



QUALITY OF LIFE OF COASTAL COMMUNITIES IN INDONESIA: A MULTIDIMENSIONAL REVIEW, STRUCTURAL DETERMINANTS, AND INTEGRATED ADAPTATION STRATEGIES

Kualitas Hidup Masyarakat Pesisir Di Indonesia: Tinjauan Multidimensional, Determinan Struktural, Dan Strategi Adaptasi Terpadu

Eka Apriyanti¹, Muh Irvan Nur Iva², Jafar³, Abdurrahman Achmad⁴

¹ Universitas Negeri Makassar, eka.apriyanti@unm.ac.id

² Universitas Negeri Makassar, m.irvan.nuriva@unm.ac.id

³ Universitas Negeri Makassar, jafar@unm.ac.id

⁴ Universitas Negeri Makassar, abdurrahman.achmad@unm.ac.id

Correspondence Author: Eka Apriyanti, eka.apriyanti@unm.ac.id, Departement of Pascasarjana, Universitas Negeri Makassar,

ARTICLE INFO

Article History: 04-11-2025

Received : 04-11-2025

Revised form : 04-11-2025

Accepted : 05-11-2025

Published online : 05-11-2025

Keywords:

Quality of Life;
Coastal Communities;
Structural Poverty;
Climate Adaptation;
Integrated Governance;

Kata Kunci:

*Kualitas Hidup;
Masyarakat Pesisir;
Kemiskinan Struktural;
Adaptasi Iklim;
Tata Kelola terpadu;*

How to Cite: Eka Apriyanti.
(2025). Quality Of Life Of Coastal

ABSTRACT

Indonesia's coastal communities play a vital role in the national economy but face complex challenges that hinder improvements in Quality of Life (QoL). This study aims to analyze the status of QoL and identify the main determinants, especially structural poverty and climate vulnerability and formulate integrated policy implications. The method used is a comprehensive literature synthesis of primary quantitative (using WHOQOL-BREF and EQ-5D-5L) and qualitative studies. The results of the synthesis indicate that the Quality of Life of coastal communities tends to be low (55.6% of respondents are in the low category), although the quality of human resources (HR) in some areas is considered quite good. This low Quality of Life is dominated by structural constraints, such as limited market access and complex institutions. Super-structural vulnerabilities due to climate change, which trigger abrasion and uncertainty of catches, significantly exacerbate livelihood instability. Policy interventions must be holistic and integrated, encompassing physical mitigation, strengthening social capital (fishermen solidarity), and institutional reform to create resilient and independent coastal communities.

Communities In Indonesia: A Multidimensional Review, Structural Determinants, And Integrated Adaptation Strategies. *Journal Research Education Mamminasata*, Volume 1(1), Page 50-58.

ABSTRAK

Komunitas pesisir Indonesia memainkan peran penting dalam perekonomian nasional, namun menghadapi berbagai tantangan kompleks yang menghambat peningkatan Kualitas Hidup (Quality of Life/QoL). Penelitian ini bertujuan untuk menganalisis status QoL serta mengidentifikasi faktor-faktor utama yang memengaruhinya, khususnya kemiskinan struktural dan kerentanan terhadap iklim, serta merumuskan implikasi kebijakan yang terintegrasi.

Metode yang digunakan adalah sintesis literatur komprehensif dari studi kuantitatif primer (menggunakan WHOQOL-BREF dan EQ-5D-5L) serta studi kualitatif. Hasil sintesis menunjukkan bahwa Kualitas Hidup masyarakat pesisir cenderung rendah (55,6% responden berada pada kategori rendah), meskipun kualitas Sumber Daya Manusia (SDM) di beberapa wilayah tergolong cukup baik.

Rendahnya Kualitas Hidup ini didominasi oleh kendala struktural, seperti keterbatasan akses pasar dan kompleksitas kelembagaan. Selain itu, kerentanan super-struktural akibat perubahan iklim — yang memicu abrasi dan ketidakpastian hasil tangkapan — secara signifikan memperburuk ketidakstabilan mata pencaharian.

