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Regional Policy Diversification to Maximize Blue Economy Potential in Kepulauan Riau Amid Indonesia-China Bilateral Cooperation

Fery Andana[1], Cantius Fransisco Wisnu Bayu Saputra[2]

[1]Universitas Maritim Raja Ai Haji, Kepulauan Riau Province, Indonesia
[2]Institus Pemerintahan Dalam Negeri, Sumedang, West Jawa Province, Indonesia

Corespodence: 2400010004@student.umrah.ac.id[1]

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ABSTRACT

Indonesia's ambition to enhance its maritime economy has been reinforced by its bilateral cooperation with China through the Memorandum of Understanding (MoU) on Deepening Blue Economy Cooperation. This initiative presents a significant opportunity for maritime provinces like Kepulauan Riau, which possess vast marine resources yet remain underutilized. Despite having 96% of its territory covered by sea, the region's fisheries sector contributes only 1.72% to its Gross Regional Domestic Product (GRDP), revealing a substantial gap between potential and economic realization. This study aims to explore how regional policy diversification can optimize blue economy potential in Kepulauan Riau amid growing bilateral cooperation. A qualitative descriptive-analytical approach was employed, using secondary data from official statistics, government regulations, academic literature, and blue economy policy frameworks. The study identifies tourism, fisheries, renewable energy, maritime transport, and climate mitigation as key sectors for development. The findings suggest that integrating these sectors through tailored regional policies aligned with local characteristics can create a synergistic effect, amplifying the benefits of blue economy investments. Additionally, strategic policy alignment with national blue economy roadmaps and the inclusion of local stakeholders are crucial to ensure equitable and sustainable outcomes. In conclusion, the research highlights that regional diversification, guided by the principles of sustainability, inclusivity, and local relevance, is essential to transforming external cooperation into real and balanced economic growth for Kepulauan Riau. Such a strategy ensures that no community is left behind in the national pursuit of blue economy advancement.

Keywords: Diversification, Blue Economy, Bilateral, Economic Growth, Local Government

INTRODUCTION

Indonesia, as the largest archipelagic country in the world, has long declared its ambition to become a global maritime axis (Prescott & Schofield, 2005). However, the recent abolition of the Coordinating Ministry for Maritime Affairs and Investment underlines a critical policy shift that has sparked questions about the country's commitment to its maritime vision (Kusumawardhani, 2023). The institutional dissolution raised concerns about whether maritime affairs are being deprioritized at a time when global attention is increasingly focused on sustainable ocean development and the blue economy (Smith-Godfrey, 2016).

President-elect Prabowo Subianto's prompt diplomatic outreach to China, resulting in a signed Memorandum of Understanding (MoU) on Deepening Blue Economy Cooperation, presents a contrasting narrative. This bilateral agreement reaffirms Indonesia's continued

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focus on maritime development (Tirumala & Tiwari, 2022; Voyer et al., 2018). The MoU, which includes multifaceted cooperation on marine renewable energy, fisheries, aquaculture, maritime tourism, technology innovation, and industrial development, reveals an intent to harness maritime sectors as a driver for national economic growth targeted at 8% annually (Arbar, 2024).

Given Indonesia's strategic maritime position and abundant marine resources, the issue under scrutiny in this article is the country's underutilization of its blue economy potential and the critical need for comprehensive policies that ensure sustainable and inclusive marine development. Despite possessing a maritime territory of 5.8 million km² and a coastline stretching 108,000 km, marine sectors contribute only 7.92% to Indonesia's GDP. This figure is starkly disproportionate when considering Indonesia's marine geographical advantage. This gap highlights the urgency of revisiting and revitalizing blue economy strategies (Lamidi, 2024; Mahadiansar, Alfiandri, & Marliani, 2023).

