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Blue *Waqf* for Coastal Community Resilience: Legal Mechanisms for Climate Adaptation and Marine Ecosystem Protection

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Abstract: Climate change, sea-level rise, and marine ecosystem degradation constitute multidimensional challenges that increasingly threaten the sustainability and adaptive capacity of coastal communities in Indonesia. Within this context, blue waqf has emerged as an innovative Islamic philanthropic instrument capable of integrating environmental sustainability principles with Islamic social finance. This study aims to analyze the legal mechanisms that enable blue waqf to contribute strategically to coastal resilience and marine ecosystem protection. Employing a normative legal research method, the study examines statutory frameworks related to *waqf*, environmental protection, and marine governance through a statute approach and a conceptual approach. Data were generated exclusively through an extensive literature review encompassing legislation, academic publications, policy documents, research reports, and official government sources. The qualitative analysis involved systematic data reduction, thematic categorization, and normative interpretation to synthesize the legal position and potential of blue waqf within the broader regulatory landscape. The findings demonstrate that integrating blue waqf into coastal protection requires cross-sector regulatory harmonization, particularly among the *Waqf* Law, the Law on the Protection and Empowerment of Fishermen, and coastal and small island management regulations. The literature also highlights that blue waqf can function as an alternative financing mechanism for mangrove restoration, coral reef conservation, blue economy initiatives, and community-based climate adaptation programs. Strengthening governance arrangements that ensure transparency, accountability, and community participation is essential to optimizing its role. Accordingly, blue waqf possesses significant potential as a legal and economic instrument aligned with sustainable development, the SDGs, and climate justice.

Keywords: blue waqf, coastal communities, climate adaptation, legal protection, marine ecosystems.

Introduction

Coastal communities are increasingly exposed to escalating climate-related risks, revealing the limits of state-centered governance in safeguarding vulnerable populations (Jalil, 2025). Sea-level rise, coastal erosion, and declining marine biodiversity exacerbate socio-economic fragilities, particularly in developing countries such as Indonesia (Baskoro, 2024; Passeri et al., 2015). These climate-induced stressors intensify livelihood insecurity among fishing communities, weaken local food systems, and disrupt socio-cultural ties to coastal landscapes. As traditional governance mechanisms struggle to provide timely and adaptive solutions, alternative financing and governance models have begun to attract scholarly and policy interest (Rusydiana et al., 2023). Within this context, Islamic social finance, particularly waqf, has emerged as a promising yet underexplored mechanism capable of supporting climate adaptation and marine ecosystem protection (Faizi et al., 2024).

Global and national climate change impacts increasingly demonstrate that existing legal and policy structures are insufficient to ensure long-term resilience for coastal populations. Rising sea levels, intensifying storms, declining marine

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biodiversity, and habitat degradation collectively undermine community safety and ecosystem functioning (Naswar et al., 2023). The governance challenges are further compounded by fragmented adaptation strategies (Mahardeka et al., 2025), weak multi-level coordination, and insufficient integration of environmental justice principles into climate policies (Garmestani et al., 2019). Such structural gaps contribute to asymmetric vulnerabilities, where marginalized coastal communities face disproportionate exposure to ecological hazards (Mehryar & Surminski, 2021). These conditions highlight the need for alternative models that integrate social finance, environmental stewardship, and community empowerment in a legally coherent framework.

State-driven coastal protection approaches, despite long-standing reliance on engineering-based interventions, typically fail to incorporate proactive, nature-based, and community-centered adaptation strategies (Baskoro, 2024). In many jurisdictions, national regulatory frameworks inadequately link climate adaptation laws with disaster risk reduction policies, resulting in overlapping institutional mandates and inconsistent enforcement (Naswar et al. 2023). These gaps create persistent governance inefficiencies, including limited budget availability, fragmented responsibilities, and an absence of mechanisms to value ecosystem services as legal assets. Furthermore, political and bureaucratic constraints often slow down implementation, leaving communities with insufficient support for anticipatory adaptation. Consequently, supplementary governance solutions are required to fill the policy void left by conventional state mechanisms.

