## 6. National TDA Governance Profile and Analysis (Dec 12, 2025)

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https://www.pemsea.org/sites/default/files/2023-12/NSOC%20Thailand%202018%20%28FINAL%29%2012032020.pdf

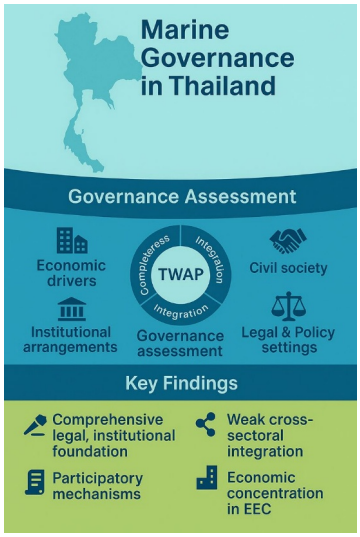
https://www.pemsea.org/resources/publications/reports/state-oceans-and-coasts-thailand


# Abstract

Thailand's coastal and marine governance plays a central role in safeguarding ecosystems, supporting national development, and managing transboundary risks within the South China Sea (SCS) region. This report assesses the current status of Thailand's governance arrangements by examining economic drivers, institutional structures, legal and policy frameworks, and mechanisms for civil society participation. Using the Transboundary Water Assessment Programme (TWAP) Governance Architecture Assessment Framework—covering completeness, integration, and engagement—the assessment identifies areas of progress and persistent governance constraints.

Findings show that Thailand has established a comprehensive legal and institutional foundation for coastal and marine resource management, including national committees, sectoral legislation, and long-term policy planning. Stakeholder engagement mechanisms, including provincial committees and community-based groups, provide additional support for participatory governance. However, weak cross-sectoral integration, uneven provincial implementation capacity, and limited alignment between climate policy, coastal development, and marine resource management continue to hinder effective decision-making and adaptive responses. Economic concentration in the Eastern Economic Corridor (EEC) further heightens governance asymmetries and ecological pressures.

The report concludes that strengthening policy coherence, climate governance, provincial capacity, and regional cooperation is essential for improving Thailand's readiness to address emerging environmental challenges and transboundary risks across the SCS Large Marine Ecosystem.




**Marine Governance in Thailand: Key Components and Assessment Overview**

This infographic summarises the core components of Thailand's marine governance system and the results of the national self-assessment using the TWAP Governance Architecture Assessment Framework. The upper panel highlights the geographic scope of marine governance within Thailand. The middle panel presents four foundational governance elements—economic drivers, institutional arrangements, civil society engagement, and the legal and policy setting—together with the TWAP assessment wheel illustrating scores for completeness, integration, and engagement. The lower panel synthesises the key findings: Thailand has a comprehensive legal and institutional foundation and well-established participatory mechanisms, but governance effectiveness is constrained by weak cross-sectoral integration and economic concentration in the Eastern Economic Corridor (EEC). Together, these components illustrate the strengths and persistent gaps shaping Thailand's capacity for effective coastal and marine governance.

## 6.1 Key findings

6.1.1 Economic arrangements
The Gulf of Thailand is a core economic engine, contributing roughly 60–65% of national GPP through industry, tourism, fisheries, and logistics. Rapid expansion under the Eastern Economic Corridor (EEC) has intensified pressures on coastal ecosystems via land conversion, pollution, habitat loss, and overexploitation. Strong economic disparities among provinces result in uneven capacity for marine resource management, with EEC provinces far better resourced than lower-income coastal areas.

6.1.2 Institutional setting
Thailand has a complex institutional structure involving multiple ministries, agencies, and cross-sectoral committees. While DMCR holds the primary mandate, effective governance depends on coordination with DOF, DNP, ONEP, PCD, DCCE, MD, and RTN. Despite strong national arrangements, coordination remains fragmented and provincial implementation capacity varies. Provincial committees continue to face weak integration, irregular operations, and limited participation of small-scale fishers and women.

