

Socio Cultural Foundations in Coastal Development Policies: A Blue Economy Assessment in North Sulawesi

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Abstract

Coastal development outcomes are shaped not only by technical planning but also by the socio cultural systems through which communities perceive, negotiate, and utilize coastal-built environments. Although the Blue Economy has emerged as a dominant framework in coastal governance, existing scholarship has paid limited attention to how socio cultural mechanisms function as informal governance structures influencing policy implementation and effectiveness. This study examines how local socio cultural practices shape community engagement with coastal infrastructure and mediate policy outcomes in North Sulawesi, Indonesia. A qualitative comparative case study was conducted across five coastal locations selected to represent diverse socio-cultural contexts and infrastructure utilization patterns. Data were collected through semi-structured interviews, field observations, and policy document analysis, and interpreted through cross-site comparative analysis. The findings reveal that safety rituals, gratitude practices, moral obligations at sea, and Traditional Ecological Knowledge operate as informal governance mechanisms shaping community assessments and utilization of boat landings, fish-landing zones, and operational shelters. Analysis through the People Planet Profit framework demonstrates a persistent mismatch between policy objectives and community practices, explaining uneven infrastructure adoption and policy effectiveness. This study underscores the importance of integrating socio-cultural governance dimensions into coastal development strategies to enhance the effectiveness, legitimacy, and sustainability of Blue Economy implementation.

Keywords: Blue Economy; Coastal Development; Socio Cultural Governance; Traditional Ecological Knowledge.

1. INTRODUCTION

Coastal development policies are becoming increasingly pivotal in global sustainability initiatives as coastal areas face escalating ecological degradation, climate-induced threats, and heightened competition for marine resources (Ostrom, 2015). The Blue Economy has arisen as a global paradigm to align



economic development with environmental conservation and social welfare, especially in areas reliant on fisheries and marine livelihoods (Chee et al., 2021; Phelan et al., 2020). International evidence indicates that coastal development programs often underperform when policy frameworks do not align with the actual experiences of coastal people (Putra et al., 2023). Constructed coastal environments spanning from landing sites to informal labor shelters are intricately intertwined with social behaviors, ethical standards, and traditional governance frameworks that influence their utilization and interpretation. Global literature increasingly recognizes that technical and regulatory mechanisms alone cannot encompass the social and cultural factors that influence coastal infrastructure performance (Daly et al., 2022; Lodder & Slinger, 2022). These insights underscore the necessity of incorporating socio-cultural foundations into coastal development strategies to guarantee their social legitimacy, ecological integrity, and responsiveness to community needs. As global marine habitats deteriorate, comprehending socio-cultural dynamics is crucial for formulating sustainable coastal development strategies.

Southeast Asia is a dynamic but vulnerable maritime region characterized by coastal development, dense populations, rich marine biodiversity, and increasing industrial activity (Bateman, 2010; Damayanti, 2018). The coastal policies of the region frequently address conflicts between modernization initiatives such as port expansion, tourism development, and marine industrialization and established community traditions that govern access to marine areas (Saxena et al., 2020). Small-scale fisheries are essential for food security and socio-economic stability, however they are disproportionately impacted by spatial reorganizations induced by state led growth. Research throughout the region indicates that fishers depend on communal norms, ancestral ecological knowledge, and ethical responsibilities to organize their everyday interactions with coastal infrastructure and marine resources (Lokuge, 2017). These cultural systems significantly affect the interpretation, negotiation, or opposition of coastal policies, particularly in circumstances where constructed infrastructure modifies traditional coastal areas. As coastal pressures escalate, policy failures increasingly arise from the mismatch between official planning and community governance systems, rather than only from technological deficiencies. Thus, Southeast Asia offers a crucial context for analyzing the influence of socio-cultural underpinnings on coastal development results.

Indonesia, the largest archipelagic nation globally, depends significantly on coastal development strategies to enhance fisheries, marine logistics, and livelihood resilience in various maritime areas. National data reveal that about 35% of Indonesia's coral reef ecosystems exhibit indicators of degradation

attributable to destructive fishing, mining activities, and pollution (KKP, 2024). These ecological factors directly affect the feasibility of coastal development projects, including infrastructural enhancements and Blue Economy measures aimed at supporting coastal lifestyles. North Sulawesi, serving as a critical conduit to the Pacific, exemplifies the challenges of executing Blue Economy strategies in culturally diverse marine contexts. Coastal communities in the region persist in utilizing spiritual practices, moral ecological ethics, and ancestral ecological knowledge to inform risk management, resource utilization, and everyday interactions with coastal-built environments (Efendi et al., 2022; Smith, 2017). However, national Blue Economy instruments, such as the Indonesian Blue Economy Index, predominantly exhibit a technocratic nature and fail to consider these socio cultural frameworks. This disparity highlights the necessity for coastal development policies that are attuned to the cultural governance frameworks influencing daily marine practices.