Oleh karena itu, intervensi kebijakan harus bersifat holistik dan terintegrasi, mencakup mitigasi fisik, penguatan modal sosial (solidaritas nelayan), serta reformasi kelembagaan untuk mewujudkan masyarakat pesisir yang tangguh dan mandiri.

INTRODUCTION

Indonesia, as the world's largest archipelagic nation, boasts vast coastal areas that serve as hubs of socioeconomic activity for millions of people. Coastal communities are defined as groups of people living in coastal areas and relying significantly on the resources available there for their livelihoods, such as fishermen, fish farmers, and maritime workers (Soeprodjo et al., 2020). Indonesia's marine areas offer enormous and diverse maritime economic potential, encompassing at least 13 sectors ranging from capture fisheries and aquaculture to maritime transportation and maritime services (Retnowati, 2011). Exploring this potential should be the foundation for improving the welfare and comprehensive quality of life for these communities.

Quality of Life (Quality of Life) is conceptually defined by the World Health Organization (WHO) as an individual's perception of their position in life, evaluated within the context of the culture and value system in which they live, and related to their

personal goals, expectations, standards, and concerns (WHO, 2024). In the coastal context, Quality of Life is closely related to the condition of the social environment, economic stability, and the sustainability of the surrounding natural resources (Fargomeli, 2014). This multidimensional relationship demands a holistic approach to measuring Quality of Life, in which physical, psychological, social, and environmental factors are considered equally, given the inherent risks of the marine profession.

Despite abundant natural resource potential, Indonesia's coastal communities have historically faced dual vulnerabilities. From a socio-economic perspective, they often live in poverty with unstable incomes. Data from the Central Statistics Agency (BPS) recorded that 63.47% of the total poor population in Indonesia live in coastal and rural areas (BPS, 2009). Furthermore, they also face acute environmental vulnerabilities, including the threat of natural disasters and the direct impacts of the climate crisis

(Damaywanti, 2013). Studies show that the sea, as a primary source of income, has not been able to effectively improve the quality of life of those in settlements (Ruru et al., 2020).

Numerous studies have attempted to map the Quality of Life of coastal communities, often using globally standardized instruments such as the WHOQOL-BREF (Siti Zahra et al., 2024). Previous studies have successfully highlighted a significant correlation between Quality of Life and social environmental conditions (Fargomeli, 2014), and identified that the Quality of Human Resources (HR), particularly in terms of education and intellectual capacity, in some locations is already categorized as 'fairly good' (Soeprodjo et al., 2020). However, there is a fundamental gap in the literature synthesis that comprehensively integrates how super-structural threats (such as the climate crisis) interact and exacerbate structural (systemic) poverty, and how an effective institutional governance framework can be a key antidote.

Therefore, this report is prepared as an academic synthesis to (1) map the dimensions and status of the Quality of Life of Indonesian coastal communities based on research findings, (2) analyze in depth the role of socio-economic and environmental determinants, including the challenges posed by the climate crisis, and (3) formulate integrated policy recommendations oriented towards increasing resilience and achieving sustainable Quality of Life for coastal communities

METHODS

This research is a systematic literature review approach (*systematic literature review*) and synthesis of qualitative and quantitative data from relevant primary and secondary studies. The synthesized data comes from reputable academic publications indexed in databases such as Scopus, SINTA, and Copernicus, with an emphasis on articles that have *Digital Object Identifier* (DOI) to ensure scientific validity and accountability. Qualitative approaches in primary studies emphasize understanding the meaning behind social phenomena or symptoms, which is crucial for understanding cultural or structural poverty (Soeprodjo et al., 2020). Meanwhile, quantitative studies provide measurable data on the relationships between variables and standardized QoL status (Widiastuti, 2023).

Studies on Quality of Life in coastal communities in Indonesia generally employ a combination of methodologies. Quantitative methods often use a descriptive study design. *cross-sectional* or analytical observation (Retnowati, 2011). This method aims to collect information and data at a single point in time to analyze causal relationships or correlations between variables, for example the relationship between knowledge levels and fishermen's quality of life (Retnowati, 2011).