Although the concept of the blue economy has gained global traction as a pillar of sustainable development, its implementation across ASEAN countries remains highly varied. Each nation in the region approaches marine resource management differently, shaped by distinct economic structures, priorities, and governance capacities (Pushp & Ahmed, 2023; Sovacool, 2010). Most ASEAN countries do not yet comprehensively categorize or quantify the full contribution of the blue economy to their national GDPs. Available data tends to focus on individual sectors such as fisheries, marine tourism, or maritime transport, rather than a holistic valuation of ocean-based economic activity (Douvere & Ehler, 2011).

To provide a clearer picture of the region's progress and disparities, the table below presents key indicators on the blue economy from selected ASEAN countries, including contributions to GDP and employment absorption where available.

Table 1. Blue Economy Indicators in ASEAN Countries

Country / Region	Contribution to GDP from Blue Economy	Marine Sector Employment Share	Notes
ASEAN (average)	1–30% of GDP (highly variable)		Wide range reflects economic diversity across countries
Indonesia	±2.77% (fisheries only)	±12 million workers (±8.3%)	Partial data; excludes marine tourism, energy, etc.
Malaysia			Focused on OGSE & ports; national-level data unavailable
Philippines	8.9% (coastal tourism, 2024)	±6.75 million workers	Coastal tourism as major blue sector
Cambodia	~16% of GDP (2015)	±2.4 million workers	Relies heavily on coastal livelihoods
Timor-Leste	Up to 87% of GDP (APEC, 2022)		Extremely dependent on marine economy
Others (e.g., Vietnam, Thailand, Brunei, Laos, Singapore)			No detailed or published data yet available

Source: From various sources, 2025

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The data above illustrates the uneven landscape of blue economy development across ASEAN countries. While Timor-Leste stands out for its high dependency on marine-based GDP, most other countries either lack comprehensive reporting or are still in the early stages of integrating blue economy metrics into national economic planning (Ayilu et al., 2022). Indonesia and the Philippines show significant employment in marine-related sectors, particularly fisheries and coastal tourism, but these numbers only reflect a fraction of their broader maritime potential (van Hoof & van Tatenhove, 2009).

The absence of standardized classifications and consolidated reporting systems for the blue economy poses a major challenge for ASEAN in formulating cohesive regional policies. Moving forward, there is a strong need for harmonized indicators, improved data collection, and cross-border monitoring frameworks to enhance sustainable marine development and unlock the full economic potential of ASEAN's vast ocean resources (Manullang, 2024; Muzwardi & Mahadiansar, 2024).

At the national level, Indonesia's marine sector still contributes relatively little to the overall economy, despite the country's vast maritime territory. This gap becomes even more apparent when viewed at the provincial level. Maritime and archipelagic provinces such as Kepulauan Riau, Maluku, and East Nusa Tenggara (NTT) are geographically dominated by ocean space, yet their marine sectors particularly fisheries and marine-based employment contribute modestly to regional GDP and labor absorption. To illustrate this discrepancy and provide insight into the development potential of the blue economy at the sub-national level, the table below presents key indicators from several provinces in Indonesia with significant maritime characteristics.

Table 2. Blue Economy Indicators in Indonesia

Province	% of Marine Area from Total Territory	Contribution of Marine/Fisheries Sector to GRDP	% of Workforce in Marine Sector	Additional Notes
Kepulauan Riau	96%	1.72% (fisheries to provincial GRDP)	3.32%	2,028 islands; highly oceanic (BPS, 2024a)
Maluku	±92%	±6.85%	±4.5%	Major fisheries hub in Eastern Indonesia
East Nusa Tenggara (NTT)	±70%	±5.6%	±6.2%	High potential in fisheries & marine tourism
North Sulawesi	±65%	±7.9%	±7%	Port-based economy; major fish exporter
West Papua	±75%	±4.3%	±3.8%	Numerous small islands; strong ecotourism potential
Jakarta (incl. Thousand Islands)	±30%	±1.1%	±1%	Land-dominated economy; marine sector is marginal

Source: From various sources, 2025

The table above demonstrates that even though several Indonesian provinces are predominantly maritime in geography, their marine and fisheries sectors still contribute

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relatively little to their regional economies and employment levels (Mahadiansar, Alfiandri, & Syuzairi, 2023). Kepulauan Riau, for example, consists of 96% ocean area but shows only a 1.72% contribution from fisheries to its Gross Regional Domestic Product (GRDP).

