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Challenges in Implementing Maritime Development in Indonesia: From Concept to Reality

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ABSTRACT

Indonesia's maritime development has been positioned as a strategic national agenda due to its archipelagic geography, abundant marine resources, and strategic location within regional and global sea lanes. However, the implementation of maritime development continues to face a gap between policy concepts and practical realities, particularly in governance coordination, port connectivity, logistics efficiency, digital transformation, environmental sustainability, and coastal community inclusion. This study aims to examine the main challenges in implementing maritime development in Indonesia and to explain how an adaptive and integrated governance framework can support the transformation of maritime policy into concrete development outcomes. This research employs a qualitative descriptive-analytical approach using secondary data collected through literature review and document analysis. The data were analyzed through qualitative content analysis by identifying key themes related to maritime governance, port logistics, blue economy implementation, institutional reform, and regional development. The findings show that Indonesia's maritime development is constrained by fragmented institutional arrangements, uneven port infrastructure, high logistics costs, weak hinterland integration, limited digital interoperability, and insufficient environmental safeguards. The study also finds that maritime development requires stronger coordination among central government, regional governments, port authorities, private sector actors, universities, civil society, and coastal communities. In conclusion, Indonesia's maritime development should move beyond infrastructure-oriented policies toward adaptive, collaborative, and sustainability-based governance. Strengthening institutional integration, digital readiness, green port practices, regional participation, and blue economy implementation is essential to transform Indonesia's maritime vision from a policy concept into an inclusive and sustainable development reality.

Keywords: Maritime Development, Maritime Governance, Blue Economy, Port Connectivity

INTRODUCTION

Indonesia's maritime development has long been framed as a strategic national agenda because the country's identity, geography, economy, and security are inseparable from the sea. As the world's largest archipelagic state, Indonesia possesses extensive maritime territory, abundant coastal resources, strategic sea lanes, and thousands of islands that require strong connectivity, effective governance, and sustainable resource management. However, the central issue examined in this article is the persistent gap between maritime development as a national concept and maritime development as an operational reality. Various policies have promoted Indonesia as a maritime-oriented state, yet implementation

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remains constrained by fragmented institutions, uneven infrastructure, high logistics costs, weak interregional connectivity, and limited integration between economic growth and ecological sustainability (Marliani, 2024; Putri & Afnira, 2024; Yamanaka, 2016).

The urgency of discussing Indonesia's maritime development lies in the fact that maritime connectivity is not merely an infrastructure issue, but also a determinant of national competitiveness, territorial integration, regional equality, and public welfare. In many island regions, especially in eastern Indonesia, maritime logistics still faces inefficiencies caused by limited port capacity, uneven cargo flows, inadequate hinterland connections, and dependence on subsidies. These conditions weaken the effectiveness of sea-based distribution systems and create disparities between western and eastern regions. Maritime development therefore cannot be understood only as the construction of ports, shipping routes, or logistics facilities; it must also be seen as a governance challenge that requires coordination among ministries, port authorities, regional governments, private actors, and local communities. Without this integrated approach, maritime development may remain a symbolic policy agenda rather than a practical instrument for equitable national development (Margaretha et al., 2024; Nguyen & Woo, 2022; Rumaji & Adiliya, 2019).

Recent studies also show that Indonesia's maritime transformation increasingly depends on digitalization, port modernization, and the capacity to build integrated logistics systems. Digital port governance, smart infrastructure, data interoperability, and service quality are becoming essential because maritime competitiveness is now shaped by speed, transparency, efficiency, and coordination across logistics chains. Nevertheless, digital transformation in Indonesian ports remains uneven, especially because the country's port network is geographically dispersed and institutionally complex. Some ports have begun to adopt digital systems, but the broader maritime system still struggles with limited standardization, fragmented data, and insufficient integration between port operations, shipping services, customs procedures, and land-based distribution (Cammin et al., 2022; Gu et al., 2023; Raza et al., 2023).