Among such innovations, blue *waqf* has emerged as a valuable Islamic philanthropic instrument offering sustainable, long-term financing for environmental protection and climate resilience. Building upon traditional waqf principles, its contemporary variants, such as green *waqf* and cash-waqf-linked blue sukuk, demonstrate the flexibility of Islamic finance to respond to ecological crises (Othman et al., 2025). Nevertheless, the integration of *waqf* into marine governance remains limited due to regulatory fragmentation, outdated managerial systems, and a lack of legal frameworks specifically allowing waqf resources to fund coastal and marine programs (Abubakar Muhammad et al., 2025; Rusydiana et al., 2023) The disconnect between *waqf* law and environmental governance further restricts the potential scalability of blue waqf initiatives (Mutmainah et al., 2022). This situation illustrates the urgency of examining how legal mechanisms can be aligned to support such integrative financing models.

In addition to structural challenges, governance weaknesses significantly hinder the effective mobilization of waqf assets for coastal resilience. Many waqf institutions operate with limited managerial capacity, insufficient transparency, and low levels of professionalism relative to contemporary environmental governance standards (Hadi et al., 2025). Public awareness of *waqf's* potential role in environmental stewardship also remains low, reducing community participation and limiting stakeholder engagement in innovative waqf-based programs (Anwar et al., 2025). Moreover, environmental agencies rarely coordinate with religious or waqf institutions, resulting in parallel but disconnected policy spheres. These conditions underscore the need for institutional reforms that promote cross-sectoral collaboration, governance innovation, and legal standardization. Without such reforms, blue *waqf's* transformative potential will remain largely unrealized.

Despite these constraints, innovative models, particularly cash waqf linked to blue sukuk, have begun to demonstrate the capacity of Islamic finance to mobilize sustainable funding for marine conservation and coastal adaptation. Studies indicate that such instruments can support mangrove rehabilitation, coral restoration, blue economy development, and climate education for coastal communities when embedded within coherent regulatory frameworks (Rusydiana et al. 2023; Othman et al. 2025). These emerging practices illustrate a pathway toward integrating waqf into national climate strategies, provided that legal harmonization, technology-based governance tools, and community participation are prioritized. They also highlight the growing recognition of waqf as a dynamic institution capable of evolving in response to contemporary environmental challenges. The next step lies in determining the legal arrangements necessary to institutionalize blue waqf as a recognized mechanism for environmental protection.

Thus, the examination of blue *waqf* as a legal and financial instrument presents a timely opportunity to address structural governance gaps in coastal resilience policymaking. A comprehensive analysis of regulatory frameworks, institutional roles, and cross-sectoral integration is crucial to unlocking the full potential of waqf for climate adaptation and marine protection. Strengthening legal certainty, ensuring accountable governance, and expanding public engagement are essential conditions for the successful mainstreaming of blue *waqf* into climate and coastal policies. By addressing these issues, blue *waqf* can evolve into a transformative tool aligned with sustainable development principles, the UN SDGs, and climate justice imperatives. The present study therefore investigates the legal mechanisms, opportunities, and challenges surrounding blue waqf integration into coastal resilience frameworks, providing both theoretical insights and policy-oriented recommendations.

Despite the growing scholarly interest in Islamic social finance and its relevance to sustainable development, research on the specific application of blue *waqf* within marine governance and climate adaptation frameworks remains scarce. Existing studies predominantly focus on green waqf, cash waqf optimization, or the conceptual potential of Islamic philanthropic instruments for environmental protection, without addressing concrete legal mechanisms for their operationalization in coastal and marine contexts (Rusydiana et al. 2023; Fauziyyah et al. 2022; Othman et al. 2025; Muhammad et al. 2025; Anwar et al. 2025). Furthermore, current literature shows limited engagement with legal integration challenges, particularly the misalignment between waqf regulations, environmental statutes, and coastal resource management laws that hinder the scalability of blue waqf initiatives (Hadi et al. 2025). Studies on climate adaptation governance likewise tend to overlook Islamic finance instruments, focusing instead on state-led or market-based models that have proven insufficient in addressing localized vulnerabilities (Mehryar and Surminski 2020; O'Donnell, 2019). This paper contributes novelty by providing a comprehensive legal analysis that situates blue waqf at the intersection of climate adaptation, marine ecosystem protection, and Islamic social finance. It advances an integrative governance model and proposes actionable legal mechanisms necessary to institutionalize blue waqf as a formal instrument for coastal resilience in Indonesia.