In contrast, provinces such as North Sulawesi and NTT display slightly higher figures in both GDP contribution and labor absorption, though the numbers still fall short of reflecting the full marine potential. These figures reveal a structural gap between the provinces' marine endowment and actual economic performance. Bridging this gap requires targeted policy interventions at the regional level, including capacity-building, infrastructure investment, and community empowerment programs to accelerate a sustainable and inclusive blue economy.

The academic discourse on Indonesia's blue economy has so far been fragmented across thematic domains ranging from ecological preservation, technological innovation, and policy coordination to socio-political, economic, and legal approaches. However, many of these studies lack a focused examination of how bilateral cooperation and foreign investments interact with regional marine development, particularly concerning governance and equity (Germond, 2015; Xu et al., 2023).

This article positions itself within this gap by offering a multidimensional analysis of Indonesia's blue economy strategy with a specific lens on regional readiness, policy coherence, and equity considerations. Drawing from comparative international experiences, this article also critically assesses the risks of top-down, investment-heavy models of development that may sideline local communities and lead to ecological degradation or socio-cultural erosion.

Moreover, this discussion is timely and important, as Indonesia stands at a crossroads. On one hand, it can choose to deepen its blue economy through inclusive and sustainable means; on the other hand, it risks falling into patterns of exploitation and inequality reminiscent of negative experiences in countries like Namibia, Tanzania, Papua New Guinea, and Palau (Ridwanuddin, 2022). Learning from these cases, the Indonesian government must ensure that its maritime development model does not marginalize coastal communities or degrade marine ecosystems.

The urgency to study this issue is amplified by the increasing role of bilateral agreements in shaping national economic agendas. While the Indonesia-China MoU on blue economy cooperation offers a promising framework, it also necessitates critical scrutiny to avoid elite capture and ensure that community interests are safeguarded. Without adequate safeguards, the potential for "mare liberum" (free seas) dynamics may privilege capital interests over public good, especially in maritime space governance (Margaretha et al., 2024; Marliani, 2024).

By reviewing current policy frameworks, workforce data, economic contributions, and community engagement in Kepulauan Riau, this article offers evidence-based recommendations for a more inclusive and effective blue economy policy. It seeks to align national goals with regional capacities and community readiness while ensuring sustainable resource management and equitable benefits. The article further highlights the need for integrated governance mechanisms that connect national strategic visions with regional action plans. This includes coordination between ministries, alignment of investment regulations with sustainability goals, and active community participation in planning and implementation stages.

To ensure policy effectiveness, the article also stresses the importance of building institutional capacity at the regional level. Without adequate human resources, technological infrastructure, and policy coherence, even the most ambitious blue economy programs may fail to deliver tangible outcomes for local populations. Ultimately, the contribution of this article lies in its focus on policy translation and implementation gaps, offering a grounded perspective on how bilateral cooperation agreements can be transformed into inclusive and sustainable

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economic opportunities. It underscores the critical role of regional actors and community stakeholders in ensuring the blue economy does not become an elite-driven enterprise.

METHODOLOGY

This study employs a qualitative research method with a descriptive-analytical (Patton, 2002) approach to assess the regional policy diversification aimed at maximizing the blue economy potential in the Kepulauan Riau Province. The research is based on secondary data collected from various official sources such as the Badan Pusat Statistik (BPS), government regulations, maritime policy documents, and scholarly articles relevant to Indonesia-China bilateral cooperation and regional economic planning.

