

Perfecting the Legal System for Comprehensive Management of Resources and Protection of the Marine and Island Environment Towards Sustainable Marine Economic Development in Vietnam

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ABSTRACT: Seas and islands play an important role in economic development, ensuring national security and defense, and international integration of Vietnam. In the context of digital transformation, climate change, and global integration, perfecting the legal system on integrated management of resources and environmental protection of seas and islands has become an urgent requirement to realize the goal of sustainable marine economic development in the spirit of Resolution 36-NQ/TW (2018). The article analyzes the theoretical and practical basis of the integrated sea-island management model (ICZM/IOCM), assesses the current status of the legal system, and points out shortcomings in decentralization, coordination, and data sharing among sectors and levels. Based on international experience (Philippines, Indonesia, Japan, European Union), the article proposes solutions to improve the law in a synchronous, interdisciplinary, and constructive direction, including strengthening marine spatial planning, establishing a national coordinating agency, and applying digital technology in monitoring and managing the marine environment, contributing to building a blue and sustainable marine economy for Vietnam.

KEYWORDS: Integrated management of seas and islands; Law and institutions; Blue marine economy; Marine spatial planning; Sustainable development

1. INTRODUCTION

Vietnam has more than 3,260 km of coastline, over 3,000 large and small islands, and an exclusive economic zone of more than one million km². Vietnam's sea is a living space, a strategic resource for green growth, innovation, and sustainable development. The sea is closely linked to key economic sectors such as oil and gas exploitation, fisheries, maritime, marine tourism, renewable energy, and coastal industry; at the same time, it plays a central role in the ecological structure and national environmental security.

Recognizing the importance of the marine economy in the country's development process, the Communist Party of Vietnam and the State of Vietnam have issued many strategic policies and guidelines. Resolution No. 36-NQ/TW dated October 22, 2018, of the Party Central Committee (12th tenure) on the Strategy for sustainable development of Vietnam's marine economy to 2030, with a vision to 2045, affirms the goal of turning Vietnam into a strong and rich maritime nation, developing sustainably and proactively adapting to climate change (Central Committee, 2018). The Law on Marine and Island Resources and Environment 2015 has created a legal foundation for integrated and unified management of marine and island resources, environmental protection, and rational use of marine ecosystems.

The Government has implemented the National Strategy on Green Growth (2021–2030), the National Marine Spatial Planning (2021–2030, vision to 2050), and comprehensive marine and island research programs, clearly demonstrating the orientation of sustainable marine economic development based on science, technology, and effective governance. However, the actual implementation process still reveals many limitations in terms of institutions, coordination mechanisms, and enforcement capacity (Dat, 2020).

Although Vietnam has achieved important results, the legal system on resource management and protection of the marine and island environment in Vietnam is still scattered, overlapping, and lacking overall coherence. Current legal documents are issued for each separate field (water resources, minerals, fisheries, oil and gas, environment, maritime), leading to fragmented management and a lack of inter-sectoral and inter-regional coordination mechanisms.

In addition, the lack of a unified legal framework on “integrated management of marine and island resources”, Integrated Ocean and Coastal Management (IOCM), makes policy coordination, data sharing, and marine spatial planning still inadequate. At the

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implementation level, the overlap between central management agencies and between the central and local levels reduces the effectiveness of state management, leading to the risk of overexploitation of resources and degradation of the marine environment.

Vietnam is facing new challenges in the era of digital transformation, climate change, and international integration of the marine economy. The requirement is to shift from the traditional administrative management model to a comprehensive marine governance model, based on science, technology, and development-building laws. This is the gap that should be researched, analyzed, and proposed for completion to meet the requirements of sustainable development of the marine economy in the new period (Cường & Dung, 2020).

On that basis, this article aims at three key objectives: clarifying the theoretical and practical basis of integrated management of marine and island resources and environmental protection, including principles, tools, and modern governance models applied in many countries. Analyzing and evaluating the current status of institutions and the legal system on integrated management of marine and island resources and environment in Vietnam, pointing out the strengths, limitations, and causes of the lack of synchronization (Hung & Nam, 2021). Proposing orientations and solutions to improve the law, aiming to build a unified, effective institutional framework suitable for the trend of developing a sustainable blue marine economy.