Another important dimension is the relationship between maritime development and the blue economy. Indonesia's maritime agenda is increasingly connected to sustainable fisheries, marine conservation, coastal livelihoods, marine tourism, renewable ocean resources, and blue finance. However, the implementation of the blue economy faces significant challenges because economic exploitation, ecological protection, and social justice often move in different policy directions. Marine resources are expected to generate growth, employment, and investment, but unsustainable practices, weak monitoring, pollution, and uneven benefit distribution can undermine long-term sustainability. Therefore, the urgency of this issue is not only economic but also ecological and social. Maritime development that prioritizes growth without ecological accountability risks creating new vulnerabilities in coastal communities and marine ecosystems (Saad et al., 2015; Tsai et al., 2021).

The complexity of implementation is further reflected in Indonesia's marine governance structure, which involves overlapping regulations, sectoral authorities, and competing interests among national and local actors. Maritime policy is often designed at the national level, while many practical challenges occur at the regional and local levels, including coastal zoning, small-island management, fisheries control, community participation, and marine spatial planning. This creates a governance gap between strategic planning and field-level execution. In this context, local knowledge, community-based resource management, and accurate spatial data are crucial for ensuring that maritime development does not marginalize coastal communities or ignore ecological limits. The implementation of maritime development therefore requires institutional arrangements that are not only centralized and technocratic, but also adaptive, participatory, and sensitive to regional diversity (Bellido et al., 2020; Ihm & Lee, 2021; Plasman, 2008; Portman, 2011).

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Environmental pressure also strengthens the urgency of evaluating Indonesia's maritime development. Port expansion, coastal development, shipping activities, fishing-port operations, and industrial growth may contribute to economic productivity, but they also create waste, emissions, habitat degradation, and pollution if they are not managed through strong sustainability standards. Global discussions on green ports and sustainable maritime logistics emphasize that port efficiency must be accompanied by environmental innovation, waste management, emission control, and stakeholder accountability. In Indonesia, this issue is particularly important because ports and coastal zones are not only economic gateways but also living spaces for coastal communities. Thus, the challenge is to ensure that maritime development moves beyond physical infrastructure and becomes part of a broader sustainability transition that connects logistics performance, environmental governance, and social responsibility (Baştuğ et al., 2022; MacKay & Collins, 2025; Wiber et al., 2009).

Table 1. Key Issues, Urgency, and Analytical Direction of Indonesia's Maritime Development

No.	Key Issue	Implementation Challenge	Urgency of Discussion	Analytical Direction in This Article
1	Maritime governance	Fragmented authority, overlapping regulations, and weak coordination	Ensuring that national maritime policies can be translated into coherent implementation	Examining institutional coordination and policy integration
2	Port and logistics connectivity	High logistics costs, unequal port capacity, and weak hinterland linkage	Reducing regional disparities and strengthening national supply chains	Analyzing maritime logistics as a system of ports, shipping routes, and regional economies
3	Digital transformation	Uneven digital adoption, limited interoperability, and weak data integration	Improving efficiency, transparency, and competitiveness of port services	Discussing digitalization as governance reform, not merely technological adoption
4	Blue economy implementation	Tension between economic growth, ecological protection, and community welfare	Supporting sustainable marine-based development	Linking maritime development with sustainability, equity, and coastal livelihoods
5	Environmental sustainability	Pollution, emissions, marine debris, and ecological degradation	Preventing maritime development from creating long-term environmental risks	Evaluating the need for green port practices and environmental accountability
6	Local and regional participation	Limited involvement of regional governments and coastal communities	Ensuring context-sensitive and inclusive maritime policy	Highlighting adaptive, participatory, and place-based implementation

Source: Author, 2025

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Maritime security and border management also form an inseparable part of the implementation challenge. Indonesia's maritime territory contains strategic border areas, international shipping lanes, small outer islands, and zones vulnerable to illegal activities, smuggling, overlapping law enforcement, and administrative complexity. These issues show that maritime development cannot be separated from legal certainty, surveillance capacity, border governance, and coordination among security agencies. A development agenda that focuses only on economic infrastructure may fail if it does not simultaneously strengthen maritime safety, security, and regulatory enforcement. Therefore, the implementation of maritime development must balance economic connectivity with legal order and maritime sovereignty, especially in border regions and strategic sea corridors (Bateman, 2007; Germond & Germond-Duret, 2016; McCabe, 2023).