Current scholarship identifies three primary deficiencies that warrant the current investigation. Research on coastal development policies and built environment governance primarily focuses on technical efficacy, economic optimization, and formal regulatory frameworks, often neglecting the socio-cultural elements that influence policy execution (Akujuru & Ruddock, 2014). Secondly, research on spiritual cultural practices in marine communities provides extensive ethnographic information but frequently regards these values as cultural objects instead of governance systems that affect coastal development results (Gajardo et al., 2023). Third, Blue Economy evaluations, especially those grounded in the Triple Bottom Line, emphasize measurable indicators of People, Planet, and Profit, however neglect to account for the spiritual-cultural foundations that directly influence ecological moderation, cooperative behaviors, and space utilization (Pauli, 2011; Sarangi, 2023). Consequently, policy instruments may misinterpret community reactions to development initiatives, resulting in policies that lack legitimacy or do not correspond with local government principles. These blind spots diminish the explanatory capacity of coastal development frameworks and hinder the efficacy of infrastructure-related activities. Addressing these deficiencies necessitates a more cohesive strategy that places socio-cultural underpinnings at the core of coastal development studies.

This study seeks to analyze the influence of spiritual cultural practices and moral ecological standards on the understanding, acceptance, and implementation of coastal development policies in maritime communities. The empirical focus includes coastal towns in Paputungan, Nain, Likupang, Belang, and the Manado Utara coastline, where Blue Economy initiatives intersect with established socio-cultural systems. The analysis is guided by two research

questions: How do socio-cultural practices influence coastal economic behavior and decisions about marine resources? (2) In what ways do the dimensions of People, Planet, and Profit appear in the everyday experiences of coastal people in North Sulawesi? The study use qualitative triangulation to examine community activities and policy consequences, aiming to discern areas of congruence and divergence. Research indicates that spiritual-cultural ethics, ritual practices, ecological knowledge, and moral responsibilities form a parallel governance framework that influences the implementation of coastal policy at the local level. The study theoretically asserts that socio-cultural foundations are not marginal cultural expressions but fundamental drivers of policy efficacy in Blue Economy environments. This article advances existing discussions on coastal development and built environment governance by advocating for more culturally informed policy design.

This study is significant as it elucidates how socio-cultural foundations operate as informal governance mechanisms that profoundly affect the success or failure of coastal development strategies. Indonesia's vast coastline and biodiverse marine habitats necessitate development frameworks that are economically viable, ecologically sustainable, culturally relevant, and sensitive to community needs. This study elucidates how safety rituals, thanksgiving practices, moral obligations, solidarity standards, and traditional ecological knowledge shape resource management and spatial behavior, thereby emphasizing the cultural infrastructures that support policy efficacy. These insights indicate that sustainable coastal development necessitates not only technology investment or legislative extension but also alignment with the cultural logics inherent in maritime communities. The results provide actionable insights for policymakers aiming to formulate development frameworks that incorporate socio-cultural aspects into Blue Economy strategies. The study's conceptual contribution is pertinent to other archipelagic and coastal states experiencing analogous cultural-policy conflicts. This research ultimately advocates for the enhancement of coastal development strategies that are more legitimate, inclusive, and resilient, as they address the socio-cultural aspects of coastal living.

2. METHODS

This study employed a qualitative comparative case study design to examine how socio cultural mechanisms influence community engagement with coastal infrastructure and shape the implementation of Blue Economy policies in North Sulawesi, Indonesia. A qualitative approach was selected to capture

cultural values, ecological ethics, and community practices that are not readily observable through quantitative methods. The study focused on five coastal sites Paputungan, Nain, Likupang, Belang, and the North Coast of Manado (Tumumpa-Sindulang-Tuminting) which were purposively selected to represent diverse ecological settings, fishing traditions, infrastructure conditions, and experiences with coastal development interventions.