2. THEORETICAL BASIS AND RESEARCH APPROACH

2.1. Concept and Characteristics of Integrated Management of Marine and Island Resources and Environment

Integrated Coastal and Ocean Governance (IOCG), or in some international documents called Integrated Coastal Zone Management (ICZM) is a comprehensive, inter-sectoral and inter-regional management method to ensure the exploitation and use of marine and island resources effectively, in harmony between economic development, environmental protection and ecosystem conservation. According to the definition of UNEP (2015), integrated management of marine and island is a dynamic, continuous process, aiming at coordinating policies, programs, and activities of many sectors, levels, and subjects, to achieve the goal of sustainable development of coastal areas and national marine space.

The nature of the management model is to shift from the mindset of “sector management” to “integrated and comprehensive governance”, that is, regulating each sector (such as fisheries, oil and gas, maritime, marine tourism), comprehensively considering the interactions between ecological – economic – social systems in a unified space (Luru, 2024). This requires coordination between central and local agencies, the participation of businesses, coastal communities and social organizations, ensuring the principle of “management for people, based on ecosystems, towards sustainable development”.

For Vietnam, integrated management of marine and island resources and environment is reflected in the Law on Marine and Island Resources and Environment 2015, in the provisions on basic surveys, marine spatial planning, integrated coastal zone management, monitoring of resources, environment and climate change. However, the level of "synthesis" and "linkage" is still limited due to the lack of coordination mechanisms, data sharing and institutional capacity (Linh, 2025).

2.2. Principles of Sustainable Development and Blue Economy

The concept of sustainable development in the field of seas and islands is understood as development that ensures harmony between three pillars, including economy, society, and environment (Patlis, 2005). Resource exploitation should go hand in hand with ecosystem conservation and maintaining the natural resilience of the ocean. The concept of blue economy is defined by the United Nations (UNDP, 2020) as an economy that sustainably uses ocean resources to promote economic growth, improve livelihoods, and protect the health of marine ecosystems.

The core principles of blue economy include (1) Reasonable and economical use of marine resources, minimizing ecological loss; (2) Balancing development and conservation, ensuring benefits for future generations; (3) Ensuring social equity and sharing of sea and island benefits for coastal communities; (4) Promote science, technology and innovation in management, monitoring and exploitation of marine resources; (5) Strengthen international cooperation and multi-level governance, because the ocean is a global common space.

For Vietnam, the idea of sustainable development and blue ocean economy is clearly affirmed in Resolution No. 36-NQ/TW in 2018, which emphasizes “developing a sustainable marine economy based on biodiversity conservation, ecosystem restoration, effective response to climate change, ensuring national defense, security, and sovereignty at sea”. This is a strategic orientation that creates the foundation for perfecting legal institutions and enhancing the capacity of sea and island governance in the new period (Phong et al., 2025).

2.3. The Role of Law and Institutions in Integrated Sea and Island Management

Law and institutions play a constructive role in the framework for integrated sea and island management. In multi-level governance theory, coordination between levels of government (national – regional – local) is a decisive factor in the effectiveness of integrated management, because the exploitation and protection of marine resources are always inter-regional, inter-sectoral, and cross-boundary. A good legal institution needs to ensure three factors: (i) Unity – synchronization; (ii) Coordination – sharing; and (iii) Adaptability – flexibility.

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The Ecosystem-Based Management (EBM) model is considered a theoretical pillar in modern ocean governance. This approach emphasizes the overall management of marine and coastal ecosystems as a connected whole, rather than being separated by administrative boundaries. EBM aims to maintain the integrity, productivity, and resilience of ecosystems, thereby ensuring long-term livelihoods for coastal communities and the sustainability of marine economic sectors.

Law in the integrated management of seas and islands is a management tool, a tool for creating development. Different from the traditional understanding of law as “constraining behavior”, modern legal thinking aims to design institutions that encourage innovation, cooperation, data sharing, and multi-sectoral policy coordination to maximize the value of marine resources within sustainable limits (Nguyen & Le Luu, 2025).

2.4. Theoretical Framework

Based on the above theoretical synthesis, the article applies an analytical framework combining the integrated governance approach (ICZM/IOCM) and the Enabling Law Theory.