Based on these issues, this article approaches Indonesia's maritime development as a multidimensional implementation problem rather than as a purely conceptual or sectoral agenda. The discussion is directed toward explaining why ambitious maritime visions often encounter practical barriers when translated into institutional coordination, logistics systems, port governance, digital transformation, environmental management, and regional implementation. By adopting this approach, the article seeks to contribute to maritime policy studies by showing that the success of Indonesia's maritime development depends not only on the strength of national vision, but also on the ability to align policy design, institutional capacity, technological readiness, ecological sustainability, and local participation. In this sense, the article positions maritime development as a continuous process of transforming ideas into operational systems that are measurable, inclusive, and sustainable.

METHODOLOGY

This study employed a qualitative research design with a descriptive-analytical approach to examine the challenges of implementing maritime development in Indonesia from concept to reality (Creswell & Poth, 2016; Leavy, 2022). This approach was selected because the research focuses on understanding policy implementation, institutional coordination, governance dynamics, and practical constraints rather than measuring statistical relationships. The study analyzed Indonesia's maritime development as a multidimensional issue involving port governance, maritime connectivity, logistics systems, blue economy transformation, coastal management, digitalization, and environmental sustainability.

The data used in this study consisted of secondary data collected through literature review and document analysis. The sources included academic journal articles, government regulations, national maritime policy documents, institutional reports, and publications related to maritime development, port management, sea connectivity, and sustainable marine governance. The documents were selected purposively based on their relevance, credibility, and contribution to explaining the gap between maritime policy formulation and implementation. Data collection was conducted by identifying key themes, categorizing relevant documents, and examining how maritime development policies are translated into practical programs.

Data were analyzed using qualitative content analysis to identify recurring themes, implementation barriers, institutional weaknesses, and policy gaps in Indonesia's maritime development (Creswell & Creswell, 2018). The analysis focused on policy vision, regulatory structure, inter-agency coordination, infrastructure readiness, stakeholder participation, and sustainability challenges. To strengthen the credibility of the findings, the study applied source triangulation by comparing academic literature, official policy documents, and institutional reports. Since the research relied on secondary data and did not involve direct human participants, ethical considerations were maintained through accurate citation, objective interpretation, and responsible use of all referenced materials.

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RESULTS AND DISCUSSION

1. The Gap Between Maritime Development Vision and Implementation Capacity

Indonesia's maritime development agenda has been built upon a strong national vision that positions the sea as the foundation of economic growth, territorial integration, and strategic competitiveness. This vision reflects Indonesia's geographical reality as an archipelagic state whose development depends heavily on maritime connectivity, port infrastructure, marine resource governance, and inter-island logistics. However, the findings show that the implementation of maritime development has not fully reflected the ambition of this policy vision. While national policy narratives emphasize Indonesia as a maritime axis, practical implementation continues to face structural constraints, particularly in institutional coordination, regulatory consistency, financing capacity, and regional execution.

One of the main findings is that maritime development in Indonesia often remains fragmented across sectors and levels of government. Various ministries and agencies are involved in port management, marine spatial planning, shipping regulation, fisheries governance, environmental protection, and coastal development. However, these institutions do not always operate within an integrated framework. As a result, maritime programs may overlap, move in different directions, or experience delays due to unclear authority and weak coordination. This condition shows that the problem is not merely the absence of policy, but the difficulty of translating policy into synchronized institutional action.