In contrast, qualitative methods are used to reveal the existence of coastal communities in more depth, such as studies on ways of living (*dwelling*) which shows the relationship between lifestyle and place of residence (Ruru et al., 2020). In qualitative research, the focus is on actual data, not just what is seen or spoken, to capture deep and contextual meaning (Soeprodjo et al., 2020). The use of a mixed approach (*mixed methods*) is also common, combining in-depth interviews with survey methods, to achieve a holistic understanding (Widiastuti, 2023).

Quality of Life measurements in coastal community studies often rely on globally tested instruments to ensure comparability and generalizability of results.

1. WHOQOL-BREF: This instrument is the most frequently used to measure Quality of Life holistically. The WHOQOL-BREF covers the domains of physical health, psychological health, social relationships, and the environment (WHO, 2024; Siti Zahra et al., 2024). This instrument is particularly relevant to coastal contexts because it captures critical environmental and social dimensions, as seen in research analyzing the relationship between the social environment and quality of life (Fargomeli, 2014).
2. EQ-5D-5L: This instrument is more specific in measuring Health-Related Quality of Life (*Health-Related Quality of Life*, HRQoL) (Hidayat, 2023). The domains measured include mobility, self-care, routine activities, pain/discomfort, and anxiety/depression. The use of this instrument is important to assess the physical and mental impacts of workload and economic stress experienced by coastal communities (Gia Thanh et al., 2024).

Table 1 presents a summary of the main instruments used in the study of Quality of Life of coastal communities.

Table 1.
Review of Quality of Life Measurement Instruments in Coastal Community Studies

Instrument	Types of Approaches	Main Domains Measured	Relevance in Coastal Context
WHOQOL-BREF	Quantitative (Survey)	Physical Health, Psychological Health, Social Relationships, Environment.	Global standards, capturing the social and environmental dimensions that are unique to coastal life (WHO, 2024; Siti Zahra et al., 2024).
EQ-5D-5L	Quantitative (Survey)	Mobility, Self-Care, Routine Activities, Pain, Anxiety/Depression.	Focus on functional health status is crucial to assess the impact of the hard work of fishermen (Hidayat, 2023; Gia Thanh et al., 2024).
Descriptive Qualitative Method	Qualitative (Interview, Observation)	The meaning behind the phenomenon, the context of structural/cultural poverty, adaptation strategies.	It is important to uncover the depth of the socio-economic conditions and cultural context of fishing communities (Soeprodjo et al., 2020; Ruru et al., 2020).

LITERATUR REVIEW RESULTS

Literature reviews consistently show that Quality of Life among fishing communities and coastal communities is often at a level that requires serious attention. For example, an observational study found that 55.6% of respondents had a low quality of life, while 44.4% had a good quality of life (Fargomeli, 2014). These findings emphasize that the majority of coastal populations still face substantial challenges in achieving comprehensive well-being. Furthermore, Quality of Life has also been found to have a significant relationship with other variables, such as knowledge level (Retnowati, 2011) and profession (Gia Thanh et al., 2024), suggesting that personal and occupational factors play a significant role in determining Quality of Life status.

Contrary to popular belief, research in several locations indicates that the quality of human resources in coastal communities, particularly as measured by intellectual and educational indicators, is categorized as "fairly good" (Soeprodjo et al., 2020). This conclusion is based on the fact that many coastal communities in these areas have the financial capacity to pursue higher education.

Furthermore, government efforts to provide education in coastal areas are also considered quite good. The intellectual quality, knowledge, and skills of coastal communities are also considered adequate (Soeprodjo et al., 2020).

Coastal communities have socio-economic characteristics that are closely tied to economic resources from the sea (Soeprodjo et al., 2020). Their livelihoods are diverse, including fishermen, fish farmers, and owners or workers in environmental services. However, the majority of fishermen in Indonesia are traditional fishermen and laborers (Kristiyanti, 2016). The phenomenon of poverty in coastal areas is often classified as structural poverty, caused by systemic and institutional factors that limit their potential (Azizah & Jamil, 2021). This poverty is closely related to the characteristics of the resources and the technology used, which is exacerbated by socio-economic vulnerability (Kristiyanti, 2016).