Table 1. *Research Gap in Studies on Waqf, Climate Adaptation, and Coastal Governance*
Source: Author (2025).

Theme	Existing Literature Focus	Identified Research Gap	Novel Contribution of This Paper
Islamic Social Finance & Environment	Green waqf, cash waqf optimization, environmental philanthropy (Rusydiana et al. 2023; Othman et al. 2025; Anwar et al. 2025)	Lack of analysis on waqf's role in marine governance and coastal resilience	Introduces blue waqf as a structured mechanism for marine ecosystem protection and climate adaptation
Legal Frameworks	Fragmented regulatory reviews on waqf management and environmental policy (Hadi et al. 2025)	No integrated legal analysis bridging waqf regulations with marine, coastal, and climate laws	Develops an integrative legal model connecting waqf law, environmental law, and coastal zone governance
Climate Adaptation Governance	State-led adaptation, disaster management, ecological resilience (Mehryar and Surminski 2020;	Absence of alternative financing analysis based on Islamic social finance instruments	Proposes blue waqf as a complementary financing and governance instrument for adaptation

	O'Donnell 2019; Garmestani et al. 2019)		
Marine Ecosystem Protection	Focus on ecological decline, policy gaps, habitat restoration (Celliers et al., 2013; Queirós et al., 2024)	No exploration of faith-based or community-driven financing for marine conservation	Demonstrates blue waqf's capacity to support mangrove, coral, and biodiversity restoration
Governance Innovation	Limited discussion on waqf digitization or cross-sectoral collaboration	No governance model linking religious institutions, environmental agencies, and coastal communities	Introduces a multi-level governance framework enabling cross-sectoral coordination

This study is guided by two central research questions that address the core challenges of integrating blue waqf into Indonesia's climate and marine governance systems. First, How can the existing legal framework be integrated to enable blue *waqf* to support coastal community protection and marine ecosystem preservation in Indonesia? Second, What legal mechanisms and governance models are required to operationalize blue *waqf* as a sustainable financing instrument for climate adaptation and marine conservation? These questions frame the analytical focus of the paper, which seeks to bridge the disconnect between waqf regulations and environmental governance structures. The purpose of this research is to develop a coherent legal and institutional framework that facilitates the implementation of blue waqf while aligning it with national climate strategies, environmental laws, and community resilience priorities. The study is significant because it introduces an innovative, faith-based financing model capable of addressing persistent gaps in state-driven coastal governance, supporting the blue economy, and advancing the UN SDGs. By articulating clear legal pathways and governance innovations, this research contributes conceptually and practically to the fields of Islamic social finance, environmental law, and climate adaptation policy.

Methods

This study adopts a normative (doctrinal) legal research method, focusing on the systematic analysis and interpretation of legal norms governing *waqf*, environmental protection, and coastal management. The research does not employ empirical or field-based methods; instead, it relies exclusively on normative legal reasoning to examine the coherence, adequacy, and integration of existing regulatory frameworks relevant to blue *waqf*. Through a statute approach, the research systematically examines legal instruments such as the *Waqf* Law, the Law on the Protection and Empowerment of Fishermen, the Environmental Protection and Management Law, and the Law on Coastal and Small Islands Management, alongside technical regulations relevant to waqf governance and marine conservation. Complementing this, a conceptual approach is utilized to analyze theoretical frameworks in Islamic social finance, environmental and blue waqf, blue economy principles, climate adaptation and climate justice theories, as well as governance standards related to transparency and accountability in waqf management. Together, these approaches enable a comprehensive synthesis of legal norms and conceptual debates surrounding the operationalization of blue *waqf* for coastal resilience.

