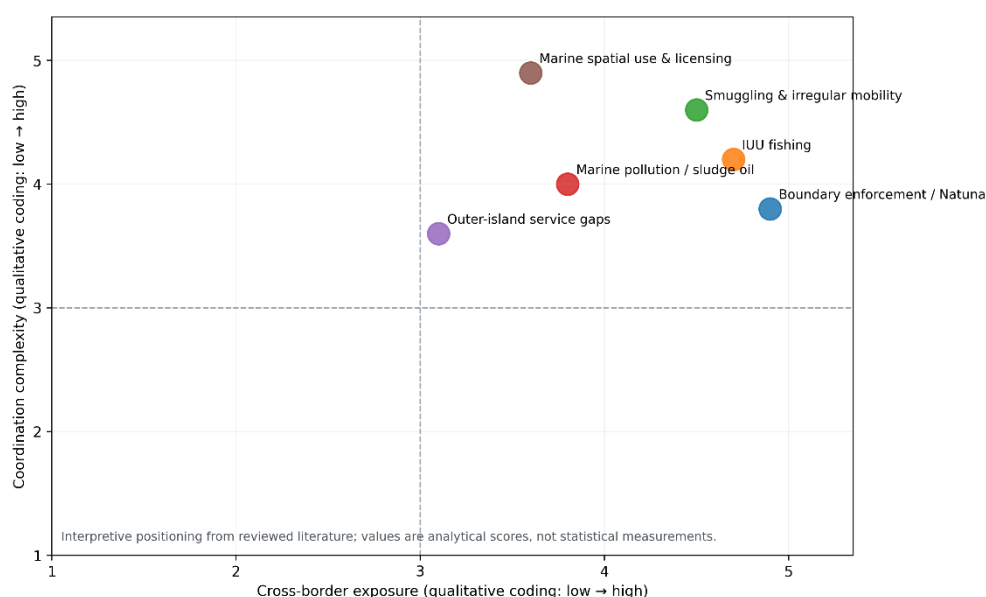


Figure 3. Governance pressure coordination complexity matrix for selected Kepulauan Riau maritime issues
Source: Author, 2026

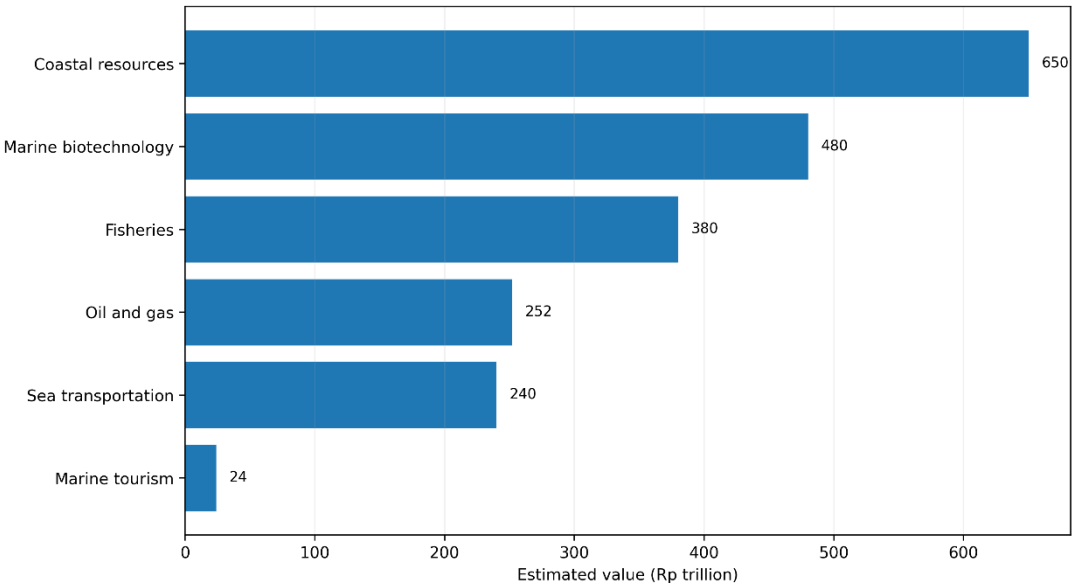
Smuggling and irregular cross-border mobility represent another high-coordination category. The analytical point is not that every incident requires every agency, but that fragmented response systems increase the possibility of gaps between detection, interception, investigation, immigration administration, customs procedures, and prosecution. Batam's institutional environment illustrates why multiple border-control bodies require compatibility rather than simple coexistence (Lay & Astrina, 2020). The same logic applies to maritime safety, environmental incidents, and resource licensing. Coordination complexity should therefore be anticipated in institutional design instead of treated as an exceptional problem that agencies negotiate after an incident occurs.

