



IMPLEMENTATION OF THE BLUE ECONOMY MISSION IN INDONESIA: ANALYSIS OF POTENTIAL, CONSTRAINTS, AND DEVELOPMENT DIRECTIONS

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Abstract :

Indonesia has enormous blue economy potential, but its contribution to the economy has not been optimal due to various implementation constraints. The main problem of this research is the gap between the potential of marine resources and the realization of their economic value at the regional level. This study aims to map the potential, identify obstacles, and formulate the direction of the blue economy mission development in Berau Regency, East Kalimantan. The research used a qualitative approach with a case study design. The research population was the actors involved in managing the Berau coastal blue economy, while the sample consisted of seven key informants selected purposively and snowball, including government officials, business actors, coastal communities, and academics. Data were collected through in-depth interviews, observations, and documentation studies, then analyzed using the interactive model of Miles, Huberman, and Saldaña, which summarizes data, presents it, then draws and verifies conclusions, and tests its validity through triangulation. The results of the study revealed seven findings: large potential that has not automatically translated into local added value, fragmentation of cross-sector governance, multi-layered financing gaps, infrastructure and markets as determinants of income, ecological sustainability as an economic asset, the need to shift participation towards co-design, and the measurement of success that must be multidimensional. The study concluded that the implementation of the blue economy in Berau is systemic and thus requires institutional integration, strengthening of value chains and financing, protection of natural capital, and equitable participation, rather than stand-alone sectoral interventions.

Keywords : Blue economy, marine governance, sustainable development, coastal economy, Berau Regency

INTRODUCTION

Indonesia is the world's largest archipelagic country. Its marine area covers 6.4 million km², comprising 17,504 islands, with a coastline of approximately 81,000 kilometers, making it the second-longest in the world (Wuwung et al., 2024; Kusumawardhani, 2023). These waters harbor vast biodiversity, ranging from approximately 8,500 fish species to 3.36 million hectares of mangrove forests (Wuwung et al., 2024). This richness positions the ocean as the foundation for national economic transformation through the blue economy mission, namely development that optimizes marine resources without damaging the carrying capacity of its ecosystem. However, this enormous potential has not yet been reflected in economic achievements. The marine economy's contribution to Gross Domestic Product (GDP) only reached 7.6% in



2021 and remains far from the target of 15% by 2045 (Wuwung et al., 2024). The economic value of Indonesia's oceans is estimated to exceed USD 280 billion per year, while the aquaculture sector could absorb up to 8.9 million workers by 2030 (Bappenas, 2024). This gap between potential and realization is the main problem of this research. The question is simple: why has such enormous potential not yet translated into commensurate economic contributions, and what is holding it back.

Numerous data points to the root of the problem. Marine governance remains fragmented across sectors, overfishing rates have reached 38%, and marine debris management programs have only achieved 35.36% of the 70% target (Wuwung et al., 2024). Fiscal space is also limited, as the State Budget only covers 20 to 25% of the marine development agenda (Kusumawardhani, 2023), while losses from plastic waste are estimated at USD 450 million annually (Bappenas, 2024). These phenomena align with the theory of implementation barriers, which argues that policy execution failure stems from weak coordination, unclear accountability, and conflicting interests between institutions (Wuwung et al., 2024). Similar conditions are evident in regions, including East Kalimantan, which is rich in coastal resources but whose economy still relies on the extractive sector, making the blue economy relevant as a diversification pathway.

Previous studies have not fully addressed this issue. Blue economy research in Indonesia still suffers from conceptual fragmentation and minimal methodological integration, resulting in the lack of a unified framework that simultaneously analyzes potential, constraints, and development directions (Atmadi et al., 2026). National blue economy policies are also considered overlapping and unclear (Latif et al., 2023). Quantitative studies have found that fisheries production and information technology drive blue economy growth, while trade openness and fossil fuel consumption suppress it (Marwa et al., 2024). Most research also focuses on the national or single sector level, and few have examined implementation at the district level in depth. These studies are strong on one level, but have not yet been integrated into an implementable policy framework.