Data for this research are obtained exclusively through literature review encompassing academic books, peer-reviewed journal articles, national policy documents, government reports, environmental and marine governance studies, and authoritative statistics related to coastal conditions and climate change. The literature is selected purposively based on its relevance to blue *waqf*, Islamic social finance, climate adaptation, and the legal protection of coastal communities. Qualitative data analysis is conducted through three sequential techniques: data reduction to filter and refine relevant literature; thematic categorization to organize sources into clusters such as waqf law, coastal regulation, blue economy, and climate policy; and normative interpretation to integrate legal norms with conceptual findings. This process facilitates the formulation of coherent legal mechanisms and governance models necessary to institutionalize blue waqf as a sustainable instrument for marine ecosystem protection and climate adaptation.

Results And Discussion

Harmonizing the Existing Legal Framework for Blue Waqf Integration

The integration of blue waqf into Indonesia's coastal protection and marine conservation agenda requires a coherent alignment between waqf regulations and sectoral environmental, coastal, and fisheries governance frameworks. Although the *Waqf* Law (Law No. 41/2004) provides a broad mandate for productive and socially oriented waqf management, its textual provisions do not explicitly address ecological objectives or climate adaptation imperatives. As a result, the allocation of waqf assets for environmental protection remains dependent on progressive interpretation by policymakers and waqf authorities. This regulatory gap limits the potential of blue waqf to function as a structured financing mechanism supporting coastal resilience, particularly in communities vulnerable to climate change impacts (Rusydiana et al., 2023; Islamiyati, 2023). Recent studies further demonstrate that the absence of explicit environmental orientation in waqf regulation has resulted in sporadic initiatives rather than integrated ecological programs linked to national coastal and fisheries strategies (Hadi et al., 2025).

The regulatory disconnect becomes more apparent when juxtaposing the *Waqf* Law with the Environmental Protection and Management Law, the Coastal and Small Islands Management Law, and the Law on the Protection and Empowerment of Fishermen. These environmental and coastal regulations emphasize sustainability, community participation, and ecosystem-based management, yet none explicitly recognize waqf as a viable financing instrument. This creates uncertainty regarding the legal permissibility of allocating waqf resources toward marine rehabilitation, mangrove restoration, or climate adaptation infrastructure. Therefore, a reinterpretation of *mauquf 'alaih*, the beneficiaries of waqf, is necessary to include marine ecosystems and coastal communities as legitimate recipients of environmental benefits, consistent with the expanded notion of *maslahah* in contemporary Islamic legal thought (Rusydiana et al., 2023; Islamiyati, 2023). Such reinterpretation would provide legal certainty for incorporating blue waqf into integrated conservation policies.

The need for harmonization extends beyond textual interpretation to the institutional level, where overlapping mandates and sectoral fragmentation hinder policy integration. Regulatory inconsistencies between Islamic social finance authorities, coastal management bodies, environmental agencies, and fisheries institutions contribute to fragmented implementation and weak policy coherence (Mahsun et al., 2022). For instance, *waqf* administrators *(nazhir)*, environmental regulators, and coastal authorities often operate under different planning frameworks without a unified mechanism for coordination. This lack of synchronization diminishes opportunities for aligning waqf-based financing with ongoing conservation programs and climate adaptation initiatives.

Addressing these inconsistencies requires cross-sectoral regulatory harmonization that aligns waqf governance with national coastal planning frameworks, environmental impact management regimes, and fisheries protection strategies. Such harmonization should incorporate sustainability principles into the broader waqf legal framework, ensuring that environmental stewardship becomes an integral component of waqf governance (Zawawi et al., 2023). This may involve expanding the legal definition of waqf objects to include ecological assets and marine-based resources or formally recognizing waqf as a complementary environmental financing instrument within sectoral regulations. Harmonization efforts would also benefit from operational guidelines that facilitate collaboration between the Indonesian

Waqf Board (BWI), local governments, and environmental agencies.