Data were collected from 22 participants, including small-scale and commercial fishers, boat owners, fish traders, village officials, and fisheries agency personnel. Participants were selected through purposive and snowball sampling based on their involvement in fishing activities and their knowledge of local cultural practices and coastal development issues. Primary data were gathered through semi-structured interviews and field observations, while secondary data were obtained from policy documents, fisheries reports, planning documents, conservation regulations, and local customary records.

Data analysis combined inductive thematic analysis with policy analysis. Interview transcripts, observation notes, and documentary materials were coded to identify recurring themes related to safety rituals, gratitude practices, ecological ethics, maritime solidarity, and Traditional Ecological Knowledge (TEK). A cross-site comparative approach was used to examine similarities and differences across the five locations. Policy documents were further analyzed using the People-Planet-Profit (3P) framework to assess the alignment between Blue Economy objectives and local socio-cultural realities. Findings were validated through triangulation across interviews, observations, and documentary sources.

Ethical approval was obtained prior to fieldwork. All participants provided informed consent, and identifying information was anonymized to ensure confidentiality. Credibility was enhanced through member checking and systematic documentation of data collection and analytical procedures.

3. RESULT AND FINDINGS ANALYSIS

Socio-Cultural Foundations of Coastal Communities

The examination of interviews, observations, and supplementary documents indicates that socio-cultural foundations significantly affect the interactions of coastal communities in North Sulawesi with the sea, their management of ecological threats, and their utilization of coastal infrastructure. Information from 22 informants in Paputungan, Nain, Likupang, Belang, and the North Coast of Manado reveals five recurring value domains: safety rituals, appreciation rituals, ecological ethics, marine solidarity, and traditional

ecological knowledge. These values function as ethical frameworks that direct judgments concerning fishing practices, risk management, the allocation of marine resources, and engagements with coastal infrastructures like as boat landings, fish landing sites, and community shelters (daseng). Instead of serving as mystical or ceremonial activities, these socio-cultural values inform practical decision-making and ecological behavior, affecting how communities interpret government laws, react to environmental changes, and address coastal development challenges.

Table 1. Categories of Socio-Cultural Values and Their Relevance to Coastal Development

Socio-Cultural Category	Empirical Evidence	Relevance to Coastal Development and Blue Economy Policies
Safety Rituals (e.g., Sea-safety prayers, Mandi Safar)	Mentioned by 8–12 informants; partially observed in Paputungan and Nain.	Supports risk-aware planning, safer fishing operations, and design of coastal safety infrastructure.
Gratitude Rituals (e.g., communal thanksgiving after large catches)	Reported by 10 informants; observed in Tumumpa.	Encourages moderate resource extraction and aligns with community-based fisheries management.
Ecological Ethics (e.g., moral ban on net-catching tuna)	Mentioned by 9 informants; supported by Nain Selective Fishing Guidelines (2024).	Strengthens local compliance with conservation policies for pelagic species.
Traditional Ecological Knowledge	11 informants rely on reading clouds, winds, and sea scents; demonstrated in Belang.	Can be integrated with digital monitoring systems and early-warning technologies.
Maritime Solidarity (mutual assistance among boats)	14 informants emphasize moral obligation to help distressed vessels; observed through light-signal communication on large boats.	Enhances community-based safety systems and supports cooperative marine governance.
Cultural Defense (Soma Dampar)	Reported by 6 informants in Manado North Coast as a response to coastal reclamation.	Highlights need for social-impact assessments and participatory planning in coastal development.

Source: Data research

These findings demonstrate that socio-cultural foundations significantly influence the efficacy of coastal infrastructure and the acceptance of development programs. Safety rituals strengthen culturally ingrained risk-navigation practices that correspond with the designated purposes of boat landings and early-warning systems. Gratitude rituals support sustainable fishing methods, serving as a cultural enhancement to formal conservation policies. Ecological ethics and indigenous knowledge enhance local observation of species behavior and meteorological trends, hence diminishing dependence on solely technical interventions. Simultaneously, solidarity networks and cultural initiatives like Soma Dampar shape community responses to contentious infrastructure projects, especially those related to reclamation or coastline access. The socio-cultural roots inherent in coastal living offer critical insights for formulating development policies that align with local values and strengthen community-based governance within Blue Economy frameworks.