This is where this research is novel. It combines three previously discussed issues-potential mapping, constraint identification, and development direction formulation-into a single policy implementation analysis framework. The focus is not on econometric determinants, as in previous studies, nor on competitive advantage at the company level, but rather on the implementation of the blue economy mission as a hierarchical governance issue that demands institutional integration (Marwa et al., 2024; Rianawati et al., 2024). This research also utilizes the second edition of the Indonesia Blue Economy Roadmap as a policy reference, a document rarely subjected to critical analysis (Bappenas, 2024).

This research analysis is based on several theoretical foundations. The Sustainable Development Goals framework, specifically SDG 14, views the blue economy as a balance between economic growth, social justice, and environmental conservation (Marwa et al., 2024). The theory of implementation

barriers and the concept of institutional integration explain that the success of marine policy depends on inter-institutional coordination and the management of conflicts of interest (Wuwung et al., 2024). The concept of decoupling complements this by demanding the separation of economic growth from environmental degradation (Wuwung et al., 2024), while the Resource-Based View perspective highlights the role of innovation and resource capabilities in building excellence in the marine sector (Rianawati et al., 2024). This combination of theories is used because blue economy issues are cross-sectoral and cannot be explained by a single theory. This multi-theoretical approach also bridges the economic, institutional, ecological, and social dimensions, which have often been analyzed separately.

This research has three objectives. First, to map the potential of the blue economy based on the latest marine data. Second, to identify structural, institutional, and financing constraints that hinder the implementation of the blue economy mission. Third, to formulate a development direction aligned with the SDG 14 framework and the national roadmap. These three objectives are designed to address integration gaps left unaddressed by previous studies.

The benefits of this research are both theoretical and practical. Theoretically, this research enriches the study of the blue economy through an analytical framework that combines theories of policy implementation, institutional integration, and the concept of decoupling, while addressing the conceptual fragmentation that has been highlighted (Atmadi et al., 2026). Practically, the findings can provide input for the government, particularly Bappenas and the Ministry of Maritime Affairs and Fisheries, in organizing blue economy financing, improving cross-sectoral coordination, and accelerating the achievement of marine economy targets. For academics and coastal communities, this research provides a knowledge base for more equitable and sustainable decision-making. Thus, this research not only enriches theory but also offers applicable policy directions at the regional level.

RESEARCH METHOD

This research uses a qualitative approach with a descriptive analytical case study design. The qualitative approach was chosen because the research objectives require an in-depth understanding of the implementation of blue economy policies, which are complex, contextual, and full of interactions between actors, making it inadequate to summarize them simply in numbers (Creswell & Poth, 2018). The case study design allows researchers to explore how and why the implementation of the blue economy mission is proceeding as it is in the field, with the case being limited to a specific region and period. The research was conducted in the coastal area of Kalimantan, specifically Berau Regency, East Kalimantan. This location was deliberately chosen because it has both significant blue economy potential and real ecological pressures, reflected in the 285,548.95-hectare coastal conservation area with 507 species of hard coral and marine tourism destinations such as the Derawan Islands (Rifandi, 2026).

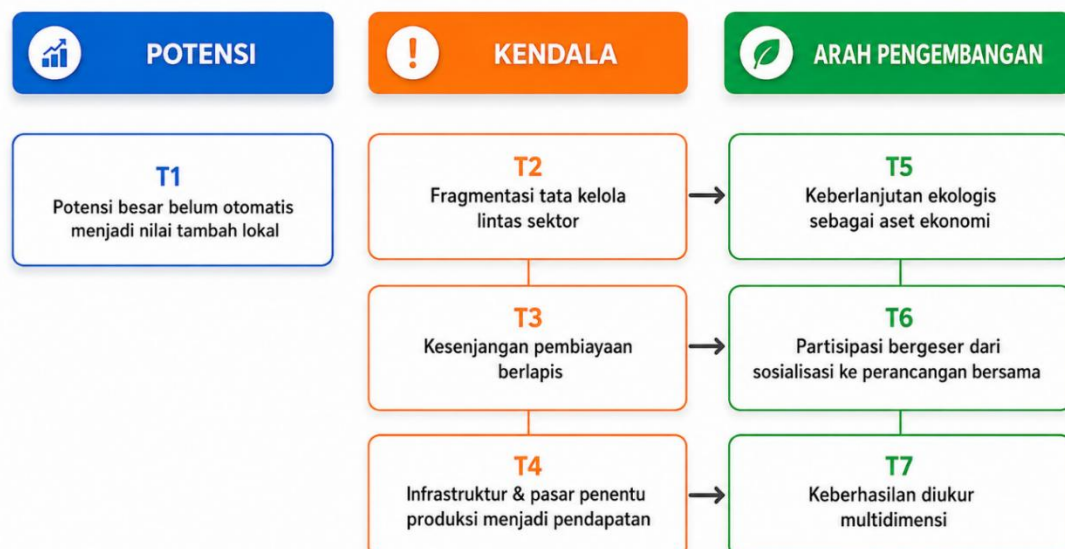
The research data consists of primary and secondary data. Primary data

