Proceeding International Conference on Economic Business Management, and Accounting (ICOEMA) 2025
Program Studi Doktor Ilmu Ekonomi
Universitas 17 Agustus 1945 Surabaya

IMPLEMENTATION OF THE BLUE ECONOMY: A SUSTAINABLE STRATEGY FOR FISHERIES SECTOR DEVELOPMENT IN SINJAI REGENCY

Abd. Muhaemin Nabir[1], Jainuddin[2]
1. Program Studi DIE,Untag Surabaya, Indonesia
2. Program Studi DIE,Untag Surabaya, Indonesia Name
E-mail: [1]eminji511@gmail.com, [2]jainuddinzenny@gmail.com

Received: April, 2025; Accepted: April, 2025; Published: June, 2025
Permalink/DOI:

Abstract

This study employs a qualitative descriptive approach based on a literature review to analyze the implementation of the blue economy concept in Sinjai Regency. The purpose of this approach is to gain an in-depth understanding of the phenomenon through descriptive data gathered from various secondary sources. Designed as a case study focused on the fisheries sector, this research explores the region's potential, challenges, opportunities, and strategies for adopting blue economy principles within a localized context. Sinjai Regency, located in South Sulawesi, Indonesia, is endowed with rich marine and coastal resources, including capture fisheries and aquaculture, supported by vital ecosystems such as mangroves and coral reefs. However, issues such as illegal fishing, habitat degradation, limited infrastructure, and low public awareness hinder sustainable development. The data is analyzed using SWOT analysis to identify the strengths, weaknesses, opportunities, and threats related to blue economy implementation. The findings highlight the importance of sustainable resource management, adoption of eco-friendly technologies, community empowerment, and strong policy support to foster balanced economic growth and environmental conservation. This study contributes to the discourse on sustainable fisheries and coastal development and offers valuable insights for policymakers and stakeholders in similar coastal regions.

Keywords: *Blue economy, sustainability, fisheries sector, Sinjai Regency, resource management.*

INTRODUCTION

The sea and coastal areas are vital natural resources for human life, providing food, and livelihoods, and contributing to the balance of the global ecosystem (Sarkar et al., 2024). However, poorly managed exploitation has led to the degradation of marine ecosystems, such as declining water quality, coral reef damage, and reduced marine biodiversity (Carneiro & Martins, 2022). If left unaddressed, these phenomena can threaten food security, economic welfare, and environmental sustainability (Luis Cordova & Milian Gómez, 2024).

Amid these challenges, the concept of the blue economy has emerged as a solution for sustainably harnessing the potential of marine resources (Choudhary et al., 2021). The blue economy focuses on the utilization of ocean- and coastal-based natural resources in ways that not only support economic growth but also preserve the environment (Das et al., 2024). This concept is increasingly important in a global context that demands efforts for climate change mitigation and inclusive economic development (Abbass et al., 2022).

The fisheries sector in Indonesia, including in Sinjai Regency, plays a crucial role in regional economic development and community welfare (Wahyuni et al., 2024). Sinjai Regency, located in South Sulawesi Province, is known for its rich natural resources, particularly in the fisheries sector (Malik et al., 2024). However, this sector faces major challenges related to overexploitation, environmental degradation, and imbalances in natural resource management.

Globally, the blue economy has become an increasingly relevant concept as a sustainable solution for managing marine and fisheries resources (Martínez-Vázquez et al., 2021). It emphasizes the sustainable management of marine and coastal ecosystems to support inclusive and environmentally friendly economic growth (Yusheng et al., 2024). The application of the blue economy in the fisheries sector can have a positive impact on the development of Sinjai Regency from economic, social, and ecological perspectives (Blanton et al., 2024). Given this background, it is important to examine the implementation of the blue economy as a sustainable strategy for the development of the fisheries sector in Sinjai Regency, in order to achieve a balance between resource utilization and conservation.

Research Questions:

RQ1: What are the strengths, weaknesses, opportunities, and threats (SWOT) associated with the implementation of the blue economy in the fisheries sector of Sinjai Regency?

RQ2: How can the blue economy be strategically implemented to support sustainable development in the fisheries sector of Sinjai Regency based on existing literature and policy analysis?

METHOD

This study employs a qualitative descriptive approach based on a literature review to analyze the implementation of the blue economy concept in Sinjai Regency. The purpose of this approach is to gain an in-depth understanding of the phenomenon through descriptive data gathered from various secondary sources. The research is designed as a case study, focusing on the fisheries sector in Sinjai Regency. This method enables a detailed exploration of the potential, challenges, opportunities, and strategies for applying the blue economy within a localized context. The study centers on Sinjai Regency, South Sulawesi, a region with significant potential in both capture fisheries and aquaculture. The data is analyzed using SWOT analysis to identify the strengths, weaknesses, opportunities, and threats. This methodological approach aims to provide a

comprehensive overview of how the blue economy is being implemented in the fisheries sector of Sinjai Regency.

RESULTS AND DISCUSSION

RQ1: What are the strengths, weaknesses, opportunities, and threats (SWOT) associated with the implementation of the blue economy in the fisheries sector of Sinjai Regency?