First, the integrated governance approach emphasizes inter-sectoral, multi-level, multi-subject coordination in planning, implementing, and monitoring marine policies. This model helps assess the relationship between institutions, management capacity, and sustainable development effectiveness, while clarifying the need for a unified legal framework for marine space governance.

Second, the Enabling Law approach considers law as a tool to regulate behavior, a foundation to promote innovation and cooperation processes. Enabling law aims to create a favorable institutional environment for integrated governance, encourage data sharing, enhance transparency, and integrate digital technology in marine resource management.

The combination of these two approaches allows the article to analyze in depth the role of legal institutions in coordinating stakeholders, promoting the development of the blue ocean economy, and ensuring the sustainability of marine and island ecosystems. The theoretical framework helps identify gaps in the current legal system, suggesting directions for improvement to build a model of “law to create sustainable marine development” suitable for the context of Vietnam in the new era.

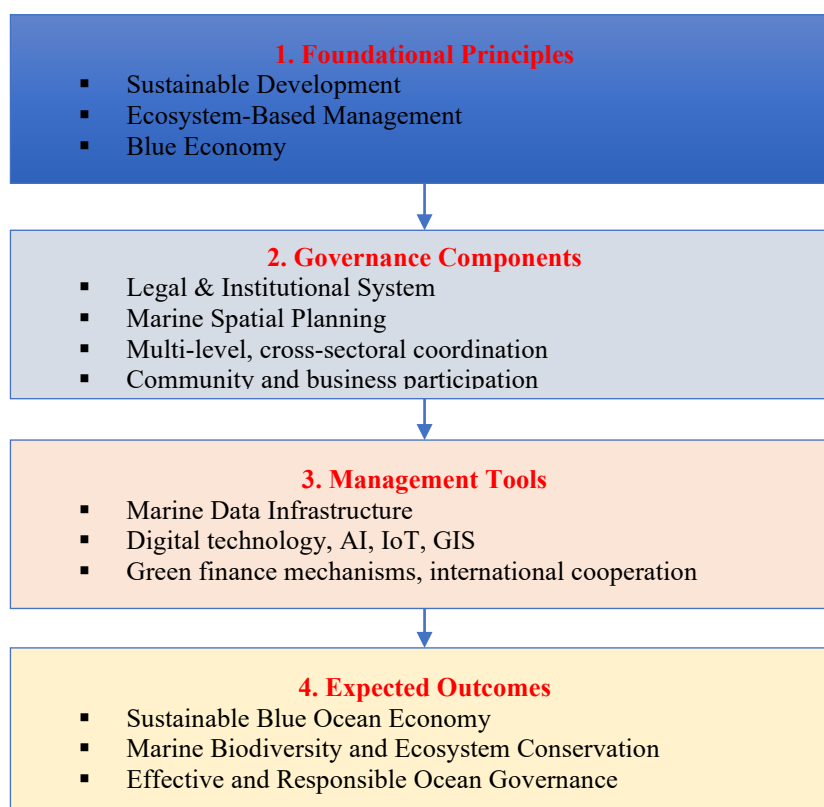


Figure 1. Theoretical framework for integrated management of marine and island resources and environment

Figure 1. explains the theoretical foundation and constituent elements of the integrated sea-island management model. The diagram shows the relationship between sustainable development principles, institutional components, management tools, and expected results. This is the theoretical foundation throughout the entire article.

3. CURRENT STATUS OF INSTITUTIONS AND LAWS ON INTEGRATED MANAGEMENT OF MARINE AND ISLAND RESOURCES AND ENVIRONMENT IN VIETNAM

3.1. Current Legal System

Vietnam has gradually formed a legal system to comprehensively regulate the management, exploitation, and protection of marine and island resources and the environment. Notably, the 2012 Law on the Sea of Vietnam marks an important step forward in affirming national sovereignty, sovereign rights, and jurisdiction over seas and islands; at the same time, it creates a legal foundation for policy making, management, and use of marine space in a unified manner. The law clearly defines the scope of Vietnam's seas, the principles of management and protection of marine resources and environment, contributing to strengthening the effectiveness of state management and promoting international cooperation in the maritime sector (Giang & Khanal, 2024).