Evaluation of the Blue Economy Pillars

The assessment of the Blue Economy pillars People, Planet, and Profit reveals a significant disparity between macro-level policy objectives and micro-level coastal conditions in North Sulawesi. Interviews with 22 stakeholders indicate that the People pillar is robust for social cohesiveness, fishing-dependent livelihoods, and food security, but deficient in structural protection and institutional support for fishermen. The Planet pillar is well-supported in policy papers via conservation areas, monitoring efforts, and digital zoning; yet, ecological stewardship in practice is mostly influenced by customary ethics and traditional knowledge rather than formal legislation or technological instruments. The Profit pillar exhibits significant economic potential through industrial fisheries and large-vessel operations; yet, it is characterized by considerable volatility stemming from variable export markets, elevated operational expenses, and disproportionate negotiating power favoring larger entities over small-scale fishermen. The findings indicate that the current 3P paradigm inadequately encompasses the moral and socio-cultural systems that support sustainable marine activities in coastal communities.

Table 2. Assessment of the People, Planet, Profit Framework in North Sulawesi

Pillar	Findings from Interviews/Observation	Documented Evidence	Critical Evaluation
People	Fishing is the primary livelihood; 40–90% of men	Regional BLUD/Blue	Strong community-level

	are fishermen; strong maritime solidarity; high fish consumption; limited access to structured assistance.	Economy directives; policy documents from Governor and Commission II.	resilience but weak institutional protection and social safety nets.
Planet	Coral reefs perceived as “still healthy”; moral ban on net-catching tuna; continued reliance on natural signs; partial adoption of digital tools.	PPS Bitung output 15,371 tons (+9.62% y/y); Atuna Index +14.91%; designated conservation zones; Digital Blue Economy Zoning plans.	Policies are strong on paper, but ecological practice relies more on cultural ethics than formal strategies.
Profit	Large-vessel operations cost ± IDR 80 million/trip; highly variable income; small fishers dependent on auction markets; high risk of zero-profit trips.	Export volumes HS-03 and HS-16 decreased (-3.22% y/y; -9.82% value); Bitung as industrial fish hub; new coastal facilities built in Sindulang-Tumumpa.	High potential but highly unstable; new infrastructure has not improved bargaining power or income equity.

Source: Data research

The aggregated information indicates that Blue Economy initiatives should more effectively consider the cultural and ethical influences that govern community behavior. Enhancing the People pillar necessitates the institutionalization of social protection programs to ensure that local solidarity networks are not the exclusive means of resilience. The Planet pillar must connect policy instruments with traditional ecological principles to guarantee robust compliance and ecological continuity. The Profit pillar necessitates actions that extend beyond physical infrastructure, including pricing volatility, supply chain disparities, and the systemic disadvantages faced by small scale fishers. The results indicate that the 3P paradigm, although beneficial for macro economic planning, is inadequate for directing coastal development without the incorporation of a more profound comprehension of community values, risk cultures, and indigenous ecological knowledge.

4. DISCUSSION

This study's findings indicate that the socio cultural underpinnings of coastal communities in North Sulawesi significantly influence environmental behavior, livelihood choices, and reactions to coastal development initiatives. Rituals of safety, practices of gratitude, ecological ethics, and traditional knowledge collectively serve as cultural frameworks that guide daily interactions with marine and coastal habitats. These systems affect how fishers maneuver through hazards, adhere to ecological limits, and employ landing places, *daseng*, and docking facilities. The examination of the People, Planet, and Profit dimensions uncovers a disparity between policy ambitions and actual conditions, where welfare relies on solidarity, conservation is contingent upon ethical standards, and earnings exhibit inherent volatility. This discrepancy illustrates that existing Blue Economy regulations inadequately acknowledge the governing capabilities inherent in cultural practices. Collectively, these observations demonstrate that socio-cultural foundations serve as essential predictors of policy reception, infrastructure utilization, and coastal space administration. These findings establish the conceptual foundation for incorporating a culturally informed governance aspect to improve coastal development policy.

The socio-cultural practices recorded in North Sulawesi indicate that communities uphold informal governance structures that organize maritime conduct and spatial utilization alongside state regulation. Rituals like *Mandi Safar* and *Doa Turun Melaut* foster emotional discipline and prudent navigation, thereby influencing the timing and manner in which fishers engage with coastal infrastructure. These ritualized procedures establish risk perception within moral-spiritual reasoning, recognized by scholars as culturally entrenched risk governance systems (Doehring, 2019; Efendi et al., 2022). Similarly, *syukuran laut* strengthens cooperative norms that diminish competitiveness and promote collaborative utilization of communal areas such as *daseng* and fish-landing zones. Mutual help at sea serves as a safety network that enhances formal maritime safety procedures in ports and docking areas. Cultural governance systems significantly influence decisions regarding timing, access, and spatial utilization in coastal-built environments. Thus, socio-cultural underpinnings should be perceived as functioning governing logics rather than mere symbolic cultural remains.