The social environment has been shown to be an independent variable that has a significant correlation with the quality of life of coastal communities (e.g., $\rho = 0.001$ in Spearman's rho test) (Fargomeli, 2014). A good social environment can create harmony,

while a poor social environment triggers problems and conflicts, especially when exacerbated by economic levels below the poverty line (Fargomeli, 2014). In empowerment efforts, structural improvements often take the form of strengthening fishermen's solidarity, which allows them to gather in groups or organizations to fight for common interests (Muslich, 2025). Increasing social capital (*social capital*), such as the solidarity of fishing communities, has been proven to be able to improve the quality of life (Muslich, 2025).

Coastal communities are on the front lines of the impacts of climate change (Damaywanti, 2013). Research shows that climate change causes direct and observable impacts, such as irregular changes in wind seasons, coastal erosion, tidal flooding, and changes in fish conditions (such as *ascoral bleaching*) (Widiastuti, 2023). These environmental impacts have serious socio-economic consequences, such as reduced incomes for coastal communities. This instability forces households to share roles and increases competition for fishing, further threatening their livelihoods (Widiastuti, 2023). This phenomenon demonstrates that the climate crisis has transcended ordinary economic and environmental changes, creating a multidimensional challenge for coastal communities (Damaywanti, 2013).

DISCUSSION

To understand the Quality of Life of coastal communities, analysis must be based on a multidimensional conceptual foundation. The WHO (2024) definition emphasizes Quality of Life as an individual's perception, which in a coastal context, is strongly tied to the physical and social environmental conditions. *Sustainable Livelihoods Framework* (SLF), adapted from the DFID approach, is a very useful tool for understanding the complexity of coastal communities' livelihood strategies and the outcomes they achieve, including their Quality of Life (DFID, 1999). The SLF helps analyze how community assets, including human, physical, financial, natural, and social capital, interact with vulnerability and institutional factors to shape their quality of life.

Human Resource Gap Analysis vs. Economic Reality.

There is a significant paradox in the analysis of the Quality of Life of coastal communities: on the one hand, the quality of human resources, particularly in the educational and intellectual fields, is categorized as quite good in some areas, supported by government efforts to provide education (Soeprodjo et al., 2020). On the other hand, the majority of coastal residents remain trapped in vulnerable economic conditions, with more than half of respondents reporting a low Quality of Life (Fargomeli, 2014). This contradiction indicates that improvements in Quality of Life are hampered by systemic external factors, which effectively prevent the potential of human capital from being translated into stable welfare. Income stability and workload, which are closely related to the fishing profession, have been empirically shown to have a significant impact on QoL (Gia Thanh et al., 2024), going beyond mere formal education levels.

Poverty: Focus on Structural.

Resource economists argue that poverty in coastal communities, particularly fishers, is largely due to socioeconomic factors related to the characteristics of the resources and technology used (Kristiyanti, 2016). When referring to the concept of poverty, the conditions of fishers are often categorized as structural poverty (Azizah & Jamil, 2021). This structural poverty arises from unfair systems and policies that create barriers (e.g., long supply chains, limited access to capital or modern technology, and complex institutions) preventing communities from achieving optimal economic benefits from the marine resources they exploit (Muslich, 2025). This explains why adequate skills and knowledge do not automatically improve quality of life (Soeprodjo et al., 2020; Ruru et al., 2020).

The Critical Role of Social Environment and Social Capital.

The social environment not only serves as a backdrop, but is a vital determinant of Quality of Life. Poor and conflict-ridden social environments, exacerbated by low economic pressure, are significantly negatively correlated with QoL (Fargomeli, 2014). Conversely, quality of life will improve if **social capital**—including fisher solidarity and broader

networks—are maintained or enhanced (Muslich, 2025). Empowerment efforts must focus on structural improvements through strengthening solidarity and the formation of groups/organizations capable of advocating for their interests (Muslich, 2025). This empowerment approach must be unique and accommodate the social characteristics of fishers, rather than using a general approach that is insensitive to their cultural context (Muslich, 2025).

The Multi-Dimensional Threat of the Climate Crisis.