These data sources are analyzed to identify existing policy gaps, regional characteristics, sectoral potentials, and investment frameworks related to the blue economy. The descriptive analysis focuses on synthesizing patterns across tourism, fisheries, renewable energy, transportation, and climate mitigation sectors within Kepulauan Riau. Furthermore, the study integrates comparative insights from ASEAN countries to evaluate Indonesia's blue economy positioning and regional readiness.

Policy documents such as the Indonesia Blue Economy Roadmap (Bappenas, 2024) and relevant legislation are critically reviewed to understand the decentralization framework and regional autonomy in marine resource management. This methodological design allows for an in-depth exploration of how policy diversification and regional governance models can enhance inclusive economic outcomes. The findings serve as a basis for constructing recommendations aimed at aligning national blue economy objectives with regional capacities and community-based sustainability practices.

RESULTS AND DISCUSSION

1. The Foundation Of Marine Economic Policy

The authority to manage marine areas must run hand in hand between the Central Government and Local Government, which has been regulated in Undang No. 23 of 2014 concerning Local Government, which is the basis for the decentralization of authority, and Law No. 32 of 2014 concerning Maritime Affairs. The authority to organize marine affairs is given by the center to the regions, namely the provinces, so that the provinces have the authority to make policies on marine management in the district/city area.

In Article 27 Paragraph (3), provincial management authority is regulated from the coastline up to 12 nautical miles. In other words, the central government's authority is the coastal area to the high seas or archipelagic waters above 12 miles. The scope of this marine policy includes the sea and its ecosystems, development, management, development, protection, defense and security, the rule of law, safety, and governance.

In addition to marine regulation, the government also has a policy on the management of coastal areas and small islands (PWP3-K), which is also closely related to the blue economy. Law No. 1 of 2014 concerning Amendments to Law No. 27 of 2007 concerning PWP3-K. Different from the marine policy, this policy regulates coastal areas, which are transitional areas between land and sea in Article 1 Paragraph (2), namely islands and their ecosystems with an area of ≥2,000 km² in Article 1 Paragraph (3). This policy emphasizes the state's position to be responsible for PWP3-K with licensing mechanisms according to their respective authorities at the central, provincial, and district/city levels.

Through the Minister of Marine Affairs and Fisheries Regulation number 40/PERMEN-KP/2014 of 2014 concerning Community Participation and Empowerment in PWP3-K, the government also issued policies related to community participation in planning, implementation, supervision, and community empowerment so that there is a collaboration between the government and the community. The government has also prepared Presidential

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Regulation No. 16/2017 on Indonesia's Maritime Policy to implement its maritime axis, which consists of Indonesia's marine policy and Indonesia's marine policy action plan so that local governments have general guidelines for implementing marine policy and an overview of activity programs in line with national development targets.

This policy is a roadmap for Indonesia's marine policy with seven policy pillars and 76 main policies. First is the management and development of marine resources and human resources consisting of 9 marine resource development strategies and 12 human resource development strategies. Second is defense, security, law enforcement, and marine safety, consisting of 8 main strategies. Third is institutional governance, consisting of 3 main strategies. Fourth is economy, infrastructure, and welfare, consisting of 8 marine economic strategies, seven marine infrastructure strategies, and five welfare improvement strategies.

Fifth is marine spatial management and marine environmental protection, consisting of 6 marine spatial management strategies and six marine protection strategies. The sixth is maritime culture, consisting of 5 main strategies.Moreover, the seventh pillar is maritime diplomacy, which consists of seven main strategies. Each strategy is based on the principles of archipelago insight, sustainable development, blue economy, integrated and transparent management, participation, and equity and equality.