were obtained from informants through in-depth semi-structured interviews and non-participant observation of conditions in coastal areas, while secondary data came from policy documents, regional planning documents, marine and fisheries statistics, and relevant scientific publications. The research population was the actors involved in managing Berau's coastal blue economy. The sample was selected using a purposive technique, namely selecting parties who are knowledgeable and directly involved in blue economy policies, including government elements, fisheries and marine tourism business actors, coastal communities, and academics. The snowball technique was used to reach other key informants based on references from previous informants, for a total of seven key informants.

Data analysis employed a simultaneous, cyclical, interactive model, encompassing data condensation, data presentation, and conclusion drawing and verification, ensuring that conclusions were continuously tested throughout the study (Miles et al., 2020). Data validity was maintained through triangulation of sources and techniques by comparing interview results, observations, and documents, as well as through member checking to reconfirm interpretations with informants (Creswell & Poth, 2018).

RESULTS AND DISCUSSION

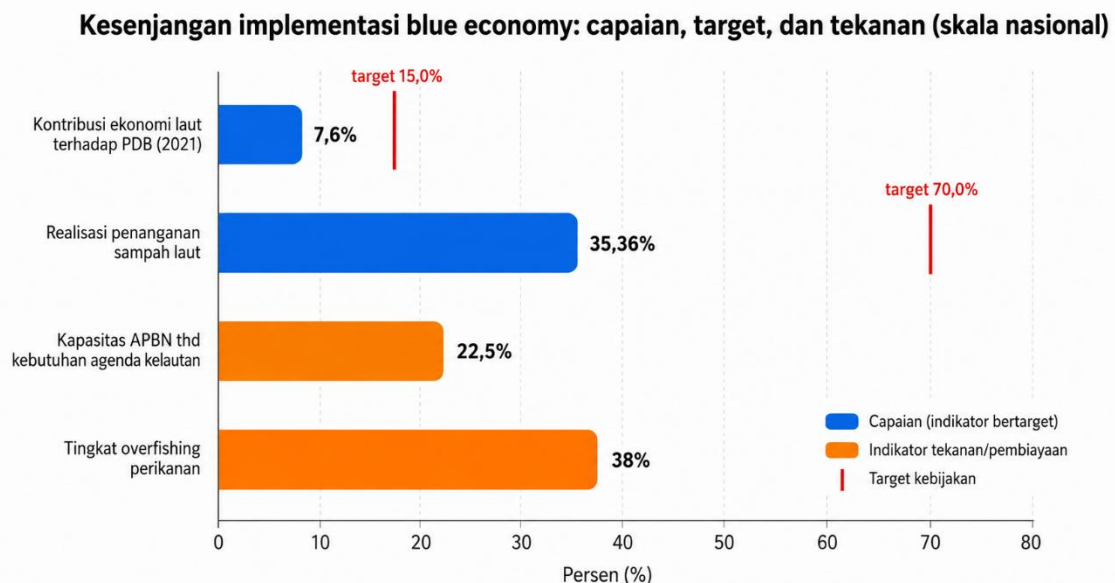
This study yielded seven thematic findings from triangulation of interviews with seven key informants, field observations, and secondary data. These seven themes can be grouped into three axes: potential, constraints, and development direction, as shown in Figure 1. This mapping demonstrates that the issues of blue economy implementation in Berau Regency are not confined to a single sector, but rather span from upstream resources to downstream governance. These findings are evident in a growing regional economy that still relies heavily on the extractive sector. Berau's economy is projected to grow by 7.28% in 2024, higher than the 5.44% growth in 2023, with a production structure still dominated by mining and quarrying (BPS Berau Regency, 2025). This situation, as shown in Figure 3, confirms the blue economy's position as a diversification pathway and aligns with regional planners' view that coastal economies must be prepared as ecosystems, not simply as a list of projects (I-02).



potential, constraints, and development directions.