The qualitative matrix in Figure 3 visualizes this relationship. The positions are not statistical estimates. They summarize how the reviewed literature characterizes the combination of external exposure and cross-institutional dependency. The value of this device is diagnostic: issues in the upper-right quadrant should receive priority for formal joint protocols, shared information, and periodic multi-agency exercises or policy reviews. Problems with lower exposure but high coordination complexity, such as marine spatial use and licensing, require regulatory integration more than enforcement escalation. In this way, governance tools can be matched to the structure of the problem rather than applied uniformly.

4. Economic potential does not automatically translate into inclusive border development

The original manuscript emphasized the scale of Indonesia's maritime economic potential. That context remains useful, but the revised analysis treats economic value as a governance opportunity rather than an outcome in itself. The illustrative estimates reproduced in Figure 4 show large potential in coastal resources, marine biotechnology, fisheries, oil and gas, and sea transportation, while marine tourism is comparatively smaller in the cited estimate (Widjaja & Kadarusman, 2019). Such aggregate values should not be interpreted as current provincial income or as a forecast. Their relevance is to demonstrate the breadth of economic sectors whose activities require compatible spatial planning, environmental safeguards, licensing, infrastructure, and security.

Recent blue-economy literature makes clear that rapid expansion of ocean industries can intensify competition over space and resources. The global "blue acceleration" reflects an intensification of human claims on ocean space (Jouffray et al., 2020). Historical experiences of blue growth also highlight the importance of equitable access, adaptive management, and ecological limits (Caswell et al., 2020). Social-sustainability problems can accompany marine and coastal tourism growth, particularly when development narratives neglect political and distributional consequences (Leposa, 2020; Ertör & Hadjimichael, 2020). These findings are important for the Kepulauan Riau because economic opportunity is spatially concentrated and can create uneven benefits across islands and communities.



Source: Widjaja & Kadarusman (2019), values reproduced from the original manuscript for contextual comparison.

Figure 4. Estimated economic value of Indonesia's maritime sectors.
Source: Author, 2026

Table 3. Major maritime-border governance challenges identified in the literature

Challenge	Manifestation in the Kepulauan Riau context	Governance consequence	Representative evidence
Institutional overlap	Multiple maritime, border-control, sectoral, and local actors with intersecting responsibilities.	Duplication, gaps, variable escalation pathways, sectoral incentives.	Lay & Astrina (2020); Dirhamsyah et al. (2022); Afriansyah et al. (2024).
IUU fishing and sovereignty pressure	Foreign fishing, Natuna-related enforcement, fisheries-resource competition.	Links security, diplomacy, fisheries regulation, evidence, and community livelihoods.	Fauzan et al. (2019); Chapsos et al. (2019); Karim & Raharja (2026).
Transboundary illicit mobility	Smuggling and irregular movement across highly connected maritime corridors.	Requires interoperable border-control and investigative processes.	Muhammad et al. (2017); Lay & Astrina (2020).
Marine pollution and shipping externalities	Pollution affecting coastal waters, including recurrent sludge-oil concerns in Bintan.	Crosses environmental, shipping, private-sector, and local-government responsibilities.	Pratama & Akbar (2020).
Uneven island development	Variation in connectivity, services, infrastructure, and administrative presence.	Weakens territorial resilience and can widen center-periphery disparities.	Samin & Poti (2022); Candra (2025).
Blue-economy governance and spatial competition	Fisheries, tourism, ports, conservation, industry, and marine spatial utilization.	Potential conflicts over access, benefits, ecological limits, and regulatory authority.	Akbar et al. (2022); Darmawan et al. (2024); Samin et al. (2024); Nugroho et al. (2026).