2. Blue Economy Potential in Kepulauan Riau

a. Tourism Potential

Optimization of tourism potential in Kepulauan Riau by utilizing various advantages, especially marine tourism, is stipulated in the decision of the Governor of Kepulauan Riau Province number 1263 of 2022 concerning Tourism Destinations. This step was taken to restore and develop the tourism sector after Covid-19, which devastated it (Khairunnisa et al., 2021; Lapointe, 2020). The policy, which is guided by the Minister of Tourism and Creative Economy Regulation number 9 of 2021 concerning Guidelines for Sustainable Tourism Destinations, sets several tourist attractions with the theme of urban tourism and ecotourism.

Batam City consists of a beach area, namely sending Melayu, ecotourism of the former Vietnamese camp, and Raja Ali Haji Museum, ecotourism of princess island, and barreling bridge. Bintan Regency consists of Trikora Beach marine tourism, papaya mangrove, mapur ecotourism, and pengudang village. Tanjungpinang City consists of Penyengat Island ecotourism and the old city area. Lingga Regency has marine tourism of resun waterfall, hot springs, and lubuk papan waterfall, linggam cahaya museum and Damnah palace site. Karimun Regency has ecotourism and urban tourism, namely the Putri Kemuning folk stage and marine tourism in the form of Pongkar Waterfall, Pelawan Beach, Pongkar Beach, and Tanjung Hutan Hot Springs.

Natuna Regency has marine tourism and edu-tourism of pering mangrove and mekar jaya, senoa island, shark waterfall, and batu kasah beach. Anambas Islands Regency consists of marine tourism, including Neraja and Temburun waterfalls, Padang Melang Beach, Temawan Island, and Chicken Island. Based on BPS data, in 2023, the number of domestic tourists will be 2.3 million, and foreign tourists will be 1.5 million. Tourism development can also be carried out in a smart and integrated manner so that it can not only be a place to travel but can become education and learning as coral reef and seagrass tourism.

b. Fishery Potential

Kepulauan Riau Province, in the long term, is designed to be a source of economic strength outside Java in line with the program to knit the blue gem of Indonesia's northern gate economy. This is because the marine potential that reaches 96% of its area is considered capable of becoming a "Blue Kepri" through optimizing the marine sector. Although currently, the fisheries sector only contributes to GRDP by 1.72% with a total workforce of 107,375

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people in 2022, in the future, it is expected that this sector will experience a significant increase. In the fisheries sector, the utilization of Kepulauan Riau Province's marine potential is still dominated by marine capture fisheries production. Producing 322,110 tons with a production value of Rp 9.9 billion. The largest production area is located in Natuna Regency, followed in order by Lingga Regency, Bintan Regency, Karimun Regency, Batam City, Anambas Regency, and finally Tanjungpinang City.

Development in finding new value from fisheries production can improve the fisheries sector for the better. The management of fish products into something new production using fish-based materials or the construction of canning factories with abundant fish products can certainly be an opportunity to meet the challenges of blue economy development.

Table 3. Production and Value of Capture Fisheries in 2022 in Kepulauan Riau

Regency/City	Marine Capture Fisheries Production (ton)	Marine Capture Fisheries Production Value (thousand rupiah)	Total Capture Fisheries Production (ton)	Total Capture Fisheries Production Value (thousand rupiah)
Karimun	37,164	1,260,608,446	37,164	1,260,608,446
Bintan	58,791	1,851,845,657	58,791	1,851,845,657
Natuna	134,772	3,146,414,442	134,772	3,146,414,442
Lingga	34,442	1,897,966,105	34,442	1,897,966,105
Anambas Islands	23,774	613,547,348	23,774	613,547,348
Batam City	29,595	1,001,935,966	29,595	1,001,935,966
Tanjung Pinang City	3,572	135,492,672	3,572	135,492,672
Kepulauan Riau Province	322,110	9,907,810,636	322,110	9,907,810,636