Table 2. Gap Between Maritime Development Vision and Implementation Reality in Indonesia

No.	Policy Vision	Implementation Reality	Main Challenge	Strategic Implication
1	Indonesia as a strong maritime-oriented state	Maritime policy remains fragmented across sectors	Weak institutional coordination	Need for integrated maritime governance
2	Efficient inter-island connectivity	Logistics costs remain high in many island regions	Uneven port and shipping infrastructure	Stronger port-network and hinterland integration
3	Maritime development as national economic driver	Benefits are concentrated in more developed regions	Regional capacity inequality	Greater support for peripheral and eastern regions
4	Sustainable blue economy	Economic exploitation often exceeds ecological control	Weak environmental monitoring	Integration of sustainability standards
5	Modern and digital maritime system	Digitalization is uneven across ports and regions	Limited interoperability and human capacity	National maritime digital governance reform
6	Inclusive coastal development	Coastal communities are not always central actors	Limited participation in planning	Community-based and place-sensitive policy design

Source: Author, 2025

The implementation gap is also visible in the relationship between national planning and regional capacity. National maritime policies tend to set broad targets related to connectivity, logistics efficiency, port modernization, and blue economy development.

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Nevertheless, many regional governments face limitations in technical capacity, budget availability, human resources, and access to reliable maritime data. This creates uneven implementation across regions. Provinces with stronger infrastructure and investment capacity are more able to benefit from maritime development, while peripheral and remote island regions often remain dependent on central government intervention and subsidy-based connectivity programs.

Another important issue is the dominance of physical infrastructure in the interpretation of maritime development. In many cases, maritime development is understood mainly as the construction of ports, docks, shipping routes, and logistics facilities. Although infrastructure is essential, this narrow interpretation can overlook governance reform, institutional learning, community participation, environmental protection, and long-term sustainability. Consequently, infrastructure projects may be completed without producing significant improvements in logistics efficiency or regional welfare if they are not accompanied by operational integration, service quality improvement, and effective policy coordination.

The findings further indicate that Indonesia's maritime development requires stronger implementation instruments. Policy concepts must be supported by measurable targets, clear division of institutional responsibility, integrated funding mechanisms, and monitoring systems that can evaluate progress beyond project completion. Maritime development should not only be assessed through the number of ports built or shipping routes opened, but also through its impact on logistics cost reduction, regional economic inclusion, port service performance, coastal community welfare, and environmental sustainability. Without these indicators, implementation risks becoming procedural rather than transformative.

These findings suggest that the challenge of maritime development in Indonesia lies not only in designing ambitious policies, but in ensuring that those policies can operate effectively within complex institutional and territorial realities. Maritime development must therefore move from a vision-driven approach toward an implementation-based approach. This means that every maritime program should be evaluated according to its ability to solve concrete problems, including connectivity gaps, logistics inefficiency, institutional fragmentation, environmental degradation, and regional inequality. In this sense, maritime development becomes a test of governance capacity, not merely a statement of national aspiration.

2. Port Connectivity, Logistics Efficiency, and Regional Inequality

Port connectivity is one of the most critical dimensions of maritime development in Indonesia because ports function as the main nodes connecting islands, production centers, markets, and international trade routes. The findings show that Indonesia has made important progress in expanding port infrastructure and improving maritime logistics networks. However, the effectiveness of this progress remains uneven. Major ports in western Indonesia tend to have better cargo volume, investment, service quality, and hinterland connectivity, while many ports in eastern and outer island regions still struggle with limited facilities, low cargo balance, insufficient shipping frequency, and weak integration with regional economic activities.

A major obstacle in maritime logistics is the imbalance of cargo flows between regions. Many shipping routes transport goods from major economic centers to less developed regions but return with limited cargo. This imbalance increases operational costs and contributes to high logistics prices in remote islands. Although sea connectivity programs are designed to reduce price disparities and strengthen national integration, their effectiveness depends on the ability of regional economies to generate return cargo, develop local production, and connect ports with inland distribution networks. Without productive regional economic development, maritime logistics may remain dependent on government intervention rather than becoming commercially sustainable.

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The findings also show that port development cannot be separated from hinterland connectivity. A port may have modern facilities, but its economic function will remain limited if it is not connected to roads, industrial zones, warehouses, fishery centers, agricultural production areas, and urban distribution networks. In some regions, ports operate as isolated infrastructure rather than integrated economic nodes. This condition reduces their contribution to regional development. Therefore, maritime development must be planned as a logistics ecosystem that links ports, shipping services, land transportation, production centers, customs systems, and market access.