The first finding shows that significant resource potential does not automatically translate into local added value. Informants from government, business actors, fishermen, and MSMEs agreed that fisheries and marine tourism are two major sources of potential, but the economic value that communities truly receive depends on the cold chain, product quality, market access, and processing capabilities (I-01, I-03, I-05, I-06). Fisheries business actors emphasized that the issue is not how many fish are caught, but how many are sold with good quality (I-03). This finding reinforces studies that differentiate resource potential from the ability to capture its value. Value chain efficiency and market access are key determinants of small-scale fisheries income in Indonesia (Sobariah & Herlambang, 2025). Socioeconomic factors also drive high post-harvest losses in small-scale fisheries (Amelia & Sari, 2025). Therefore, claims of significant potential need to be balanced with policies that improve the downstream side.

The second finding points to governance fragmentation as the most prominent cross-sectoral barrier. Blue economy programs are spread across multiple agencies with differing authorities, budget sources, and indicators, so coordination often stops at the administrative level (I-01, I-02, I-07). Bappeda planners assess the greatest risk as numerous activities but little aggregate impact (I-02). This pattern is consistent with the theory of implementation barriers, which emphasizes weak coordination and unclear accountability as sources of execution failure (Wuwung et al., 2024). National blue economy policies also continue to overlap (Latif et al., 2023). Quantitatively, institutional factors and information technology influence blue economy growth across provinces (Marwa et al., 2024). The national implementation gap underlying these findings is illustrated in Figure 2.



cover all needs, necessitating partnership schemes and thematic financing (I-01, I-02). MSMEs also struggle to fulfill financing documents due to disorganized

bookkeeping (I-06). This situation aligns with data showing that the state budget only covers 20 to 25% of the needs of the maritime development agenda (Kusumawardhani, 2023). The blue bond market is considered a potential catalyst for maritime financing (Bosmans & de Mariz, 2023). However, its regulatory implementation in Indonesia requires a mature legal framework and governance for the instrument to be credible (Endarto et al., 2025). In other words, alternative financing is only effective if accompanied by strengthening project feasibility and business record keeping.

The fourth finding confirms that infrastructure and markets determine whether production translates into revenue. Ice, cold storage, logistics, and price information are direct levers of added value, and prices fall when the cold chain is broken (I-03, I-05, I-06). This finding challenges approaches that solely focus on increasing production. The implementation of a cold chain system impacts the quality, yield, and productivity of fishery products (Sayuti et al., 2023). Innovation capabilities and strategies also determine the competitive advantage of Indonesia's maritime sector (Rianawati et al., 2024). This evidence suggests that post-harvest investment and strengthening business capabilities are more strategic than simply providing fishing gear.

The fifth finding positions ecological sustainability as an economic asset, not a cost burden. Tourism operators emphasize ecosystem quality as the primary selling point, while fishermen and academics link habitat destruction to declining livelihoods (I-04, I-05, I-07). These concerns are justified, given that overfishing has reached 38% and marine debris management is only 35.36% of the target (Wuwung et al., 2024). Losses due to plastic waste are estimated at USD 450 million per year (Bappenas, 2024). Berau's ecological capital is substantial, encompassing a 285,548.95-hectare coastal conservation area with 507 hard coral species (Rifandi, 2026). A carrying capacity-based approach is key to developing marine ecotourism (Ardila et al., 2026; Sondi et al., 2026). The management of Indonesia's marine conservation areas also needs to be strengthened (Meilana et al., 2023). Measurable fishing policymaking is a prerequisite for a sustainable blue economy (Jumantoro et al., 2025). This finding reinforces the principle of decoupling, which separates economic growth from environmental degradation (I-07).