Within this regulatory landscape, existing legal instruments provide promising avenues for integrating blue waqf into coastal protection efforts. Instruments such as Islamic CSR (corporate social responsibility), productive *waqf* schemes, and the emerging concept of environmental waqf offer flexible mechanisms for financing ecological programs (Annisa Qurrata et al., 2024). These instruments can be aligned with blue waqf models to support marine ecosystem rehabilitation, including mangrove restoration, coral reef protection, and shoreline stabilization. Their integration into regulatory frameworks could create a structured pathway for channeling Islamic philanthropic funds toward environmental objectives.

Moreover, blue *waqf* presents significant opportunities for synergy with Indonesia's national blue economy policies, which prioritize economic growth aligned with ecological sustainability. By linking blue waqf mechanisms with blue economy programs, such as coastal community empowerment, sustainable fisheries, and nature-based solutions for climate resilience, policymakers can create a cohesive financing ecosystem that leverages Islamic philanthropy for long-term sustainability goals (Qurrata et al., 2024; Mahsun et al., 2022). This synergy aligns with the broader global trend of integrating Islamic finance into environmental sustainability initiatives and the SDGs, particularly SDGs 13 and 14.

Finally, these opportunities demonstrate that a strengthened legal foundation for blue *waqf* is both feasible and necessary. Reinterpretation of maqasid al-shariah to include ecological protection, supported by sectoral regulatory reform, can establish a legitimate legal pathway for waqf to fund climate adaptation and marine conservation (Rusydiana et al., 2023; Islamiyati, 2023; Mahsun et al., 2022). By harmonizing the legal framework, policymakers can transform blue waqf from an isolated philanthropic idea into a coherent, legally grounded instrument that enhances the resilience of coastal communities and safeguards marine ecosystems against the accelerating impacts of climate change.

Table 2. *Key Challenges and Legal Integration Opportunities for Blue Waqf in Indonesia*
Source: Author (2025).

Aspect	**Key Challenges**	**Legal Integration Opportunities**
Statutory Compatibility	Regulatory gaps and narrow interpretations of waqf objects and beneficiaries	Reinterpretation of waqf objects and *mauquf 'alaih* to include marine ecosystems and coastal communities
Cross-Sector Harmonization	Fragmentation and overlapping jurisdiction among fisheries, maritime affairs, coastal management, and waqf administration	Multi-sector collaboration and alignment with SDGs, particularly SDG 14 (Life Below Water)
Utilization of Instruments	Limited blue waqf models and absence of integration into marine conservation frameworks	Synergy with sharia-based CSR, blue economy agenda, and climate adaptation financing instruments

Legal Mechanisms for Operationalizing Blue Waqf

Designing a Legal Framework for Blue Waqf Implementation

A functional legal mechanism for operationalizing blue waqf must begin with the formulation of a comprehensive framework that defines the ecological purposes of waqf and ensures legal certainty over natural-resource-based waqf assets. This includes establishing formal procedures for environmental waqf designation, ecological certification standards, and the recognition of marine and coastal ecosystems as legitimate waqf objects (*mauquf bih*) and beneficiaries (*mauquf 'alaih*). Such clarity is essential to bridge regulatory ambiguities and to align blue waqf with existing statutory regimes governing coastal zones, fisheries, and marine conservation (Ishom et al., 2025).

Developing sustainable financing schemes constitutes the next essential component of the legal framework. Operationalization requires the design of funding pathways that enable blue waqf to support climate adaptation and ecosystem restoration programs. Cash waqf, coastal asset waqf, and dedicated endowment funds can be engineered to support activities such as mangrove rehabilitation, artificial reef development, marine pollution prevention, and coastal livelihood resilience. These schemes must be structured to ensure long-term financial sustainability, risk mitigation, and compatibility with climate adaptation objectives (Jafar et al., 2025).