The implementation of the blue economy in the fisheries sector of Sinjai Regency presents a diverse set of strengths, weaknesses, opportunities, and threats that must be carefully considered for sustainable development. Among the key strengths are the region's rich marine biodiversity, including the presence of productive coral reef ecosystems, mangrove forests, and abundant fish stocks. These natural assets provide a solid foundation for sustainable fisheries and aquaculture development. Sinjai also benefits from a culturally embedded reliance on the sea, which means local communities have traditional knowledge and skills in fisheries practices. On the other hand, weaknesses include inadequate infrastructure such as limited cold storage, processing facilities, and transportation networks, which hinder the efficient distribution and added value of fishery products. Additionally, there is a lack of technological adoption and limited access to modern and environmentally friendly aquaculture systems among small-scale fishers.

The opportunities in implementing the blue economy are equally promising. These include the potential for job creation in sectors such as sustainable aquaculture, eco-tourism, and marine conservation. National and regional policies that promote the blue economy, along with increasing interest from private and international development agencies, offer pathways for collaboration, investment, and capacity-building. Moreover, ecosystem restoration programs, such as mangrove and coral reef rehabilitation, can enhance resilience against climate change while supporting long-term resource productivity. However, several threats persist. These include ongoing environmental degradation due to illegal fishing practices, coastal development pressures, and weak enforcement of marine protection regulations. Climate change also poses a significant threat to marine ecosystems through rising sea temperatures and ocean acidification. Furthermore, the low level of awareness and understanding of the blue economy concept among local stakeholders may hinder community engagement and the adoption of sustainable practices. Addressing these internal and external factors is essential to ensure that the implementation of the blue economy in Sinjai Regency leads to inclusive, long-term benefits for both people and nature.

Table 1. SWOT Analysis of Blue Economy Implementation in the Fisheries Sector of Sinjai Regency

SWOT Component	Description
Strengths	- Abundant marine biodiversity (e.g., coral reefs, mangroves, and fish stocks) - Strong traditional knowledge and community dependence on fisheries - Geographical location with access to both marine and freshwater resources
Weaknesses	- Limited infrastructure (e.g., cold storage, fish processing facilities, transport) - Low adoption of technology in fisheries and aquaculture - Limited access to financing and modern equipment for small-scale fishers
Opportunities	- Potential for job creation in eco-tourism, sustainable aquaculture, and marine conservation - National and regional support through blue economy policies - Availability of ecosystem restoration initiatives (e.g., mangrove and coral reef rehabilitation) - Growing interest from private sector and development agencies
Threats	- Environmental degradation from illegal and destructive fishing practices - Weak enforcement of coastal and marine regulations - Climate change impacts (e.g., rising sea temperatures, ocean acidification) - Low public awareness and understanding of the blue economy concept

RQ2: How can the blue economy be strategically implemented to support sustainable development in the fisheries sector of Sinjai Regency based on existing literature and policy analysis?

The strategic implementation of the blue economy in the fisheries sector of Sinjai Regency can be achieved through a multi-faceted approach based on insights from existing literature and relevant policy frameworks. First, sustainable resource management must be prioritized by enforcing regulations against illegal, unreported, and unregulated (IUU) fishing and by protecting critical ecosystems such as mangroves and coral reefs. This aligns with national and international policies aimed at ecosystem conservation and responsible fisheries.

Second, technological innovation plays a crucial role. The adoption of tools such as Geographic Information Systems (GIS) and drones enables more efficient monitoring of marine environments, allowing for early detection of environmental degradation and better enforcement of fishing zones.

Third, capacity building and community empowerment are essential. Providing ongoing education and training for fishermen and coastal residents enhances awareness and promotes sustainable practices. This fosters local participation in conservation efforts and builds resilience within fishing communities.

Fourth, strengthening policy and institutional support is vital. Coordinated efforts between local government, national agencies, and non-governmental

organizations can create a favorable policy environment that supports blue economy initiatives through incentives, technical assistance, and cross-sector collaboration.

Lastly, financial investment and private sector involvement through mechanisms such as Corporate Social Responsibility (CSR) programs and public-private partnerships can help bridge funding gaps and sustain long-term projects. These strategic actions, when implemented cohesively, can promote a balanced development model that ensures both economic growth and environmental sustainability in Sinjai's fisheries sector.

Table 2. Strategic Framework for Implementing the Blue Economy to Support Sustainable Fisheries Development in Sinjai Regency

Strategic Area	Description
1. Sustainable Resource Management	Enforce regulations against IUU fishing, promote responsible fishing practices, and protect key ecosystems like mangroves and coral reefs.
2. Technological Innovation	Use GIS and drone technology to monitor marine ecosystems, map degradation, and support data-driven decision-making.
3. Capacity Building and Community Empowerment	Provide education and training for local communities to raise awareness of sustainability and involve them in resource conservation.
4. Policy and Institutional Support	Strengthen collaboration among local government, national bodies, and NGOs; develop policies that incentivize sustainable practices and governance.
5. Financial Investment and Partnerships	Mobilize funding through CSR, public-private partnerships, and government programs to support infrastructure and blue economy initiatives.