The sixth finding suggests that participation needs to shift from mere socialization to co-design. Communities often only understand regulations after the policy is implemented, yet the quality of engagement determines legitimacy and compliance (I-01, I-02, I-05, I-07). Improving community perception and participation is key to a sustainable coral reef management model (Widiarti et al., 2025). The social dynamics of participation also determine the success of collaborative coastal conservation management (Souliissa et al., 2026). The equity dimension is equally important, as strengthening women-led seafood processing businesses contributes to the sustainability of coastal livelihoods (Sari et al., 2024). Benefit distribution therefore needs to be an explicit part of policy design.

The seventh finding emphasizes that the success of the blue economy must be measured multidimensionally. All informants rejected single indicators such

as production volume or tourist numbers, and proposed a composite indicator encompassing local income, labor absorption, value-added, habitat conditions, zoning compliance, waste reduction, and benefit distribution. This view aligns with calls for blue economy research and policy to be developed within an integrated, interdisciplinary framework (Atmadi et al., 2026). Balancing economic, social, and environmental concerns is also central to sustainability, as outlined in SDG 14 (Marwa et al., 2024). Overall, the implementation of the blue economy mission in Berau faces systemic challenges, necessitating institutional integration, strengthening value chains and financing, protecting natural capital, and meaningful participation, rather than isolated sectoral interventions.

CONCLUSION

Based on research results, the implementation of the blue economy mission in Berau Regency, East Kalimantan, faces a paradox between the vast potential of resources, especially fisheries and marine tourism, and the limited ability to capture their economic value at the local level, so that this potential has not been transformed into equitable prosperity. The main obstacles are systemic and interconnected, including fragmented governance across sectors, a layered financing gap from the government to small actors, weak post-harvest infrastructure and market access, ecological pressures, and participation that still stops at the socialization stage. Therefore, the success of the blue economy cannot be measured by a single indicator such as production volume or number of tourists, but must be multidimensional, encompassing added value, benefit distribution, and ecosystem conditions in accordance with the principle of decoupling and the SDG 14 framework. As a suggestion, local governments need to integrate programs and data across regional government organizations with shared outcome targets, strengthen the cold chain, added value, and market access as revenue levers, develop blended financing schemes accompanied by strengthening project feasibility and business records, position carrying capacity-based conservation as a protection of natural capital, and shift participation from socialization to joint design that ensures fair benefits for small-scale fishermen, MSMEs, and coastal women. Further research is recommended to test the integrated governance model and multidimensional success indicators quantitatively across a wider area.

REFERENCES

- Atmadi, Al Habsy, MY, Bakar, AN, Traiyarach, S., Surjaatmadja, S., & Christina, A. (2026). The development of blue economy research in Indonesia: A systematic literature review and future research directions. *Journal of Geospatial Science and Analytics*, 2(1), 51–60.<https://doi.org/10.58524/jgsa.v2i1.134>
- Amelia, BS, & Sari, DW (2025). The influence of socioeconomic factors on postharvest losses of fish in small-scale fisheries in East Java Province. *Grouper*, 16(1), 146–159.<https://doi.org/10.30736/grouper.v16i1.303>