Source: Thematic synthesis of the reviewed literature, 2026

At the local scale, the key policy question is how marine development changes access, livelihoods, environmental risk, and participation. Multi-actor collaboration is central to a sustainable blue economy in the Kepulauan Riau (Alfarizi, 2024). Evidence from fisheries management and marine spatial utilization further demonstrates the importance of aligning development with governance arrangements across the province (Nugroho et al., 2026; Darmawan et al., 2024). These studies suggest that blue-economy governance must be embedded in the same institutional architecture that handles border security. Economic licensing,

spatial use, conservation, and enforcement generate data and decisions that can either reinforce or undermine one another. Justice provides an additional criterion for evaluating this integration. A blue-economy program can be ecologically framed yet still exclude small-scale fishers from decision-making or distribute benefits unevenly. The international literature therefore highlights recognition, procedural participation, and distribution alongside sustainability (Engen et al., 2021; Jentoft et al., 2022; Idris et al., 2026). Indonesian work on marine tenure and community fisheries shows that local institutions and knowledge can support sustainable governance when they are recognized rather than displaced (Muawanah et al., 2021; Ananta & Cabral, 2026). For border islands, inclusion also contributes to resilience because communities with viable livelihoods and institutional voice are better positioned to participate in stewardship and report emerging risks.

5. Layered integration and institutional compatibility

The final result is a policy-design proposition: the Kepulauan Riau require layered integration rather than either complete institutional centralization or reliance on informal collaboration. Total centralization would be difficult because border governance spans functions that legitimately belong to different legal and policy sectors. Ad hoc collaboration, however, is too dependent on personalities and episodic coordination. A layered architecture retains specialized agencies but integrates them through shared rules, data standards, recurring coordination forums, and problem-specific operating protocols. This approach is consistent with polycentric-governance scholarship, which emphasizes coordinating mechanisms rather than the elimination of institutional plurality (Mahon & Fanning, 2019a, 2019b).

Table 4. Institutional constellation and recommended coordination functions

Actor group	Institutions / actors	Primary contribution	Priority integration mechanism
Maritime security and enforcement	BAKAMLA, Indonesian Navy, Marine Police, KPLP, PSDKP/MMAF.	Patrol, maritime safety, fisheries enforcement, incident response, evidence.	Shared risk picture, coordinated planning, lead/support protocols by incident type.
Border-control institutions	Customs and Immigration.	Movement of goods and people, border compliance, investigation support.	Data interoperability and formal transfer/escalation procedures.
National border and policy coordination	BNPP and relevant central ministries.	Strategic alignment, border-development policy, cross-ministerial coordination.	Integrated border priorities and joint performance review.

Actor group	Institutions / actors	Primary contribution	Priority integration mechanism
Provincial and district/city governments	Kepulauan Riau Province; Batam, Bintan, Karimun, Natuna and other local governments.	Services, local development, spatial implementation, community engagement.	Vertical planning interface linking security risk with development and service gaps.
Economic and port actors	Port operators, maritime industry, tourism and fisheries businesses.	Operational data, investment, compliance capacity, infrastructure.	Compliance partnerships, transparent reporting, pollution prevention, emergency coordination.
Coastal communities and knowledge actors	Fishers, island communities, universities, civil society.	Local knowledge, early warning, livelihood perspectives, evaluation.	Participatory planning, community reporting channels, research and independent assessment.

Source: Author, 2026

At the strategic layer, integration should establish shared provincial-border priorities linked to national maritime policy and district-level development needs. At the information layer, participating institutions should develop interoperable data and common definitions for recurring risks. At the operational layer, problem-specific protocols should identify who leads, who supports, what information is exchanged, and how cases are transferred across jurisdictions. At the development layer, security assessments should inform infrastructure and public-service priorities, while economic plans should incorporate ecological and security risks. At the accountability layer, performance should be assessed through collective outcomes rather than only agency-specific activity counts.