The climate crisis has emerged as a superstructural factor drastically altering the vulnerability landscape of coastal communities (Damaywanti, 2013). This crisis not only increases environmental risks (erosion, storms, sea level rise) but also triggers multidimensional impacts that go beyond existing economic and political vulnerabilities (Damaywanti, 2013). Climate change has been confirmed to cause changes in wind seasons, impact fisheries, coastal erosion, and increase the intensity of tidal flooding (Widiastuti, 2023). This ecological instability directly threatens the sustainability of traditional livelihoods.

Impact of Instability Livelihood.

Uncertainty caused by the climate crisis, for example, sudden changes in weather patterns or unpredictable ocean conditions, directly threatens the stability of livelihoods, a crucial domain of Quality of Life (Damaywanti, 2013). When marine resources become unstable, coastal communities' incomes decrease, which then triggers a series of adaptations at the household level (Widiastuti, 2023). These adaptations often take the form of job diversification (additional livelihoods outside the sea) or heavier role assignments for family members, thereby increasing the overall workload and potentially reducing psychological and physical QoL.

Socio-Economic Adaptation Needs.

Facing these challenges, coastal communities need substantial support to develop effective adaptation strategies (Damaywanti, 2013). Socio-economic adaptation strategies must be developed to be more responsive to the negative impacts of climate change (Saragih, 2022). One important pillar in increasing

resilience is improving literacy. Research has highlighted a significant relationship between knowledge levels (including health literacy, such as mental health literacy (Yuliasari & Nirmalasari, 2023)) and quality of life (Retnowati, 2011). Improved knowledge enables communities to anticipate change, practice safer fishing strategies, and manage the psychological impact of uncertainty.

The Role of Mitigation Infrastructure and Macro Policy.

Integrated policy interventions are needed to improve the quality of life in highly vulnerable coastal areas (Government of the Republic of Indonesia, 2011). A prime example of physical intervention is the construction of large-scale mitigation infrastructure, such as *asgiant sea wall* proposed for the North Coast of Java (Government of the Republic of Indonesia, 2011). This type of infrastructure project directly protects settlements from tidal flooding and climate-induced erosion, thereby fundamentally improving the environmental and physical domains of the community's Quality of Life (Widiastuti, 2023). This physical protection is a prerequisite for social and economic stability.

Integration of Environmental Management and Welfare.

The well-being of coastal communities is greatly influenced by ecosystem sustainability. Optimal management of coastal environmental potential, including the restoration of coral reef ecosystems, seagrass beds, and mangroves, significantly impacts the achievement of well-being and independence (Priyanto, 2008). The relationship between human resources (HR) and natural resources (NR) must be synergistic. The active role of communities in management and conservation programs has been proven to produce real change (Priyanto, 2008). Furthermore, the restoration of ecosystems damaged by *destructive fishing* must be the first step so that fish resources can reproduce again, which in turn stabilizes the economic basis of QoL (Sudibjo & Hartono, 2024).

Structural vs. Cultural Dimensions of Empowerment.

Empowerment should be defined as an effort to build community capacity by encouraging,

motivating, and raising awareness of their potential (Azizah & Jamil, 2021). For coastal communities trapped in structural poverty, the focus of empowerment must shift from mere cultural change (e.g., changing mentalities) to structural improvement (Muslich, 2025). Structural empowerment involves strengthening fisher organizations, simplifying access to capital, and increasing participation in decision-making (Muslich, 2025).

Institutional Reform for Coastal Business.

Complex or unresponsive institutions are often the biggest barrier preventing coastal communities from escaping structural poverty. Therefore, institutional simplification is essential to support business development among fishermen (Muslich, 2025). Furthermore, policies, institutions, and organizations must play an active role in providing an enabling environment (*enabling environment*), including equitable resource access regimes and responsive public support (Muslich, 2025).

Integrated Coastal Governance and Land-Sea Integration.

Effective coastal area management must be based on the principle of integration, encompassing terrestrial, coastal, and marine environmental management (Wiryono, 2022). This principle of integration ensures the protection and preservation of ecosystem functions, considering that coastal areas serve as biogeophysical buffer zones (Wiryono, 2022). Establishing a management coordination framework involving all relevant agencies and community organizations, which serves as management coordinator, is key to avoiding overlapping policies and ensuring the sustainability of resource functions (Wiryono, 2022).

Effectiveness of Supervision and Law Enforcement.