The efficacy of these socio-cultural systems originates from their incorporation into daily practices, emotional anticipations, and collective

obligations. Rituals, ethical duties, and ecological principles are conveyed through generations and reinforced by collective experiences of peril, bereavement, and endurance. Traditional ecological knowledge (TEK) offers interpretative instruments such as interpreting clouds, winds, and currents that are crucial for navigating areas when digital tools are scarce or unreliable (Farr et al., 2018; Harmsworth & Awatere, 2013; Muhandi et al., 2020). These factors also foster social accountability: individuals adhere to norms not due to external enforcement, but because compliance is associated with identity, spiritual belief, and community affiliation. This approach to moral governance encourages ecological moderation, secure navigation, selective equipment utilization, and judicious interaction with maritime environments. Significantly, these mechanisms engage with coastal amenities, affecting the timing and manner in which fishers depart, return, congregate, or circumvent specific infrastructure. Their resilience during technological advancement demonstrates their practical significance in alleviating uncertainty and directing the use of the built environment.

The implementation of the Blue Economy's People, Planet, and Profit framework in North Sulawesi exposes structural constraints when evaluated in relation to the actual experiences of the community. The People factor is most pronounced in communal cooperation and informal welfare networks, rather than in formal state protection. The Planet dimension obtains legislative focus; however, practical ecological stewardship arises more from ethical obligations such as prohibitions on tuna gear and ecological interpretations than from governmental action. The Profit dimension remains volatile due to inconsistent fish populations, export fluctuations, and elevated operational expenses. The trends indicate that the 3P model captures quantifiable indicators but fails to account for the socio-cultural influences that influence coastal behavior and the utilization of the built environment (Batra, 2023). Consequently, the 3P model inadequately elucidates compliance, adaptation, or resistance to coastal development strategies. The empirical findings underscore the necessity for policy frameworks that incorporate cultural governance principles.

The disparity between legislative goals and community behaviors stems from varying interpretations of sustainability, accountability, and spatial organization. Coastal development regulations define sustainability in technical terms ecological preservation, infrastructure enhancement, and economic viability whereas people perceive sustainability through moral reciprocity, expressions of gratitude, and environmental humility. These divergent worldviews create tensions when zoning choices, infrastructural initiatives, or conservation regulations fail to align with the cultural principles that govern

maritime and coastal areas. Academics contend that such misalignment may diminish infrastructure adoption, create compliance issues, or provoke nuanced kinds of policy pushback (Srivastava et al., 2022). The results in North Sulawesi corroborate this perspective, demonstrating that communities employ cultural governance as a criterion for assessing policy legitimacy. When alignment is deficient, cultural norms supersede formal policy directions, especially with decisions related to space utilization and risk behavior. This underscores the importance of incorporating cultural governance factors into coastal policy formulation.

The research enhances broader discussions by illustrating that sustainable coastal development necessitates more than ecological indicators or economic diversification. The Blue Economy must integrate emotional, ethical, and spiritual connections with the sea that affect compliance, collaboration, and risk behavior. The significance of cultural governance in North Sulawesi contests the notion that communities oppose policies because of informational deficiencies or institutional frailties. Evidence indicates that community decisions conform to coherent cultural logics that govern marine interactions and engagement with the built environment (Argota Caicedo, 2018). This viewpoint redirects focus from "technocratic inadequacy" to "cultural discord" as a significant obstacle in maritime administration. Identifying cultural logics enhances the prediction capacity for discerning which interventions will be embraced, modified, or dismissed. This discovery enhances the theoretical comprehension of sustainability as a process influenced by culture.

The synthesis of the findings suggests that socio-cultural underpinnings should be seen as an essential governance feature that enhances the examination of coastal development plans. This dimension includes ritualized safety protocols, gratitude centered moderation ethics, moral responsibilities of mutual assistance, ecological interpretations, and collective cosmological perspectives. It solves conceptual deficiencies in the 3P paradigm by providing insights into qualitative factors that influence infrastructure use, compliance behaviors, and risk perception. This culturally rooted aspect corresponds with recent research that emphasizes the governance significance of indigenous and local knowledge systems (Cohen et al., 2022). Integrating it into coastal development research elucidates why specific policies thrive when they correspond with cultural expectations, whilst others falter owing to symbolic or moral dissonance. The dimension elucidates discrepancies in community readiness to utilize, sustain, or trust coastal infrastructure. Consequently, cultural governance is crucial for analyzing and enhancing policy results.