Another important issue is the variation in port governance and service quality. Larger ports are generally more capable of adopting digital systems, improving cargo handling, and attracting private investment. In contrast, smaller regional ports often face limitations in equipment, management capacity, service standards, and operational efficiency. These differences create unequal logistics performance across Indonesia's maritime regions. If not addressed, port modernization may unintentionally widen regional disparities because advanced ports become increasingly competitive, while smaller ports remain underdeveloped and disconnected from national and global supply chains.

Table 3. Key Challenges in Port Connectivity and Maritime Logistics

No.	Dimension	Current Condition	Implementation Challenge	Policy Direction
1	Port infrastructure	Development is stronger in major ports	Uneven capacity among regions	Improve secondary and feeder ports
2	Cargo flow	Return cargo remains limited in remote areas	High operational costs	Strengthen local production and regional supply chains
3	Hinterland linkage	Many ports are weakly connected to production centers	Ports function as isolated infrastructure	Integrate ports with roads, warehouses, and industrial zones
4	Shipping services	Route frequency varies significantly	Limited service reliability in remote areas	Improve route planning and public service schemes
5	Digital logistics	Digital systems are adopted unevenly	Limited interoperability	Develop integrated national port data systems
6	Regional equity	Maritime benefits are concentrated in developed regions	Persistent spatial inequality	Prioritize inclusive maritime connectivity

Source: Author, 2025

The findings indicate that maritime logistics reform must address both efficiency and equity. Efficiency is needed to reduce logistics costs, improve trade competitiveness, and accelerate cargo movement. Equity is needed to ensure that maritime connectivity benefits remote islands, small producers, coastal communities, and less developed regions. Therefore, port and logistics development should not only prioritize commercially profitable routes, but also consider national integration and public service obligations. This requires a balanced policy that combines market-based logistics improvement with state-supported connectivity for strategic and disadvantaged regions.

Overall, port connectivity and logistics efficiency are central to turning Indonesia's maritime concept into practical development outcomes. However, infrastructure alone is

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insufficient. The improvement of maritime logistics requires integrated planning, cargo-flow management, regional economic strengthening, digital interoperability, and stronger coordination between central and local institutions. When ports are treated as part of a broader economic ecosystem, they can become engines of regional development. Conversely, when ports are treated merely as physical projects, their contribution to national maritime transformation will remain limited.

3. Blue Economy, Environmental Sustainability, and Coastal Community Welfare

The blue economy has become an increasingly important component of Indonesia's maritime development agenda. It offers a framework for using marine resources to support economic growth while maintaining ecological balance and social inclusion. In principle, the blue economy connects fisheries, marine tourism, coastal industries, renewable ocean resources, conservation, and maritime innovation. However, the findings show that the implementation of the blue economy in Indonesia still faces serious challenges. These challenges include weak institutional coordination, limited enforcement of environmental standards, uneven community participation, and the difficulty of balancing economic extraction with ecological preservation.

One of the central problems is that marine and coastal resources are often managed through sectoral approaches. Fisheries, tourism, conservation, port development, coastal settlement, and industrial activities are frequently governed by different institutions and policy frameworks. This fragmentation creates potential conflict in marine space utilization. For example, coastal areas may be simultaneously targeted for tourism development, fishing activities, conservation zones, port expansion, and industrial investment. Without strong marine spatial planning and enforcement, these competing interests can produce ecological degradation and social tension among local stakeholders.

The findings also show that environmental sustainability remains a major concern in maritime development. Port expansion, shipping activities, marine transportation, coastal reclamation, and industrial development can contribute to pollution, habitat disturbance, waste accumulation, and carbon emissions. In many areas, environmental management systems are not yet strong enough to control these impacts effectively. This situation indicates that maritime development must be accompanied by green port standards, waste management systems, emission reduction strategies, and stricter environmental monitoring. Sustainability should not be positioned as a supplementary agenda, but as a core requirement of maritime development.