Hybrid Islamic social finance instruments, combining zakat, waqf, and sukuk, provide additional legal and financial opportunities for blue waqf integration. These hybrid models enable the pooling of philanthropic capital with impact-oriented investment strategies, allowing waqf assets to be leveraged for broader marine conservation initiatives. By embedding these instruments into the legal architecture of blue waqf, policymakers can expand available resource mobilization pathways and strengthen the capacity of coastal communities to adapt to climate risks (Hadi et al., 2025; Jafar et al., 2025).

Governance Structure and Stakeholder Roles

Establishing a robust governance structure is crucial for ensuring that blue waqf initiatives are implemented effectively. The nazhir, as the principal waqf manager, must be legally mandated to undertake marine conservation functions, which include planning, managing, and monitoring conservation programs funded through waqf assets. Strengthening nazhir professionalism, authority, and oversight mechanisms is essential to enhance the credibility and operational capacity of blue waqf institutions (Hadi et al., 2025; Shofiatin et al., 2025)

Legal mechanisms must also clarify the division of roles between central and local governments in synchronizing policies related to marine conservation, waqf administration, and climate adaptation. Central government agencies can set national standards and regulatory guidelines, while local governments facilitate implementation at the community level, enforce spatial planning rules, and support monitoring of conservation outcomes. This vertical harmonization enhances policy coherence and reduces the jurisdictional fragmentation commonly found in coastal governance regimes (Hadi et al., 2025; Shofiatin et al., 2025).

Coastal communities should not merely be beneficiaries but should be formally recognized as co-managers of blue waqf programs. Their participation ensures that conservation initiatives are contextually relevant, socially legitimate, and aligned with local ecological knowledge. Legal provisions may institutionalize community-based monitoring, participatory decision-making, and co-management structures in which community groups collaborate with waqf boards, marine agencies, and Islamic authorities. Such multi-stakeholder partnerships enhance accountability, strengthen local stewardship, and ensure long-term sustainability (Jafar et al., 2025).

Ensuring Legality, Accountability, and Sharia Compliance

Operationalizing blue waqf also requires a strong accountability framework that upholds legality, transparency, and sharia compliance. Mechanisms such as periodic reporting, financial transparency, and sharia compliance audits must be standardized to ensure that waqf assets are managed with integrity and in accordance with both Islamic principles and environmental law. These accountability mechanisms strengthen public trust and reduce the risks of mismanagement or regulatory violations (Aisyah, 2025).

Standardized governance frameworks based on good governance principles, including participation, transparency, rule of law, and effectiveness, are necessary to institutionalize high-quality waqf management practices. Legal reforms may include mandating certification of *waqf* properties, digitizing *waqf* registries, and adopting environmental governance standards to ensure that blue waqf institutions can meet emerging conservation and climate adaptation needs. Standardization also facilitates coordination among diverse stakeholders and ensures regulatory predictability (Aisyah, 2025; Shofiatin et al., 2025).

Integrating ecological monitoring and community empowerment into blue waqf evaluation systems is essential to ensure that conservation goals are effectively achieved.

Monitoring frameworks may incorporate ecological indicators, such as coral cover, fish biomass, or carbon sequestration capacity, alongside socio-economic indicators relating to community resilience and local livelihoods (Jafar et al., 2025). This dual approach ensures that blue waqf initiatives contribute to both environmental sustainability and social welfare, thereby fulfilling the holistic objectives of Islamic socio-economic justice (Hadi et al., 2025; Shofiatin et al., 2025).

Figure 1. *Key Points Legal Mechanisms for Operationalizing Blue Waqf*
Source: Author (2025).

Key Points Legal Mechanisms for Operationalizing Blue Waqf

1. Ecological Waqf Legal Framework

Establishing clear legal foundations for ecological purposes, certification of environmental waqf, and securing natural-resource-based waqf assets.