The suggested cultural governance aspect reinterprets socio-cultural practices as functional mechanisms that directly affect coastal development

outcomes. This approach perceives rituals and moral norms not merely as symbolic heritage, but as functional systems that govern risk, resource utilization, spatial behavior, and interaction with the built environment. It provides a systematic method for integrating value-based governance into coastal sustainability assessment, consistent with concepts like Blue Justice and polycentric governance in New Zealand (Mark et al., 2017; Ramstad et al., 2007). This component improves theoretical coherence by connecting cultural systems to specific policy results, hence augmenting the explanatory power of coastal development models. It also enriches the literature on traditional ecological knowledge by formalizing the spiritual and ethical aspects of environmental reasoning. This contribution enhances the alignment between policy frameworks and community realities by integrating cultural governance into Blue Economy planning. This theoretical innovation views cultural systems as crucial to the effectiveness of coastal policy, rather than peripheral.

This study's culturally grounded paradigm correlates North Sulawesi's experience with international scholarship on community centered coastal government. Researchers find analogous tensions between technocratic coastal development and culturally ingrained ecological ethics across the Pacific, Caribbean, and South Asian maritime regions (Damayanti, 2018). These analogies indicate that cultural governance deficiencies are inherent characteristics of global maritime policy, rather than mere anomalies. This concept is analytically pertinent for multi-ethnic marine situations where spiritual and moral ecologies influence interactions with the built environment. The research enhances comparative discourse by demonstrating how cultural logics might influence the efficacy of coastal zoning, infrastructure implementation, and marine conservation efforts. It also promotes cross-regional investigation of how cosmological beliefs influence policy legitimacy and community engagement. The worldwide ramifications underscore the study's greater importance in international Blue Economy discussions.

The results of this study have substantial consequences for coastal development strategy, planning, and execution. Policymakers must acknowledge that the efficacy of zoning, infrastructural enhancements, coastal revitalization, and conservation efforts depends on their alignment with cultural governance systems. Incorporating Traditional Ecological Knowledge and ritualized safety practices into maritime spatial planning can augment risk communication and bolster the cultural validity of regulations. Engaging cultural authorities ritual leaders, senior fishers, and holders of ecological knowledge in policy consultations enhances co-governance frameworks and improves compliance. Infrastructure planning must account for the impact of cultural

norms on the utilization of boat landings, daseng, docking places, and other coastal-built habitats. Policymakers ought to develop qualitative indices that reflect cultural resonance, trust, and moral legitimacy in conjunction with conventional 3P metrics. An strategy that is culturally responsive can mitigate conflict, improve sustainability, and foster more resilient coastal development results. Ultimately, linking policies with socio cultural underpinnings provides a means for more equal and effective implementation of the Blue Economy.

5. CONCLUSION

This study demonstrates that socio-cultural foundations in North Sulawesi encompassing safety rituals, gratitude practices, moral obligations at sea, and Traditional Ecological Knowledge function as informal governance systems that fundamentally shape how coastal communities perceive risks, allocate marine resources, and engage with coastal-built environments such as boat landings, fish-landing sites, and working shelters. Assessment of the People, Planet, Profit framework reveals persistent misalignments between Blue Economy policy objectives and community realities, whereby welfare depends on solidarity networks, ecological stewardship is driven by moral ethics rather than formal regulation, and economic returns remain structurally volatile for small-scale fishers. These findings establish that cultural governance is not peripheral but central to the success or failure of coastal development interventions, contributing theoretically by formalizing socio-cultural systems as a critical analytical dimension in coastal development studies and practically by elucidating why certain facilities succeed or fail based on their alignment with local values and traditional ecological knowledge. Accordingly, effective and sustainable Blue Economy implementation necessitates that policymakers actively engage cultural authorities and Traditional Ecological Knowledge holders, integrate ceremonial calendars and spatial prohibitions into maritime spatial planning, and develop qualitative metrics that recognize community defined trust, legitimacy, and environmental ethics alongside conventional measurable indicators.

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