Coastal community welfare is another crucial aspect of maritime development. Many coastal communities depend on fisheries, small-scale trade, marine tourism, and informal maritime economies. However, they are not always positioned as active participants in development planning. In some cases, maritime projects are designed from a top-down perspective, while local communities are involved only as beneficiaries or affected groups. This weakens social legitimacy and may reduce the effectiveness of implementation. Maritime development should therefore strengthen community participation, protect local livelihoods, and ensure that economic benefits are distributed fairly.

The blue economy also requires innovation in financing, technology, and institutional capacity. Sustainable fisheries, marine conservation, clean port systems, and coastal adaptation programs require long-term investment. However, many local governments and coastal communities lack access to adequate financing and technical support. In this context, partnerships among government, private sector, universities, civil society, and international institutions are important. These partnerships can support research, technology transfer, capacity building, and sustainable business models that allow maritime development to produce both economic and ecological benefits.

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The discussion shows that the blue economy should not be reduced to a slogan of marine-based economic growth. It must be understood as a development model that integrates productivity, sustainability, and justice. If Indonesia's maritime development continues to prioritize economic expansion without sufficient ecological safeguards, it may generate short-term growth but create long-term environmental and social costs. Therefore, the success of maritime development depends on the ability to design policies that protect marine ecosystems, empower coastal communities, and build sustainable maritime industries. In this regard, the blue economy becomes a bridge between national maritime ambition and responsible development practice.

4. Institutional Reform, Digital Transformation, and Adaptive Maritime Governance

Institutional reform is a fundamental requirement for strengthening maritime development in Indonesia. The findings show that many implementation problems are rooted in fragmented authority, overlapping mandates, and weak coordination across maritime institutions. Maritime development involves multiple policy domains, including transportation, fisheries, trade, environment, defense, tourism, industry, investment, and regional development. Because these domains are managed by different institutions, policy execution often becomes complex and slow. This condition demonstrates that maritime development requires not only sectoral programs, but also a governance architecture capable of integrating diverse actors and policy interests.

Digital transformation has emerged as an important instrument for improving maritime governance. Digital port systems, online licensing, cargo tracking, integrated customs services, electronic documentation, and maritime data platforms can increase transparency, reduce bureaucracy, and improve logistics efficiency. However, the findings indicate that digital transformation remains uneven across Indonesia's maritime system. Some major ports have adopted digital technologies, while smaller ports and regional institutions still face limitations in infrastructure, human resources, and technical capacity. This creates a digital divide within the national maritime network.

The implementation of digital maritime governance also depends on data integration. Maritime development requires accurate and interoperable data on ship movement, cargo volume, port capacity, marine resources, environmental conditions, coastal zoning, and logistics performance. Without integrated data, decision-making becomes fragmented and reactive. Many institutions may collect maritime data, but the data are not always connected or used collectively for policy evaluation. Therefore, digital transformation should be directed toward building a shared maritime information system that supports planning, monitoring, coordination, and accountability.

Adaptive governance is needed because maritime development takes place in a dynamic environment. Indonesia faces changing global trade patterns, climate risks, technological disruption, geopolitical pressure, environmental degradation, and shifting regional economic conditions. Rigid governance systems are often unable to respond effectively to these changes. Adaptive maritime governance requires flexibility, learning capacity, stakeholder participation, and evidence-based decision-making. This means that policy implementation should be continuously evaluated and adjusted according to emerging challenges, rather than treated as a fixed administrative process.

The findings suggest that adaptive and integrated maritime governance must connect institutional reform, digital innovation, environmental responsibility, and regional participation. Such a governance model should allow central government institutions to formulate national direction while enabling regional governments and local communities to contribute context-specific knowledge. It should also involve private actors, port operators, universities, and civil society organizations in developing solutions to logistics, environmental, and technological

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challenges. This integrated approach can help Indonesia move beyond fragmented maritime development toward a more coherent and sustainable implementation system.