6.1.3 Legal and policy framework
Thailand possesses a comprehensive legal and policy framework aligned with key international commitments (UNCLOS, CBD, GBF, SDG 14). Core instruments include the Marine and Coastal Resources Management Act (2015), Fisheries Ordinance (2015), Environmental Quality Act, Climate Change Master Plan, NBSAPs, and the National Marine and Coastal Resources Management Plan (2023–2027). However, enforcement gaps persist, and pending legislation (Climate Change Act and National Biodiversity Act) constrains long-term legal certainty.

6.1.4 Civil society, stakeholders, and partnerships
Thailand is highly active in regional and global marine governance platforms (e.g., UNEP/COBSEA, ASEAN, APEC, IOC/WESTPAC, IORA), with DMCR playing a central leadership role. At the local level, however, participation remains uneven. Women and marginalized groups have limited influence, and community engagement is strongest when supported by long-term donor or academic partnerships.

Overall finding
Thailand demonstrates strong national policy frameworks and active regional engagement, but persistent implementation gaps—driven by institutional fragmentation, economic disparities, and uneven provincial capacity—pose ongoing governance risks. Strengthening cross-sectoral coordination, inclusive participation, legal coherence, and sustainable financing is essential for effective governance of marine and coastal resources in the Gulf of Thailand.

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## 6.2 Current Status

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### 6.2.1Economic arrangements

The Gulf of Thailand covers approximately 200,000 km² with a coastline of about 2,000 km across 17 coastal provinces from Trat to Narathiwat. It contains highly productive ecosystems, including coral reefs, mangroves, and seagrass beds, that underpin food security, biodiversity conservation, and coastal livelihoods (DMCR, 2013). These ecosystems also support Thailand's major marine-based industries, including fisheries, tourism, maritime transport, seafood processing, energy, and emerging blue economy activities. The total annual value of Thailand's marine and coastal ecosystems (Gulf of Thailand and Andaman Sea combined) is estimated at approximately THB 24 trillion (USD 742 billion), including both direct economic services and indirect ecosystem services such as coastal protection and carbon sequestration (Sub-Committee on Knowledge Management for Marine National Interests, 2019).

Over the past two decades, marine resource use in the Gulf of Thailand has intensified alongside rapid economic development. Key drivers include the Eastern Economic Corridor (EEC), coastal urbanization, and expansion of marine tourism. Since its launch in 2017, the EEC has transformed Chonburi, Chachoengsao, and Rayong into major industrial and logistics hubs, driving large-scale port development, industrial estates, and coastal land conversion. While these investments have strengthened national economic growth, they have also contributed to significant environmental degradation, including mangrove loss, coral and seagrass decline, overfishing, and increasing marine pollution (Sub-Committee on Knowledge Management for Marine National Interests, 2019).

National budget allocations and rising domestic and foreign investments continue to shape infrastructure and industrial development across the Gulf, with marked variation among provinces. Given the scale of economic pressure on marine ecosystems, strengthening sustainable financing mechanisms and improving integration between economic and environmental policies are essential to support long-term conservation, ecosystem restoration, and the sustainable use of marine and coastal resources in the Gulf of Thailand.

#### 6.2.1.1 Policy and Economic Drivers

**Policy drivers**

Economic development policies and political priorities strongly shape marine and coastal resource use in the Gulf of Thailand, a national hub for industry, tourism, and fisheries. Over the past two decades, development has been guided by the National Economic and Social Development Plans and the 20-Year National Strategy, which promote economic competitiveness alongside environmental sustainability. Key policy drivers include the bio-economy and marine tourism, industrial and port expansion under the Eastern Economic Corridor, and environmental strategies such as the Blue Economy, Bio-Circular-Green (BCG) Economy, and Marine Spatial Planning.

While these policies have supported economic growth, rising incomes, and poverty reduction, they have also intensified pressures on marine ecosystems. Significant impacts include mangrove loss, coral and seagrass degradation, declining fish stocks, and increasing marine pollution from industrial and shipping activities (PEMSEA & DMCR, 2019; DMCR, 2024). These trends underscore the need for stronger institutional accountability and sustained financing for ecosystem protection and restoration.