The 2015 Law on Marine and Island Resources and Environment is the first legal document to systematically regulate the integrated management of marine and island resources and environment. The Law has institutionalized the Party's policy in Resolution 09-NQ/TW (2007) and Resolution 36-NQ/TW (2018), defining the principle of "unified, comprehensive, inter-sectoral, inter-regional management" of marine and island resources and environment. Key contents include: basic investigation and comprehensive monitoring of resources, marine spatial planning, integrated coastal zone management, environmental protection, and climate change response (Hoi & Giao, 2015).

The Government has issued many guiding decrees and circulars, including Decree No. 40/2016/ND-CP detailing the implementation of several articles of the Law on Marine and Island Resources and Environment; Decree No. 11/2021/ND-CP on national marine spatial planning; and Decision No. 892/QĐ-TTg of 2023 approving the Strategy for sustainable exploitation of resources and protection of the marine and island environment until 2030, with a vision to 2050. In addition, Vietnam has developed a National Marine Spatial Planning for the period 2021–2030, with a vision to 2050, orienting the organization of space for the development of marine economic sectors according to ecological zones and economic sub-zones, ensuring a balance between exploitation and conservation.

The legal system reflects the State's efforts in internalizing international commitments, especially the 1982 United Nations Convention on the Law of the Sea (UNCLOS), and at the same time demonstrates the trend of approaching "sustainable development and integrated management" in accordance with international practices.

3.2. Institutional and Law Enforcement Shortcomings

Although the legal system on seas and islands has been improved, there are still many shortcomings in both content and implementation, reflected in three aspects

First, the lack of inter-sectoral and inter-regional coordination mechanisms. Marine resource management is still carried out according to the "vertical" model – each ministry and sector manages a separate type of resource or activity. This reduces the synthesis in policy-making and causes duplication of functions and tasks. Integrated coastal zone management programs have only been piloted in several localities and have not been expanded and institutionalized into a national mechanism.

Second, overlap in the authority of state agencies. Many marine exploitation activities, such as aquaculture, ecotourism, coastal infrastructure construction, and renewable energy exploitation, are subject to simultaneous regulation by many different laws (Fisheries Law, Environmental Law, Land Law, Public Investment Law). The lack of specific regulations on jurisdictional boundaries makes the licensing, inspection, and handling of violations difficult, even leading to conflicts between management agencies (Giuliani et al., 2019).

Third, there is a lack of a mechanism for sharing data and comprehensive management by sea area. The information system and database on marine resources and environment are still fragmented and not connected between ministries, branches, and localities. The application of digital technology in monitoring, warning, and analyzing marine data is still limited, mainly based on pilot projects. This leads to duplication in basic surveys and a lack of updated data for marine spatial planning and environmental management (Hoi & Dang, 2015).

Inspection, examination, and handling of violations of the marine environment are not regular; Human resources, equipment, and financial resources for sea and island management do not meet the requirements of a modern comprehensive management model.

3.3. Assessing the Impact of the Current Legal System on Sustainable Marine Economic Development

The positive impact of the current legal system is that it has created a basic institutional framework for the management, exploitation, and protection of marine and island resources and the environment. The promulgated laws, decrees, and strategies have helped establish a clear legal foundation for ownership rights, exploitation rights, and responsibility for protecting resources; encouraging coastal localities to develop marine economic development plans in accordance with their potential and natural conditions. The structure of Vietnam's marine economy in recent years has had positive changes, forming dynamic development zones (Nguyen & Uong, 2025).

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The current legal system has not met the requirements for sustainable and blue marine economic development. The fragmentation in legal regulation makes the integration of planning, ecosystem protection, and marine space management ineffective. The level of integration of principles of sustainable development, ecosystem-based management, and climate change adaptation into legal documents is still limited.

The legal framework is not strong enough to mobilize the participation of businesses and communities in marine environmental protection; financial, tax, and investment incentive mechanisms for the “blue ocean economy” have not been specifically regulated. The lack of data sharing and inter-sectoral coordination mechanisms makes policy decisions not sufficiently based on science, reducing the effectiveness of comprehensive management.

Vietnam's current legal system on sea and island management is at the level of “management adjustment”, not truly becoming a “development-creating institution”. In the context of Vietnam moving towards a blue, modern, and responsible marine economy, the requirement is to continue to perfect the institution in a comprehensive, transparent, ecosystem-based, and digital technology-based direction, to ensure both economic development and sustainable protection of marine and island resources and environment.