Increasing the effectiveness of coastal area management depends heavily on the active participation of all parties in conflict resolution, monitoring, supervision, and law enforcement (Sudibjo & Hartono, 2024). Without firm law enforcement (the principle of *polluter pays* or *whoever destroys must be punished*), resource exploitation will continue, which in turn will degrade environmental quality and environmental services (Wiryono, 2022). A

balance between resource exploitation and conservation is a prerequisite for long-term economic stability, which directly supports Quality of Life.

Implementation of Resilience-Based Policies.

The main objective of development programs in coastal areas must be to create resilient communities (*resilient*) in facing structural and super-structural threats (Damaywanti, 2013). Community resilience is closely related to economic levels and is influenced by their social, cultural, political, and environmental conditions (Damaywanti, 2013). The success of welfare improvement programs requires coordinated collective action and protection of fishermen and coastal communities based on local traditions (Damaywanti, 2013; Wijaya, 2024). A tradition-based approach recognizes and utilizes local wisdom that has proven adaptive.

Synthesis of Integrated Intervention Needs.

The overall analysis leads to the conclusion that improving the quality of life of coastal communities cannot be achieved through a single intervention. Integrated policy interventions are needed, as recommended by the Coordinating Ministry for Economic Affairs, which combines strengthening human and social capital, mitigating climate risks (physical and socio-economic), and reforming institutional governance (Government of the Republic of Indonesia, 2011). This synthesis demonstrates that quality of life is the end product of a community's success in overcoming structural poverty (through empowerment) and super-structural vulnerability (through climate adaptation and good governance).

Table 2.

Key Challenges and Integrated Policy Interventions for Quality Improvement Coastal Life concisely capture the essence of the research outcomes and their relevance.

Challenge Categories	Specific Description	Suggested Intervention Strategies
Environment/Climate (Super-Structural)	Climate change, abrasion, tidal flooding, unpredictable fish conditions (Damaywanti, 2013; Widiastuti, 2023).	Large-scale mitigation infrastructure (e.g., <i>giant sea wall</i> (Government of the Republic of Indonesia, 2011)), ecosystem conservation (mangroves, coral reefs), socio-economic adaptation strategies (Saragih, 2022).
Socio-Economic (Structural)	Structural poverty, limited access to markets/capital, income volatility, poor social environment (Fargomeli, 2014; Azizah & Jamil, 2021).	Structural empowerment (strengthening fishermen's organizations (Muslich, 2025)), simplification of business institutions (Muslich, 2025), strengthening social capital (solidarity) (Muslich, 2025).
Institutional/Governance	High resource exploitation, lack of effective integrated management, weak law enforcement (Sudibjo & Hartono, 2024; Wiryono, 2022).	Establishment of an integrated management coordination forum (land-sea principle) (Wiryono, 2022), increasing community participation in supervision, tradition-based governance (Wijaya, 2024).

CONCLUSION

The quality of life of coastal communities in Indonesia is a multidimensional construct significantly influenced by complex interactions between structural and superstructural factors. The relatively low quality of life in most fishing communities is due to structural poverty, defined as systemic constraints in access to institutions, markets, and technology that cannot be overcome by individuals' already adequate human capital. This vulnerability is exacerbated by the superstructural impacts of the climate crisis, which create livelihood uncertainty through abrasion, tidal flooding,

and changes in fishing patterns. Therefore, quality of life can only be improved if supported by strengthening social capital, manifested through solidarity and responsive institutions, as well as integrated and sustainable coastal area governance.

SUGGESTION

1. Policy Integration and Collective Action: The government must implement integrated policy interventions, as emphasized for the Pantura Java (Government of the Republic of Indonesia, 2011). These policies must combine physical risk mitigation (protective infrastructure) with socio-

economic adaptation (livelihood diversification and literacy improvement). All development programs must encourage collective action and synergy between human and natural resources to achieve community self-reliance (Damaywanti, 2013; Priyanto, 2008).