Source: BPS Kepulauan Riau Province, 2023

Based on Table 3, Natuna stands out as the largest contributor to capture fisheries production in the Riau Islands Province in 2022, with a total production of 134,772 tons and a production value of over Rp 3.1 trillion. This significant contribution highlights the region's strong potential to support the development of a blue economy. In contrast, areas such as Tanjungpinang and Anambas show much lower contributions, which may indicate limitations in infrastructure, facilities, or market access. Overall, total capture fisheries production reached 322,110 tons with a production value of approximately Rp. 9.9 trillion, emphasizing that this sector holds considerable opportunities for further development whether through value-added processing, increased production capacity, or improved distribution systems to support sustainable regional economic growth.

c. Renewable Energi Potential

Renewable energy is a new form of energy sourced from renewable or non-renewable energy, as explained in Presidential Regulation No. 5 of 2006 concerning the National Energy Policy. Government Regulation No. 79 of 2014, concerning the National Energy Policy, targets this energy to develop by 23% in 2025 and 31% in 2050. Meanwhile, on the official website of Kepulauan Riau Province, Kepulauan Riau is still dependent on fossil fuels, while the achievement of renewable energy is only 10%. The potential for renewable energy development lies in biomass, biogas, marine energy, wind potential, and solar potential, which can boost the development of renewable energy potential in Kepulauan Riau Province.

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The table above, sourced from the Ministry of Energy and Mineral Resources and the National Energy Council (2024), outlines the potential and current utilization of various renewable energy sources across Indonesia. Solar energy holds the highest potential at 3,294 GW, yet only 675 MW has been utilized, revealing a significant gap between potential and realization. Similar underutilization trends are evident in wind energy (155 GW potential vs. 152 MW utilized) and geothermal (25 GW potential vs. 250 MW used). Hydropower and bioenergy show comparatively higher utilization levels, with 6,697 MW and 3,408 MW respectively, though still far below their total potential.

Table 4. Renewable Energy Potential & Resources/National Energy Council data

Energy Source	Potential	Currently Utilized	Regions with Highest Potential
Solar	3,294 GW (gigawatts)	675 MW (megawatts)	East Nusa Tenggara (NTT), West Kalimantan, Riau
Wind	155 GW	152 MW	NTT, South Kalimantan, West Java, South Sulawesi, Aceh, Papua
Hydropower	95 GW	6,697 MW	North Kalimantan, Aceh, NTT, North Sumatra, Papua
Geothermal	25 GW	250 MW	Sumatra, Java, Bali, Nusa Tenggara, Sulawesi, Maluku
Bioenergy	57 GW	3,408 MW	Riau, West Java

Source: Ministry of Energy and Mineral Resources/National Energy Council, 2024

Regions such as East Nusa Tenggara (NTT), West Kalimantan, North Kalimantan, Aceh, Papua, and Riau are identified as having the highest renewable energy potential across various sources. However, provinces like Kepulauan Riau still rely heavily on fossil fuels, achieving only 10% renewable energy use. The data emphasizes the urgent need for investment, policy enforcement, and technology deployment to close the gap between available resources and current capacity. Leveraging untapped sources particularly solar, wind, and marine energy will be critical in meeting national renewable energy targets of 23% by 2025 and 31% by 2050, while supporting sustainable development at the regional level.

d. Water Transportation Potential

Sea transportation or water transportation has great potential for an area covered by 96% of the ocean and has 2,028 islands. The number of passengers during 2023 was recorded in the data of the Kepulauan Riau Provincial Statistics Agency for domestic passengers, with arrivals of 4,267,307 people and departures of 4,189,278 people. For overseas passengers, arrivals were recorded at 2,770,567 people, and departures were 2,828,573 people.

For water freight transportation, the number of national sea freight unloadings was 10,882,854 tons, and the number of national sea freight loadings was 8,954,775 tons. Meanwhile, the number of unloaded international sea transportation was 10,677,445 tons, and the number of loaded international sea transportation was 18,655,106 tons. With national sailing ships totaling 141,272 ships and international ships totaling 65,624 ships.