4. INTERNATIONAL EXPERIENCES ON INTEGRATED MARINE AND ISLAND MANAGEMENT

4.1. Integrated Marine Management Models In Some Countries

First, the Integrated Coastal Management (ICM) Model Associated with Community Development in the Philippines

The Philippines is one of the leading countries in Asia in applying the ICM model since the early 1990s, with the support of Partnerships in Environmental Management for the Seas of East Asia (PEMSEA). The Philippines' ICM approach focuses on decentralization to local governments and mobilizing coastal communities to participate in resource management, aiming at reducing pollution, restoring ecosystems, and improving livelihoods.

Republic Act No. 8550 (Philippine Fisheries Code, 1998) and Republic Act No. 8550 (Philippine Fisheries Code, 1998) provides for the implementation of the (ICM) model. 9275 (Philippine Clean Water Act, 2004) clearly defines the responsibilities of local governments in developing and implementing ICM plans. The Philippines has established a network of more than 40 ICM pilot areas nationwide, with provinces such as Batangas and Bataan serving as models for inter-sectoral coordination, integrating coastal planning with socio-economic development.

The Philippines' experience shows that integrated marine and island management can only be successful when there is clear decentralization, and a mechanism for horizontal coordination between sectors and vertical coordination between levels of government is established, with the participation of local people and businesses.

Second, the Blue Economy Framework in Indonesia

Indonesia, a country with more than 17,000 islands and the second-longest coastline in the world, has developed a Blue Economy Strategy since 2014. The strategy's central objective is to combine marine resource protection with economic development based on technological innovation, renewable energy, and ecotourism.

In 2017, Indonesia enacted the Marine Spatial Management Law (Law No. 32/2014), establishing a legal framework for Marine Spatial Planning (MSP) - integrated marine spatial planning, allowing for the allocation of space between sectors (fisheries, transport, energy, tourism, conservation) to reduce conflicts of interest and ensure rational exploitation. The country also established the Coordinating Ministry for Maritime Affairs, which plays a central role in coordinating policies between relevant ministries and agencies.

The Indonesian model clearly demonstrates the viewpoint of “developing blue ocean based on science and unified institutions”, while emphasizing the role of e-government and digital data in ocean management – a factor that Vietnam is interested in promoting.

Third, the Management Model According to the Marine Basic Plan in Japan

Japan is a pioneer country in promulgating the Basic Act on Ocean Policy (2007) and the Marine Basic Plan, which is updated periodically every 5 years. The goal of this policy framework is to ensure the comprehensive and sustainable use of marine space through an inter-sectoral coordination mechanism at the national level, and at the same time, develop an integrated ocean data system (Ocean Information Infrastructure) to serve management, monitoring, and decision-making.

Japan has vigorously implemented Ecosystem-Based Management (EBM), combining marine environmental conservation with coastal industrial development and renewable energy (offshore wind, tidal energy). In particular, the “Smart Ocean” model uses IoT technology, sensors, and artificial intelligence (AI) to help monitor environmental changes and provide early warning of natural disasters and pollution. Japan's experience emphasizes the importance of building a comprehensive, long-term vision for the ocean, linking policy, science, and technology in ocean governance.

Fourth, Integrated Maritime Policy in The European Union

The European Union (EU) has been a pioneer in establishing an Integrated Maritime Policy (IMP) since 2007, aiming at the goal of “one ocean – one policy – one unified management mechanism”. This policy is concretized through Directive 2014/89/EU on Maritime Spatial Planning (Maritime Spatial Planning Directive), requiring member states to develop Marine Spatial Plans (MSPs) with regional and cross-border linkages.

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The EU considers the ocean as a “source of blue growth” and promotes the role of marine data science, the European Monitoring Network (EMODnet), and the European Environment Agency (EEA) in collecting and sharing open data. In addition, the EU IMP policy also encourages public-private partnerships (PPPs) and cross-border cooperation in monitoring, rescue, and management of marine resources.

The EU’s experience demonstrates the importance of regional coordination and open data sharing, thereby improving the efficiency of management, conservation, and sustainable use of marine resources at the transnational scale.