CONCLUSION

The implementation of the blue economy in Sinjai Regency offers a promising pathway toward achieving sustainable development in the fisheries sector. By harnessing its rich marine and coastal resources, Sinjai has the potential to improve economic productivity while simultaneously preserving environmental integrity. The SWOT analysis reveals that while the region benefits from ecological diversity and supportive policies, it also faces significant challenges such as limited infrastructure, funding constraints, and low community awareness. Strategic implementation—through sustainable resource management, technological innovation, ecosystem restoration, and inclusive community involvement—is essential to overcoming these barriers. Supported by strong government policies and stakeholder collaboration, the blue economy can serve as a transformative approach to foster long-term resilience, environmental stewardship, and inclusive growth in the region.

REFERENCES

Abbass, K., Qasim, M. Z., Song, H., Murshed, M., Mahmood, H., & Younis, I. (2022). A review of the global climate change impacts, adaptation, and

sustainable mitigation measures. *Environmental Science and Pollution Research*, *29*(28), 42539–42559. https://doi.org/10.1007/s11356-022-19718-6

Blanton, A., Ewane, E. B., McTavish, F., Watt, M. S., Rogers, K., Daneil, R., Vizcaino, I., Gomez, A. N., Arachchige, P. S. P., King, S. A. L., Galgamuwa, G. A. P., Peñaranda, M. L. P., al-Musawi, L., Montenegro, J. F., Broadbent, E. N., Zambrano, A. M. A., Hudak, A. T., Swangjang, K., Velasquez-Camacho, L., … Mohan, M. (2024). Ecotourism and mangrove conservation in Southeast Asia: Current trends and perspectives. *Journal of Environmental Management*, *365*, 121529. https://doi.org/10.1016/j.jenvman.2024.121529

Carneiro, M., & Martins, R. (2022). *Destructive Fishing Practices and Their Impact on the Marine Ecosystem* (pp. 295–304). https://doi.org/10.1007/978-3-319-98536-7_10

Choudhary, P., G, V. S., Khade, M., Savant, S., Musale, A., G, R. K. K., Chelliah, M. S., & Dasgupta, S. (2021). Empowering blue economy: From underrated ecosystem to sustainable industry. *Journal of Environmental Management*, *291*, 112697. https://doi.org/10.1016/j.jenvman.2021.112697

Das, J., Govender, M., Irfanullah, H. Md., Selim, S. A., & Glaser, M. (2024). Stakeholder perceptions of blue economy governance networks and their equity implications in Bangladesh. *Marine Policy*, *170*, 106359. https://doi.org/10.1016/j.marpol.2024.106359

Luis Cordova, J. G., & Milian Gómez, J. F. (2024). Energy and Food Poverty in Latin America, Towards a Rights Perspective. In *Energy Poverty, Justice and Gender in Latin America* (pp. 205–224). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-80068-9_9

Kustiwi, I.A. 2024. "Accounting Information System (AIS): Integration of Artificial Intelligence and Management in Farm Tourism Kelompok Tani Elok Mekar Sari." DiE: Jurnal Ilmu Ekonomi Dan Manajemen 15(1):123–31. doi: 10.30996/die.v15i1.10634.

Kustiwi, I. A., Hwihanus, H. 2023. Sistem Informasi Akuntansi Dari Sisi Audit Internal. JPEKBM (Jurnal Pendidikan Ekonomi, Kewirausahaan, Bisnis, dan Manajemen, Vol 7, No 2.

Malik, A., Lynham, J., Ali, M. I., Jalil, Abd. R., Rahim, Abd., & Rahmawati, A. (2024). The Value of Mangroves to Domestic Tourists and Local Households in South Sulawesi, Indonesia. *Tourism in Marine Environments*, *19*(2), 95–107. https://doi.org/10.3727/216901924X17221514868461

Martínez-Vázquez, R. M., Milán-García, J., & de Pablo Valenciano, J. (2021). Challenges of the Blue Economy: evidence and research trends. *Environmental Sciences Europe*, *33*(1), 61. https://doi.org/10.1186/s12302-021-00502-1

Sarkar, P., Banerjee, S., Biswas, S., Saha, S., Pal, D., Naskar, M. K., Srivastava, S. K., Barman, D., Kar, G., & Mukul, S. A. (2024). Contribution of Mangrove Ecosystem Services to Local Livelihoods in the Indian Sundarbans. *Sustainability*, *16*(16), 6804. https://doi.org/10.3390/su16166804

Wahyuni, S., Kasim, M. N., & Izzah, N. (2024). *Sustainable Mangrove Tourism: Economic Valuation And Participation In Sinjai*. *7*(2), 2622–4798. https://doi.org/10.12928/ijiefb.v7i2.11304

Yusheng, C., Sun, Z., Zhou, Y., Yang, W., & Ma, Y. (2024). Can the regulation of the coastal environment facilitate the green and sustainable development of the marine economy? *Ocean & Coastal Management*, *254*, 107203. https://doi.org/10.1016/j.ocecoaman.2024.107203