6. From sectoral fragmentation to institutional compatibility

The synthesis suggests that the often-used description of “sectoral ego” captures only part of the fragmentation problem. Organizational self-interest can inhibit cooperation, but recurrent coordination failure may persist even among willing officials if legal mandates, information systems, budgeting rules, and performance incentives remain incompatible. Institutional design in Batam and the need for legal harmonization around BAKAMLA both demonstrate why compatibility matters (Lay & Astrina, 2020; Afriansyah et al., 2024). This points toward institutional compatibility as a more useful reform objective than generic calls for stronger coordination. Compatibility means that separate organizations can work together because their procedures, information categories, escalation rules, and accountability expectations are designed to connect.

Institutional compatibility also creates a more realistic basis for reform than assuming that a single coast-guard model would automatically solve border governance. A more integrated maritime-security arrangement may reduce certain enforcement overlaps, yet many border problems would still require customs, immigration, fisheries management, environmental governance, provincial

administration, and community engagement. The IMBG framework therefore does not take a position that one agency should absorb all others. It argues instead that reform should be assessed by whether the system reduces coordination costs and closes predictable gaps. Organizational consolidation may be appropriate for some functions, while interoperable polycentricity may be more feasible for others.

This distinction also matters for accountability. When multiple institutions share a problem, each can report successful activities even if collective outcomes remain weak. An integrated evaluation system should therefore add cross-agency indicators: time required to exchange critical information, percentage of priority incidents handled under agreed protocols, resolution of overlapping jurisdictional questions, continuity of border-island services, ecological compliance, and stakeholder participation. Such measures would shift attention from organizational outputs toward system performance.

7. Security and development are mutually constitutive

A second contribution is the argument that maritime security and border development are mutually constitutive. Traditional policy can separate them: security agencies defend sovereignty, while civilian agencies pursue growth and welfare. In an archipelagic borderland, however, development conditions shape security capacity. Poor connectivity can limit administrative presence and emergency response; weak livelihoods can increase vulnerability to illicit economic networks; environmental degradation can intensify competition over resources; and exclusion from decision-making can reduce community trust. Conversely, effective security and legal certainty can enable investment, fisheries sustainability, tourism, and stable cross-border exchange. The relationship should therefore be treated as reciprocal rather than sequential.

This integrated perspective aligns with blue-economy scholarship. Blue-economy development has been framed around the sustainable use of marine resources, while later studies place stronger emphasis on justice and governance capacity (World Bank & United Nations Department of Economic and Social Affairs, 2017). Equity and enabling governance conditions are central rather than optional to socially sustainable ocean development (Cisneros-Montemayor et al., 2019, 2021). International blue-economy practices also demonstrate substantial institutional diversity (Wenhai et al., 2019). Indonesia's blue-economy performance has increasingly been operationalized through combined policy, ecological, economic, and social dimensions (Trenggono et al., 2025). These approaches support the incorporation of welfare and ecosystem indicators into border-governance evaluation.

For the Kepulauan Riau, this means that the governance value of a port, tourism zone, fisheries program, or marine conservation initiative should be assessed partly by how it interacts with border resilience. Does it improve transport connectivity to smaller islands? Does it create livelihood options that are accessible to local communities? Does it strengthen monitoring and compliance? Does it generate environmental burdens elsewhere? Does it create new spatial conflict? These questions connect economic policy to the territorial and security functions of the state without securitizing every development issue.

8. Blue justice in maritime-border governance

A third contribution is to place blue justice inside, rather than alongside, maritime-border governance. The policy debate around borders often prioritizes sovereignty and enforcement, while the blue-economy debate prioritizes economic opportunity and sustainability. Yet small-scale fishing communities encounter both systems simultaneously. They may be regulated as resource users, treated as security stakeholders, affected by tourism or industrial development, and expected

to support monitoring or conservation. Fishing communities can contribute valuable knowledge to anti-IUU governance (Chapsos et al., 2019). Small-scale fisheries can nevertheless be marginalized when blue-economy agendas privilege industrial actors (Ayilu et al., 2022; Jentoft et al., 2022).