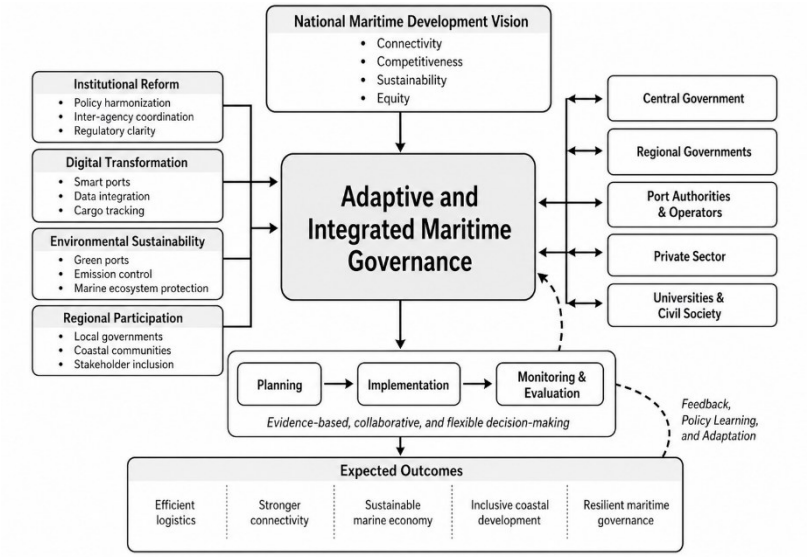

Figure 1. Adaptive and Integrated Maritime Governance Framework for Indonesia's Maritime Development
Source: Author, 2025

The overall discussion confirms that Indonesia's maritime development cannot be realized through policy vision alone. It requires strong institutions, integrated planning, digital readiness, sustainable financing, environmental safeguards, and inclusive participation. The transition from concept to reality depends on the capacity of the state and its partners to transform maritime ideas into operational systems that produce measurable benefits. Therefore, the future of Indonesia's maritime development should be directed toward governance reform that is adaptive, collaborative, and implementation-oriented. Only through such reform can Indonesia's maritime agenda become a practical foundation for national connectivity, economic competitiveness, ecological sustainability, and regional equality.

CONCLUSION

This study concludes that the implementation of maritime development in Indonesia remains marked by a significant gap between policy vision and practical realization. Although Indonesia has a strong geographical, economic, and strategic foundation to become a maritime-oriented state, the transformation of this vision into concrete development outcomes continues to face institutional, infrastructural, technological, environmental, and regional challenges. The findings show that maritime development cannot be understood merely as port construction, shipping route expansion, or marine resource utilization. Instead, it must be viewed as a multidimensional governance agenda that requires policy coherence, inter-agency coordination, regional capacity, logistics integration, digital readiness, and sustainable coastal management.

The major findings indicate that Indonesia's maritime development challenges are closely related to fragmented governance, unequal port connectivity, high logistics costs, weak hinterland integration, uneven digital transformation, and limited implementation of blue economy principles. These issues demonstrate that maritime development requires an adaptive and integrated governance framework capable of linking national vision with regional implementation. The study contributes to the existing body of knowledge by emphasizing that

the success of maritime development depends not only on the formulation of ambitious policy concepts, but also on the ability to build operational systems that are collaborative, evidence-based, inclusive, and responsive to changing economic and environmental conditions. Practically, the findings suggest the need to strengthen institutional reform, improve port and logistics networks, expand digital integration, empower coastal communities, and embed environmental sustainability into every stage of maritime development.

Nevertheless, this study has limitations because it relies primarily on secondary data, literature review, and document analysis, without direct field observation or interviews with policymakers, port operators, coastal communities, and maritime industry actors. Therefore, future studies should employ empirical field-based methods to examine how maritime development policies are implemented in specific regions, ports, or coastal communities. Comparative studies across western, central, and eastern Indonesia would also be valuable to identify regional differences in maritime governance capacity and logistics performance. Further research may also explore the effectiveness of digital maritime systems, green port initiatives, blue economy financing, and community-based coastal governance as strategic instruments for transforming Indonesia's maritime development from concept into sustainable reality.

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