2. Sustainable Financing Models

Designing funding schemes using cash waqf, coastal asset waqf, and hybrid Islamic social finance (zakat–waqf–sukuk) to support climate adaptation and marine conservation programs.

3. Strengthening Nazhir and Governance Roles

Defining the roles of nazhir in marine conservation, ensuring coordination between national–local government, and institutionalizing community participation as co-managers.

4. Accountability and Sharia Compliance Mechanisms

Implementing transparency tools, sharia audits, standardized governance procedures, and digitized waqf management to ensure legality and trust.

5. Integrated Ecological & Community-Based Monitoring

Embedding ecological indicators and community empowerment metrics into monitoring–evaluation systems to ensure effective conservation and resilience outcomes.

Blue *Waqf* as a Sustainable Instrument for Climate Adaptation and Marine Conservation

Blue *waqf* holds significant potential as a sustainable financing instrument to support climate adaptation initiatives in coastal regions. Its endowment-based mechanism allows long-term funding for ecological rehabilitation programs such as mangrove restoration, coral reef recovery, and coastal protection infrastructure, interventions that are central to enhancing both ecological resilience and community livelihoods (Qurrata et al., 2024; Rusydiana et al., 2023). Beyond ecological works, blue waqf can fund social adaptation initiatives including coastal schools, climate literacy programs, and community capacity-building on disaster preparedness and adaptive technologies (Raniah & Rohim, 2025). This multidimensional design positions blue waqf as a unique Islamic social finance instrument capable of addressing environmental and socio-economic vulnerabilities simultaneously.

The integration of blue waqf into Indonesia's broader marine governance framework further strengthens its operational relevance. By aligning waqf financing with national blue economy policies, marine protected area programs, and small-island management regulations, blue waqf can complement state efforts to promote sustainable ocean governance (Shiiba et al., 2022). Such integration reduces sectoral fragmentation and fosters co-management models where coastal communities, government agencies, and waqf institutions collaborate in planning, monitoring, and implementing conservation initiatives. This increases ecological resilience while reinforcing community ownership of marine conservation outcomes.

From a governance perspective, blue waqf offers a strategic avenue to reduce the ecological and social vulnerabilities of coastal populations. It can channel resources to address erosion risks, declining fisheries productivity, and biodiversity degradation, all of which disproportionately impact vulnerable and low-income communities (Rusydiana et al., 2023). By embedding equitable benefit-sharing mechanisms, blue waqf establishes pathways for marginalized coastal groups to exercise greater agency in determining local adaptation priorities. This contributes to a more inclusive and just marine governance framework aligned with the principles of sustainable development.

Legally, the potential of blue waqf aligns strongly with the Islamic principles of climate justice, which emphasize stewardship (khalifah), public interest *(maslahah),* and intergenerational equity *(amana).* This alignment reinforces blue waqf's contribution to global development agendas, particularly SDG 13 (climate action), SDG 14 (life below water), SDG 1 (no poverty), SDG 16 (strong institutions), and SDG 17 (partnerships) (Rusydiana et al., 2023; Raniah & Rohim, 2025). Blue waqf thus acts as both a legal and ethical instrument that integrates sharia values with contemporary environmental governance frameworks.

Innovation in Islamic social finance further expands the operational space for blue waqf. Models such as Cash Waqf Linked Blue Sukuk (CWLBS) combine the perpetual nature of waqf with the investability of sukuk, enabling structured and scalable capital mobilization for marine ecosystem restoration and coastal community empowerment (Fauziyyah et al., 2022; Rusydiana et al., 2023). These hybrid instruments can generate recurring returns to finance conservation while maintaining sharia compliance and ensuring the long-term sustainability of waqf assets. Such innovations demonstrate how Islamic finance can be adapted to meet modern environmental challenges.