- Ardila, A., Yulianda, F., & Yulianto, G. (2026). Development of marine ecotourism with the approach of suitability of natural resources and carrying capacity in Cemara Beach, Wakatobi. *Journal of Fisheries and Marine Technology*, 17(1), 38–48. <https://doi.org/10.24319/jtpk.17.38-48>
- National Development Planning Agency. (2024). Indonesia blue economy roadmap (2nd ed.). Ministry of National Development Planning/Bappenas.
- Central Statistics Agency of Berau Regency. (2025). Gross regional domestic product of Berau Regency by industry 2020–2024. BPS Berau Regency.
- Bosmans, P., & de Mariz, F. (2023). The blue bond market: A catalyst for ocean and water financing. *Journal of Risk and Financial Management*, 16(3), Article 184. <https://doi.org/10.3390/jrfm16030184>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Endarto, B., Indriastuty, DE, & Mardiana, F. (2025). Legal transplantation of blue bond regulation in Indonesia. *Environmental Development*, 53, Article 101118. <https://doi.org/10.1016/j.envdev.2024.101118>
- Jumantoro, TRP, Supriantoro, NC, Albanna, SA, & Novemyanto, AD (2025). Restructuring measured fishing policy: Integrative supervision of fishery business actors in realizing a sustainable blue economy. *Alauddin Law Development Journal*, 7(1), 26–41. <https://doi.org/10.24252/aldev.v7i1.53585>
- Kusumawardhani, RT (2023). Opportunities and challenges of Indonesia's blue economy. *State Budget Bulletin*, VIII(1). Budget Study Center, Expertise Body of the Secretariat General of the Indonesian House of Representatives.
- Latif, MFA, Wafa, SN, & Alia, S. (2023). Analysis of blue economy policies in Indonesia. *Journal of Taxation and Public Finance*, 2(2). <https://doi.org/10.15575/jpkp.v2i2.38412>
- Marwa, T., Muizzuddin, Bashir, A., Andaiyani, S., & Cahyadi, A. (2024). Determinants of the blue economy growth in the era of sustainability: A case study of Indonesia. *Economies*, 12(11), 299. <https://doi.org/10.3390/economies12110299>
- Meilana, L., Fang, Q., Susanto, HA, Widiastutik, R., Syaputra, DE, Ikhumhen, HO, Sholihah, R., Hakim, A., Yang, S., & Liu, Z. (2023). How Indonesian marine protected areas (MPAs) are doing: A management performance-based evaluation. *Biological Conservation*, 282, Article 110033. <https://doi.org/10.1016/j.biocon.2023.110033>
- Miles, M.B., Huberman, A.M., & Saldaña, J. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). SAGE Publications.
- Rianawati, A., Darmasetiawan, NK, Hadi, FS, Oktavianus, J., & Utama, CA (2024). Enhancement of Indonesia's blue economy sector through innovation and competitive advantage based on Resource-Based View theory. *Problems and Perspectives in Management*, 22(2), 165–181. [https://doi.org/10.21511/ppm.22\(2\).2024.14](https://doi.org/10.21511/ppm.22(2).2024.14)
- Rifandi, A. (2026, June 23). East Kalimantan Maritime Affairs and Fisheries Department boosts the blue economy potential of Derawan waters. *Antara*

- News.<https://www.antaranews.com/berita/5619517/dkp-kaltim-genjot-potensi-ekonomi-biru-perairan-derawan>
- Sari, AK, Nissa', ZNA, Ajri, M., & Al Rosyid, AH (2024). An empirical study of sustainability strategies in women-led fish processing enterprises on the Depok Coast. *Journal of Social Sciences and Humanities*, 13(3), 672–685.<https://doi.org/10.23887/jish.v13i3.84867>
- Sayuti, M., Rafiani, E., & Salampessy, RBS (2023). Quality characteristics, cold chain system, yield and productivity of frozen tuna (*Thunnus albacares*) steak processing. *PELAGICUS*, 4(3), 121–130.<https://doi.org/10.15578/plgc.v4i3.13077>
- Sobariah, & Herlambang, T. (2025). Market access and value chain efficiency in small-scale fisheries: A case study from Indonesia. *The Journal of Academic Science*, 2(6), 1639–1646.<https://doi.org/10.59613/3kjnnx91>
- Sondi, B., Sangaji, M., & Huliselan, N.V. (2026). Suitability analysis and carrying capacity of marine ecotourism based on swimming, fishing, and boating activities at Marsegu Island, Kotania Bay. *International Journal of Science and Environment*, 6(2), 10–19.<https://doi.org/10.51601/ijse.v6i2.410>
- Soulisa, FM, Ufi, JA, & Salampessy, M. (2026). Social dynamics of collaborative management in coastal conservation: Community participation in Negeri Lima, Central Maluku. *Journal of Social Knowledge Education*, 7(3), 245–253.<https://doi.org/10.37251/jske.v7i3.2720>
- Widiarti, R., Kusumawardhani, AD, Burhanuddin, E., Susiloningtyas, D., Takarina, ND, Patria, MP, & Fadhilah, MF (2025). The enhancement of community perception and participation in gaining sustainable coral reef management models. *Frontiers in Marine Science*, 12, Article 1577199.<https://doi.org/10.3389/fmars.2025.1577199>
- Wuwung, L., McIlgorm, A., & Voyer, M. (2024). Sustainable ocean development policies in Indonesia: Paving the pathways towards a maritime destiny. *Frontiers in Marine Science*, 11, 1401332.<https://doi.org/10.3389/fmars.2024.1401332>