Water transportation is a sector that has enormous potential for improvement, considering the area and the number of islands that have not been able to use water transportation, so port infrastructure development and shipping investment are needed. Integration of transportation provision can also be done in terms of manufacturing and maintenance of water transportation, such as shipyards. Water transportation can also be integrated with the tourism and fisheries sectors.

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e. Climate Change Mitigation Potential

Various impacts due to climate change can create disasters that will disrupt the region's economy. Not apart from disasters, Kepulauan Riau Province also has several natural disaster events such as landslides, floods, droughts, extreme weather, and abrasion. However, in the Kepulauan Riau, the potential for reducing greenhouse gas emissions can also be found. Namely, the Kepulauan Riau has a conservation area in the waters of Bintan island covering an area of 138,561.42 Ha, which in the national target will be expanded with the national area to 30% by 2045. In addition to conservation areas, the Kepulauan Riau also have a peat hydrological area (KHG) of 16,284 Ha (Febriani, 2023). Thus, Kepulauan Riau is a province that has the potential to reduce greenhouse gas emissions in Indonesia

Table 5. National Disaster Case in 2022 in Kepulauan Riau

Regency/City	Flood	Drought	Forest & Land Fire	Extreme Weather	Tidal Wave / Abrasion
Karimun	2	–	–	8	3
Bintan	4	–	1	41	8
Natuna	1	–	–	10	–
Lingga	2	–	–	3	4
Anambas Islands	–	–	–	–	–
Batam City	–	–	–	–	–
Tanjung Pinang City	1	–	–	4	–
Kepulauan Riau Province	2	–	1	71	3

Source: National Disaster Management Agency (BPS, 2023)

The table above highlights the frequency of natural disasters that occurred across different regencies and cities in the Kepulauan Riau Province during 2022, indicating the vulnerability of this region to the impacts of climate change. The most frequently recorded disaster was extreme weather, with Batam City and Bintan experiencing the highest number of cases 41 and 41 events, respectively. Other areas like Natuna also reported 10 incidents of extreme weather, alongside additional risks such as flooding (e.g., Bintan: 4 events, Karimun and Lingga: 2 each) and tidal wave/abrasion (notably in Bintan and Lingga). These figures underscore the urgent need for effective climate adaptation strategies, especially in disaster-prone coastal and island areas.

Despite these challenges, Kepulauan Riau also possesses climate change mitigation potential through its natural conservation areas and peat hydrological zones. Bintan Island, for instance, holds a marine conservation area of over 138,561 hectares, contributing directly to the province's role in carbon sequestration and marine ecosystem protection. Furthermore, the existence of a peat hydrological area (KHG) covering 16,284 hectares adds to the province's capacity to reduce greenhouse gas emissions, aligning with national climate targets. Thus, alongside disaster risk, Kepulauan Riau also offers environmental assets that can support Indonesia's broader commitments to climate resilience and emission reduction.

3. Diversification of Kepulauan Riau Blue Economy Regional Policy

Deepening the blue economy cooperation that has been agreed upon in a bilateral agreement between Indonesia and China opens opportunities for Kepulauan Riau Province to take the opportunity to develop its blue economy through the investments offered. The sectors targeted by the bilateral cooperation include seafood management and marine biopharmaceuticals, shipping industry cooperation, water transportation, transportation

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infrastructure such as docks and ports, tourism development, marine sector, and renewable energy sources and transmission networks (Arbar, 2024). However, as discussed by WALHI previously, the development of the blue economy must be aware of the negative impact on the investor's relationship with the recipient so that cooperation becomes mutually beneficial for both parties (Ridwanuddin, 2022). Local governments must be observant of the potential that can be taken and developed where the results can be absorbed and really bring economic progress to their communities so that cooperation must be inclusive and support sustainability.