4.2. Lessons for Vietnam

From the experiences of the above countries and regions, three main groups of lessons can be drawn that are suitable for Vietnam’s conditions

First, strengthening Marine Spatial Planning (MSP). Successful countries all consider MSP as a central tool in the integrated management of seas and islands, helping to rationally allocate space for sectors, reduce conflicts, and optimize resource use value. Vietnam should soon complete the national marine spatial planning in the direction of integration with coastal planning, sectoral planning, and coastal infrastructure development, ensuring the connection between development and conservation.

Second, establish a national coordinating agency for seas and islands. Vietnam should have a unified coordinating agency at the Government level with the authority to coordinate policies between ministries, sectors, and localities related to the sea. The General Department of Seas and Islands should be strengthened in its role as an “institutional conductor”, with a clear legal mechanism to direct, coordinate, and supervise integrated sea and island management activities.

Third, mobilize digital technology in monitoring and managing the marine environment. Experience from Japan and the EU shows that the application of Big Data, Remote Sensing, Artificial Intelligence (AI), and GIS/IoT is an important foundation for building an integrated national marine information system, serving planning, pollution warning, and policy decision-making. Vietnam needs to soon build a “National Digital Marine Data Portal”, integrating data from ministries and localities, connecting with international monitoring networks, to improve the capacity to forecast and monitor marine ecosystems.

International experience shows that the effectiveness of integrated marine and island management depends on the combination of strong institutions, modern planning tools, and advanced digital infrastructure. For Vietnam, absorbing and flexibly applying international models suitable to socio-economic conditions, while strengthening legal and technological capacity, will be the key direction to move towards sustainable, modern, and responsible marine governance in the new era.

5. SOLUTIONS TO IMPROVE THE LAW ON INTEGRATED MANAGEMENT OF RESOURCES AND PROTECTION OF THE MARINE AND ISLAND ENVIRONMENT IN VIETNAM

5.1. Orientation Viewpoints

Improving the legal system on integrated management of resources and protection of the marine and island environment is an inevitable requirement to successfully implement the Strategy for sustainable development of Vietnam's marine economy to 2030, with a vision to 2045, according to Resolution No. 36-NQ/TW (2018) of the Central Executive Committee. The consistent viewpoint is to develop the marine economy based on the principles of sustainability, synthesis, inter-sectoral, inter-regional, and ecosystem-based, considering the ocean as a unified development space, harmonizing exploitation, conservation, and adaptation to climate change.

Accordingly, the legal system needs to be oriented according to three pillars, including (1) Synchronization and consistency between specialized laws; (2) Integration and connectivity in planning, management, and supervision; (3) Creation and adaptation, encouraging innovation, technology application, and international cooperation. The focus of the institutional improvement process is to build a comprehensive legal framework for modern ocean governance, in which the law plays the role of both a management tool and a foundation for creating a blue ocean economy and environmental protection.

5.2. Solutions to Improve the Law on Integrated Management of Resources and Protection of the Marine and Island Environment

First, Improve a Unified and Synchronous Legal Framework.

The 2015 Law on Marine and Island Resources and Environment should be reviewed, amended, and supplemented in the direction of fully institutionalizing the principles of integrated management, based on ecosystems and climate change adaptation. The amendment must aim to build a "Law on Integrated Management of Marine Resources and Space", with a wider scope of regulation, linking related fields such as fisheries, minerals, oil and gas, marine tourism, renewable energy, and maritime transport.

It is necessary to build a synchronous and unified legal system between the central and local levels. Sub-law documents (decrees, circulars) must clearly define the responsibilities of each agency, avoid duplication of authority, and at the same time create conditions for localities to have the right to be proactive in planning, licensing, and monitoring coastal resources.

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It is necessary to strengthen the integration of maritime law into related laws such as the Law on Planning, Law on Environmental Protection (2020), Law on Fisheries (2017), and Law on Public Investment (2019), ensuring consistency in resource use, biodiversity conservation, and sustainable development of marine economic sectors.