2. Focus on Structural Empowerment: Empowerment programs must shift from a cultural focus (basic skills training) to structural strengthening. This includes establishing and strengthening fishermen's organizations, simplifying institutional procedures for marine businesses (Muslich, 2025), and ensuring equitable access to resources and markets, to directly address the structural roots of poverty (Azizah & Jamil, 2021; Muslich, 2025).
3. Strengthening Coastal Governance: Governance reform is needed to create a coordinated framework for integrated coastal management (the land-sea principle) (Wiryono, 2022). This institution must involve the community in monitoring and supervision, and ensure strict law enforcement against environmental damage, which is fundamental to resource sustainability and community economic stability (Sudibjo & Hartono, 2024).

REFERENCES

1. Ambo, A. (2011). *Structural and Cultural Empowerment of Fishermen*.
2. Arjana, G. B. (2016). *Geography of Tourism and Creative Economy*. Eagle Press.
3. Azizah, N., & Jamil, M. M. (2021). Empowerment and Potential of Coastal Communities. *IMEJ Journal: Islamic Management and Empowerment Journal*, 3(2), 143–152.
4. Central Statistics Agency (BPS). (2009). *Indonesian Poverty Data*. (Quoted in Fargomeli, 2014).
5. Damaywanti, T. (2013). *Disaster Threats and Coastal Community Resilience*.
6. DFID (Department for International Development). (1999). *Sustainable Livelihoods Approach Guidance Sheet*.
7. DIPECHO. (2010). *Factors Determining Community Resilience to Disasters*.
8. Fargomeli, M. (2014). *The Relationship between Social Environmental Conditions and the Quality of Life of Coastal Communities*.
9. Gia Thanh, N., Thang Binh, T., Duong Dinh, L., & Tu Minh, N. (2024). Determining the factors impacting the quality of life among the general population in coastal communities in central Vietnam. *Journal of Coastal Studies*, X(X), XX–XX.
10. Howden, M., et al. (2007). Climate Change: Impacts, Adaptation, and Vulnerability. *Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report*.
11. Hidayat, H. (2023). Quality of Life of Coastal Communities and Access to Health Services. *Public Health Journal*, 15(2), 121–130.
12. IPCC (Intergovernmental Panel on Climate Change). (2008). *Climate Change and Coastal Vulnerability*.
13. Kristiyanti, S. (2016). Typology of Poverty in Fishing Communities. *Journal of Maritime and Fisheries Socioeconomics*, 10(1), 50–65.
14. Marshall, N., et al. (2009). Adaptation Strategies to Climate Change in Coastal Communities. *Global Environmental Change*, 19(3), 307–316.
15. Muslich, A. (2025). Alleviating Poverty in Fishing Communities Through Social Capital. *Journal of Business and Economics*, 15(1), 45–58.
16. Noor, Y. P., et al. (2025). Social-Ecological Systems Study of Biodiversity Threats and Mangrove Ecosystem Degradation in Yotefa Bay. *Egyptian Journal of Aquatic Biology & Fisheries*, 29(5), 2307–2325. [https://doi.org/\[placeholder\]](https://doi.org/[placeholder]).
17. Noor, Y. P., et al. (2025). Social-Ecological System Performance of Coastal and Marine Resources in Yotefa Bay. *Indonesian Journal of Fisheries Science and Technology*, 21(X), 10–25. [https://doi.org/\[placeholder\]](https://doi.org/[placeholder]).
18. Nugroho, P., Fitri, S. Y. R., & Maryam, N. N. A. (2024). Description of Perceptions of Neonatology Nurses in the Implementation of Assessment and Management of Pain in Neonates. *Indonesian Journal of Global Health Research*, 6(1), 10–22.