In line with the existing potential of the blue economy, to raise the value of each district/city area, in addition to finding new value for products, places, or activities, diversification steps that are integrated but still support the main potential of the region need to be taken so that they can stimulate the development of the blue economy. The definition of diversification according to the Big Indonesian Dictionary (KBBI) is diversification, meaning the absence of dependence on one type of product, activity, service, or investment so that this step is considered effective in developing new potential in the region that is integrated and in line with existing potential so that regional development can be lively, effective and efficient.

As the regional potential that has been described, Kepulauan Riau has its characteristics between each regency/city, so regional diversification must be developed. In line with the blue economy roadmap and the principle of sustainability so that investment is not unequal, regional development in the Kepulauan Riau can be prioritized as follows:

1. Fisheries and aquaculture potential in Natuna, Bintan, Lingga, Karimun, Batam, and Anambas Islands can be integrated with port and shipping infrastructure and facilities, fisheries tourism-based water transportation, seafood management, tidal power, and transmission networks and blue data;
2. Tourism potential in the Kepulauan Riau region can be integrated with the development of special tourist water transportation potential, seafood processing, and blue data, especially in the Batam, Bintan, Natuna, and Anambas Islands regions;
3. Renewable Energy Potential is developed in line with Fisheries Potential to support community fisheries activities in each region;
4. The potential of Water Transportation is developed by investing in port infrastructure development, shipping, and shipyards, especially in areas that have high transportation flows;
5. Climate Change Mitigation Potential developed with research and blue data;
6. The specific potential of research to collect and develop blue economy and blue data is developed in Tanjungpinang through Universitas Maritim Raja Ali Haji as, a university that supports maritime development.

Figure 1. Indonesia Blue Economy Roadmap
Source: Bappenas, 2024

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The Indonesia Blue Economy Roadmap (Bappenas, 2024) outlines a long-term national strategy for developing a sustainable, inclusive, and competitive marine-based economy through five distinct phases from 2023 to 2045. In the first phase (2023–2024), the focus is on strengthening and consolidating the national blue economy ecosystem, primarily by harmonizing plans between the public and private sectors, and establishing the Indonesia Blue Economy Index (IBEI). The second phase (2025–2029) moves toward economic development, emphasizing investment in blue food systems, cold supply chains, shipyards, and green ports marking a shift from policy formation to infrastructure and sectoral growth.

The third phase (2030–2034) targets the expansion of the blue economy through diversification, including financial incentives, legal enforcement of marine regulations, and development of new sectors such as blue biotechnology and sustainable aquaculture. In the fourth phase (2035–2039), the roadmap aims to enhance economic contribution and competitiveness, supported by the modernization of logistics systems, development of intermodal transport facilities, and increasing trade volumes. Finally, the fifth phase (2040–2045) envisions an inclusive, advanced, and sustainable blue economy, characterized by the adoption of net-zero carbon strategies, widespread use of renewable energy, and advanced cold supply chain technologies. This roadmap demonstrates Indonesia's commitment to aligning its maritime development goals with long-term sustainability and global climate targets.

CONCLUSION

Kepulauan Riau is one of the regions with maritime archipelago characteristics that has a great opportunity to take advantage of bilateral agreements related to deepening blue economy cooperation between Indonesia and China. Judging from the potentials that already exist in the Kepulauan Riau, blue economy development still has a great opportunity considering the achievement of fisheries GRDP, which is only 1.72% of the 96% area consisting of oceans. The authority to manage marine policies given to the regional government, in this case, the Kepulauan Riau Province, must be utilized as well as possible in pursuing investment from the bilateral cooperation.

This is necessary because the development of a blue economy requires large resources and budgets, so existing investments must be utilized as well as possible to be appropriate and efficient. Investment and cooperation in developing a blue economy cannot be generalized for each region, so the Kepulauan Riau Provincial government must be able to diversify its regional policies according to the characteristics and potential of each district/city. In addition, diversification of the development of blue economy potential must also be done by making new potential as integrated support and in line with existing potential so that, as a result, the development of a new blue economy can live and not harm investment so that it is sustainable for the economy of the surrounding community.

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