Second, Perfecting the Mechanism for Organizing and Coordinating the Integrated Management of Seas and Islands

One of the major shortcomings at present is the overlap between decentralization and coordination. Therefore, it is necessary to establish a National Coordinating Agency for Integrated Management of Seas and Islands, under the Government or the National Steering Committee for Sustainable Marine Economy. This agency should have the function of strategic planning, inter-sectoral coordination, and supervision of law enforcement at both the central and local levels.

The capacity of the Vietnam Administration of Seas and Islands (Ministry of Natural Resources and Environment) should be strengthened and enhanced as a technical-legal focal point, taking on the role of “institutional conductor”, with the right to propose, supervise, and coordinate national marine policies.

At the local level, integrated management boards for coastal zones or key marine areas should be established to coordinate activities between neighboring sectors and localities. Pilot models such as those in Quang Ninh, Khanh Hoa, and Ba Ria-Vung Tau need to be summarized, replicated, and institutionalized through legal documents.

Third, Strengthen National Marine Spatial Planning And Multi-Sectoral Integration

Marine Spatial Planning (MSP) is a tool in integrated management. Vietnam needs to complete the National Marine Spatial Planning for the period 2021–2030, with a vision to 2050, in the direction of closely combining economic development zoning (aquaculture, energy, tourism, transport) and sensitive ecosystem conservation areas; Establish marine-coastal ecological corridors to maintain the natural functions of ecosystems; Build digital interactive maps on marine spatial use, serving decision-making, licensing, and monitoring.

A set of national technical regulations on marine spatial planning should be issued, ensuring consistency in data, methods, and assessment criteria. MSP implementation should be linked to coastal planning, provincial planning, and overall socio-economic development planning.

Fourth, Apply Digital Technology and Build a National Marine Data Infrastructure

The 4.0 industrial revolution opens up great opportunities for Vietnam to modernize its sea and island management. It is necessary to build a National Marine Data Infrastructure, integrating data sources from the Ministry of Agriculture and Environment, the Ministry of Science and Technology, and localities (Nguyễn, 2023).

This system needs to operate on a digital technology platform, GIS, remote sensing, AI, and the Internet of Things (IoT) to collect, analyze, and forecast changes in marine resources and the environment in real time. This is also the basis for building an Open Data Portal on Vietnam's seas and islands, helping to increase transparency, share information, and support evidence-based decision-making.

Legal regulations on sharing and securing marine data should be issued, ensuring the right to access information for organizations, businesses, and communities, while avoiding wasting basic investigation resources.

Fifth, Strengthen Monitoring, Enforcement, and Improve Institutional Capacity

No matter how complete a legal system is, it still needs effective monitoring and enforcement mechanisms. Vietnam should improve the multi-sectoral marine environmental inspection and examination system; establish periodic reporting mechanisms on the status of marine resources, environment, and climate change; and develop a set of indicators to assess the effectiveness of integrated marine management (Marine Governance Index) to monitor the progress of implementing the sustainable marine economic strategy (Thanh et al., 2009).

Should promote training and development of specialized human resources in ocean governance, maritime law, marine spatial planning, data technology, and environmental policy. The formation of a network of experts and interdisciplinary research centers on seas and islands will be an important scientific foundation for policy-making (Van Tuan et al., 2024)