Building on these foundations, a climate-justice-based legal model for blue waqf is essential to ensure its effective national implementation. This model requires harmonizing waqf regulations with coastal and marine governance laws, establishing clear standards for environmental waqf certification, and strengthening accountability mechanisms through sharia audits and ecological monitoring systems (Qurrata et al., 2024; Muhammad et al., 2025; Raniah & Rohim, 2025). When supported by inclusive governance structures involving state agencies, waqf institutions, and coastal communities, blue waqf can be transformed into a holistic legal and financial instrument that advances marine conservation, climate adaptation, and social justice in Indonesia.

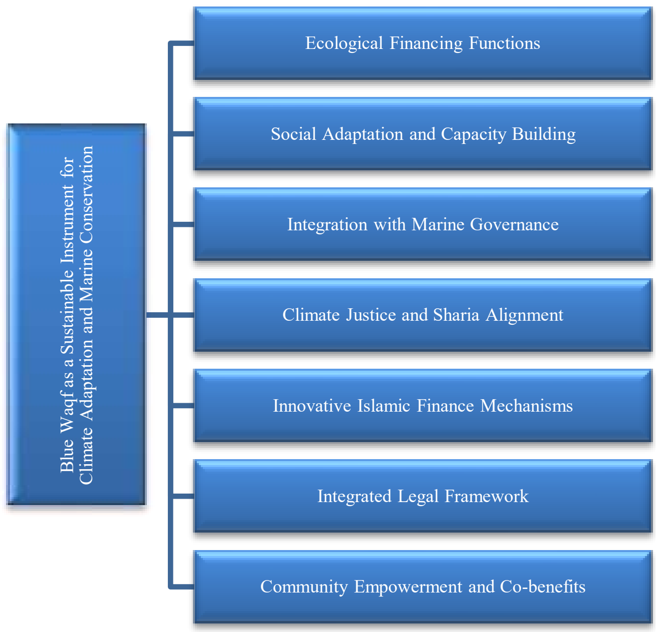

Figure 4 *Key Points for Conceptual Blue Waqf as a Sustainable Instrument for Climate Adaptation and Marine Conservation*
Source: Author (2025).

Conclusions

This study demonstrates that blue waqf has significant potential to become a transformative legal-financial instrument for strengthening coastal community resilience and protecting marine ecosystems in Indonesia. By integrating Islamic social finance principles with climate adaptation and marine governance frameworks, blue waqf provides a sustainable, ethical, and community-centered alternative to conventional conservation financing. The findings show that Indonesia's existing legal structure, ranging from waqf law to environmental and coastal management regulations, offers a foundational basis that can be strategically harmonized to support blue waqf implementation. With appropriate legal interpretation, regulatory alignment, and institutional strengthening, blue waqf can function as a viable mechanism for ecological restoration, livelihood protection, and long-term environmental stewardship.

Operationalizing blue waqf requires clear legal mechanisms, governance models, and accountability frameworks. Strengthening the role and professionalism of *nazhir*, establishing environmental waqf certification, and integrating financing tools such as cash waqf and hybrid Islamic social finance instruments are essential steps. Equally important is the inclusion of coastal communities as co-managers and beneficiaries, ensuring that blue waqf initiatives uphold principles of equity, transparency, and climate justice. The study highlights that when supported by multi-sectoral collaboration, bridging waqf institutions, marine authorities, scholars, and local communities, blue waqf can contribute meaningfully to ecosystem resilience, reduce socio-ecological vulnerability, and support national blue economy objectives.

In conclusion, blue waqf offers an innovative pathway for aligning Islamic ethical values with contemporary environmental governance and climate adaptation needs. It simultaneously advances ecological sustainability, social welfare, and compliance with the Sustainable Development Goals, particularly SDG 13 and SDG 14. Future policy development should focus on harmonizing cross-sector regulations, establishing standardized governance guidelines, and scaling up pilot projects to generate empirical evidence of impact. By institutionalizing blue waqf within Indonesia's environmental and coastal governance framework, the country can pioneer a model of climate-resilient, justice-based, and sustainable marine conservation that may serve as a reference for other Muslim-majority coastal nations.

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