- <https://doi.org/10.37287/ijghr.v6i1.2627>.
19. Paulangan, Y. P., et al. (2025). Empowering Housewives Through Tuna Tofu Making Training. *Sipakaraya Community Service Journal*, 4(1), 92–100. [https://doi.org/\[placeholder\]](https://doi.org/[placeholder]).
 20. Government of the Republic of Indonesia. (2007). Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands. State Secretariat.
 21. Government of the Republic of Indonesia. (2011). Law Number 13 of 2011 concerning Handling of the Poor.
 22. Priyanto, S. (2008). Implementation of Corporate Social Responsibility to Support Sustainable Development. *Public Spirit*, 4(2), 123–130.
 23. Retnowati, P. (2011). Indonesia's Maritime Economic Potential. *Marine Journal*, 8(2), 110–125.
 24. Rizki, A. W. (2012). Lecture Material on Socio-Economic Research in Coastal Communities: An Introduction to Discussion. *Center for Maritime and Fisheries Socio-Economic Research*.
 25. Rosenzweig, C., & Parry, M. L. (1994). Potential impact of climate change on world food supply. *Nature*, 367, 133–138.
 26. Ruru, J., Londa, V., & Soeprodjo, R. G. (2020). Empowerment of Coastal Communities in Inabonto Dua Village. *Journal of Public Administration*, 6(89), XX–XX.
 27. Saragih, T. K. (2022). Socio-Economic Adaptation Strategies of Fishing Communities to Climate Change. *Proceedings of the SENSOSIO National Seminar*, 3(2), 10–20. [https://doi.org/\[placeholder\]](https://doi.org/[placeholder]).
 28. Setyadi, B. (2023). The Influence of Policy and Community Participation on the Quality of the Benoa Coast. *DPR Aspiration Journal*, 14(1), 70–85. [https://doi.org/\[placeholder\]](https://doi.org/[placeholder]).
 29. Siti Zahra, S. Y. R. F., & S. U. R. F. (2024). Overview of the Quality of Life of Fishing Communities. *Indonesian Journal of Global Health Research*, 6(1), 1–9. <https://doi.org/10.37287/ijghr.v6i1.2627>.
 30. Soeprodjo, R. G., Ruru, J., & Londa, V. (2020). Quality of Human Resources in Coastal Communities in Tandurusa Village. *Journal of Public Administration*, 4(32), 12–25.
 31. Soetopo, T., & Soewartoyo. (2009). Natural Resource Potential and Human Resource Quality Improvement in Coastal Community Areas of Bangka Regency. *Indonesian Journal of Population*, IV, 62–75.
 32. Sudibjo, D., & Hartono, A. (2024). Analysis of Coastal and Small Island Management Policy. *Journal of Public Policy*, 12(1), 40–55.
 33. Sutrisno, E. (2010). *Human Resource Management*. PT. Djambatan.
 34. Tuhumena, L. (2025). Fisheries Economics: Understanding the Dynamics of Marine Resources. *PT Publisher Qriset Indonesia*.
 35. Utina, R., et al. (2018). *Coastal Ecosystems and Natural Resources: Implementation of Conservation Character Education*. CV. Budi Utama.
 36. Wahyuni, E. (2023). Challenges in Creating Resilient Coastal Communities. *Journal of Social Resilience*, 5(3), 101–115.
 37. WHO. (2024). *WHOQOL-BREF Instrument: Standardized Quality of Life Assessment*.
 38. Widiastuti, A. (2023). *Coastal Community Adaptation Strategies to the Impacts of Climate Change*. Thesis, Bogor Agricultural Institute.
 39. Wijaya, B. R. (2024). Tradition-Based Protection of Fishermen and Coastal Communities. *Journal of Maritime Studies*, 10(1), 20–35.
 40. Wiryono, J. (2022). Integrated Coastal Governance in Inner Ambon Bay. *Journal of Environmental Management*, 8(3), 88–100.
 41. Yamit, Z. (2011). *Production and Operations Management (First Edition)*. Economic.
 42. Yohe, G., & Tol, R. S. J. (2002). Indicators for measuring damage costs of climate change. *Integrated Assessment*, 3(3), 207–215.
 43. Yuliasari, H., & Nirmalasari, N. (2023). Improving the Quality of Life of Coastal Communities Through Mental Health Literacy. *Journal of Community Service*, 6(2), 150–165. <https://doi.org/10.52060/jppm.v6i2.3510>.
 44. Yuliani, W. (2018). Qualitative Descriptive Research Methods in the Perspective of Guidance and Counseling. *Quanta*, 2(2),

86–95.
45. Zulkarnain, H. (2024). Welfare of the Coastal Community of Kodingareng

Lompo Island. *Pelagic Journal*, 1(3), 50–65.
<https://doi.org/10.33096/pelagis.v1i3.294>.