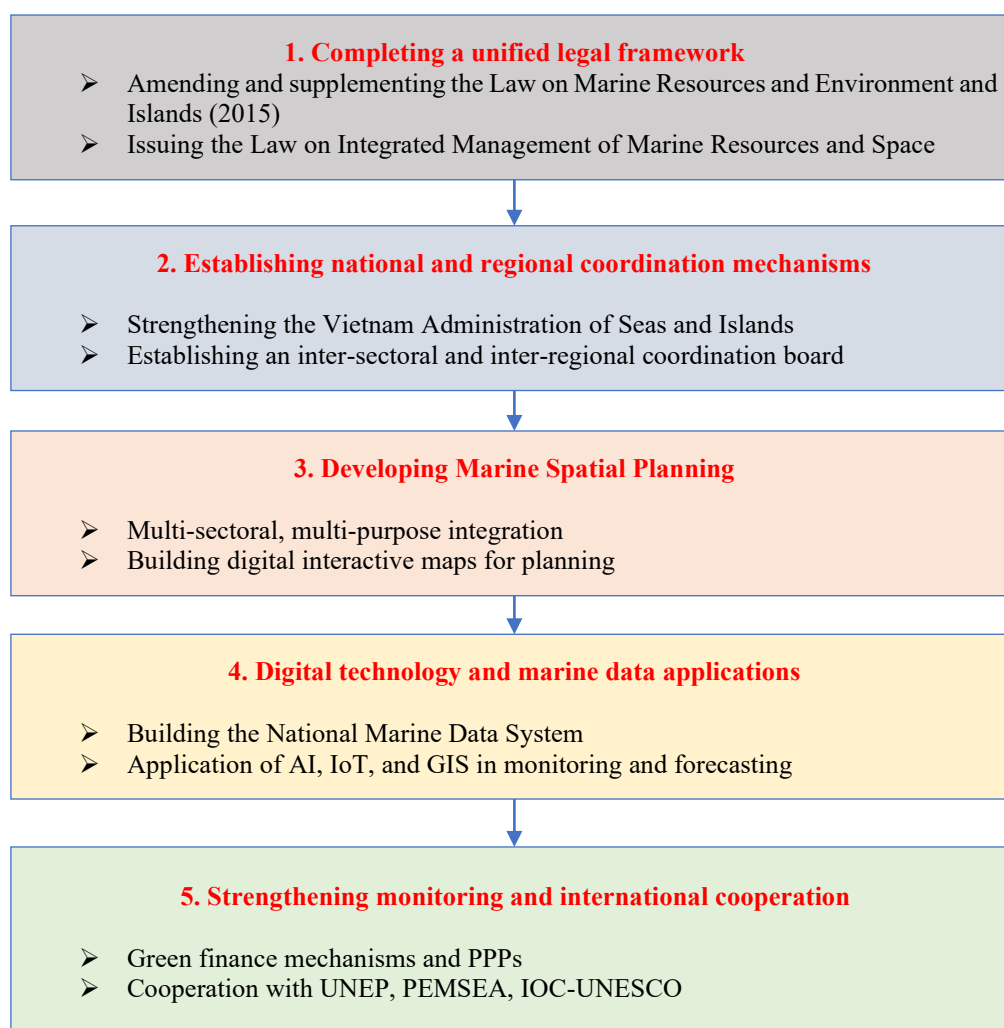


Figure 2. Framework for solutions to improve the law on comprehensive management of marine and island resources and environment

Figure 2. Illustration of the relationship between proposed solution groups and the goal of sustainable marine economic development. The diagram shows the process of legal reform in an interdisciplinary, comprehensive, constructive direction, in which five solution groups operate synchronously to achieve the central goal of modern ocean governance, a blue and sustainable marine economy.

7. CONCLUSION

Vietnam's seas and islands are living spaces, strategic resources of the country, playing a key role in economic development, ensuring national defense - security, and international integration. In the context of globalization, climate change, and digital transformation, comprehensive management of resources and protection of the marine and island environment has become an inevitable requirement for sustainable marine economic development.

The Vietnamese legal system in recent times, with the pillars of the 2012 Law on the Sea of Vietnam and the 2015 Law on Marine and Island Resources and Environment, has

created a foundation for unified management of marine resources and environment. However, the dispersion, overlap, and lack of connection between sectors and levels remain major barriers to effective implementation and ocean governance capacity.

Research shows that the Integrated Coastal and Ocean Governance model has become a popular trend in the world, associated with the principles of sustainable development, ecosystem-based management, and blue ocean economy. Experience from the Philippines, Indonesia, Japan, and the European Union shows that the decisive factor for success is institutional unity, modern marine spatial planning, and the application of digital technology in monitoring and management.

For Vietnam, the improvement of the law on integrated management of resources and protection of the marine and island environment needs to focus on three key directions: (1) Building a comprehensive, synchronous and unified legal framework, ensuring the principles of integrated and inter-sectoral management; (2) Establishing a national and

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maritime coordination mechanism, connecting management entities from central to local levels; (3) Applying digital technology and integrated ocean data, creating a foundation for digital government in the field of seas and islands.

Perfecting the legal system not only contributes to protecting marine resources and the environment but also creates new development space for the blue ocean economy, gradually turning Vietnam into a strong and rich maritime nation, actively contributing to the national sustainable development goals and fulfilling international responsibilities on ocean governance in the new era.

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