Recognition justice is therefore relevant to how local maritime knowledge and customary practices are treated. Marine tenure and locally embedded institutions such as Sasi Laut illustrate how customary arrangements can support blue-economy goals when they are integrated into policy (Muawanah et al., 2021; Ananta & Cabral, 2026). Procedural justice concerns whether communities have meaningful opportunities to influence spatial planning, licensing, conservation, and development decisions. Distributive justice concerns how benefits, environmental costs, and access to marine space are allocated. Although these concepts come from broader ocean-governance research, they provide practical evaluation questions for the Kepulauan Riau.

Embedding justice also strengthens policy legitimacy. A border-governance system that is experienced only through enforcement may generate distance between institutions and communities. A system that couples enforcement with accessible services, transparent rules, livelihood support, and meaningful participation can build a more durable form of state presence. This does not imply that communities should carry enforcement responsibilities or that formal authorities should be diluted. Rather, it recognizes that effective governance depends on reciprocal information and institutional trust, especially in dispersed island environments where officials cannot be physically present everywhere at all times.

9. Implications for adaptive governance in the Kepulauan Riau

The IMBG framework implies a sequence of reforms rather than a one-time institutional redesign. The first priority is mandate mapping and regulatory harmonization focused on recurring problem types. This should identify where responsibilities overlap, where handoffs are ambiguous, and which information is needed across institutions. The second priority is interoperability: shared data definitions, agreed access procedures, and routine coordination protocols. The third priority is integration of border-island development with security and ecological risk analysis. The fourth priority is adaptive evaluation in which agencies and local governments periodically revise arrangements based on incidents, changing economic patterns, environmental conditions, and stakeholder feedback.

Adaptive governance is particularly important because the Kepulauan Riau are exposed to rapid change. Shipping patterns, tourism investment, fishing pressure, digital trade, geopolitical tensions, and climate-related coastal risks can alter the problem structure faster than formal organizations change. A governance framework should therefore combine stable institutional rules with the capacity to learn. This principle is consistent with historical lessons on blue growth, which emphasize responsive management rather than rigid expansion (Caswell et al., 2020). It also reflects the broader value of polycentric systems when they are connected by integrating mechanisms (Mahon & Fanning, 2019a).

CONCLUSION

This article reframes maritime-border management in the Kepulauan Riau Province as an integrated governance problem. The central challenge is not a lack of institutions, maritime potential, or strategic importance. It is the difficulty of producing coordinated action across a dense institutional system operating in a dispersed archipelagic borderland. The literature shows that sovereignty pressures, IUU fishing, cross-border illicit mobility, marine pollution, spatial

competition, and uneven island development are connected through shared governance mechanisms: overlapping authority, fragmented information, weak horizontal and vertical integration, and unequal participation. Treating these problems separately can therefore reproduce the fragmentation that policy is intended to solve.

The proposed Integrated Maritime Border Governance framework offers five linked dimensions: legal and jurisdictional clarity, maritime-domain information, inter-agency and vertical coordination, border-island services and resilience, and inclusive blue-economy governance. Its main policy implication is that integration should not be equated with the elimination of institutional plurality. Specialized organizations remain necessary, but they require compatibility through common data standards, predictable operating protocols, shared risk assessment, and collective performance evaluation. This layered architecture can support both enforcement effectiveness and development outcomes.

The article also argues that blue-economy policy should be incorporated into border governance through justice and resilience criteria. Fisheries, tourism, ports, conservation, and marine spatial use can strengthen the Kepulauan Riau only when economic gains are linked to ecological sustainability, community participation, and fair distribution of benefits and burdens. Recent Indonesian and international studies demonstrate that blue-economy success depends on governance capacity and social inclusion as much as on resource abundance. In a border province, these qualities also strengthen territorial resilience and the legitimacy of state institutions.

The study remains limited by its reliance on secondary sources. The IMBG framework and the qualitative positioning of governance pressures require empirical validation. Future research should conduct interviews with national and subnational agencies, coastal communities, port and fisheries actors, and civil-society or academic stakeholders; examine inter-organizational networks and case-transfer procedures; and compare Batam, Bintan, Karimun, and Natuna as distinct border-governance configurations.

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