**Economic drivers**

Over the past two decades (2000–2024), Thailand's economy has been shaped by a wide range of dynamics. These include domestic factors such as political uncertainty, constitutional reforms, and multiple changes in government, as well as external influences such as global economic fluctuations, trade tensions among major powers, and the COVID-19 pandemic. All of these have had significant impacts on the country's overall economic growth.

**a) Thailand's Overall Economic Situation (2000–2024)**

Over the past two decades, Thailand's economy has expanded substantially, with GDP increasing from USD 126.4 billion in 2000 to USD 526.4 billion in 2024, while GDP per capita rose from USD 1,967 to USD 7,345 (Figures 1–2; Annex 1). Over the same period, the national poverty rate declined sharply from 61% to about 10%, reflecting significant improvements in living standards and economic resilience. Thailand is currently classified as an upper-middle-income country based on GNI per capita, and poverty reduction has been largely consistent with this income transition (World Bank, 2025).

**b) Economic Profile of the Gulf of Thailand Region**

The Gulf of Thailand spans 17 coastal provinces across the eastern, upper, western, and lower Gulf zones. Together, these provinces form a major economic corridor supporting industry, marine and coastal tourism, fisheries, seafood processing, and maritime logistics. The region is therefore a strategic hub for national and international trade and a major contributor to Thailand's GDP and employment (Annex 2).

**c) GPP and Regional Economic Contribution**

From 2000–2023, the Gulf of Thailand consistently contributed about 60–65% of Thailand's national GPP, increasing from USD 80.25 billion to USD 324.49 billion. Bangkok alone accounted for roughly 32% of national GPP, while the remaining Gulf provinces contributed about 30%. The Eastern Economic Corridor (EEC) provinces—Chonburi, Rayong, and Chachoengsao—emerged as key growth centers driven by strong public and private investment, confirming the Gulf's central role in Thailand's industrial, logistics, fisheries, and tourism economy (Figure 3).

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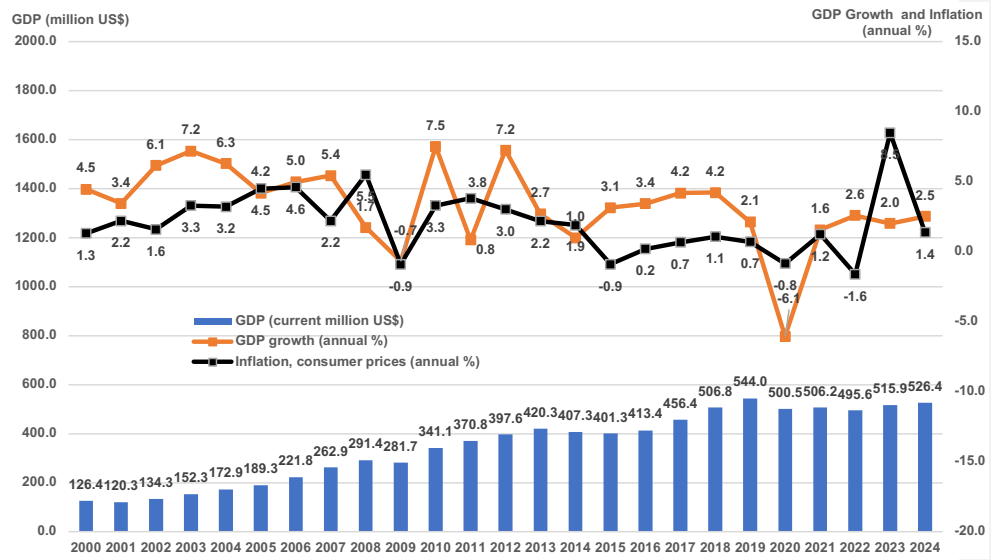



Figure 1: GDP, GDP growth rate, and inflation rate 2000-2023.

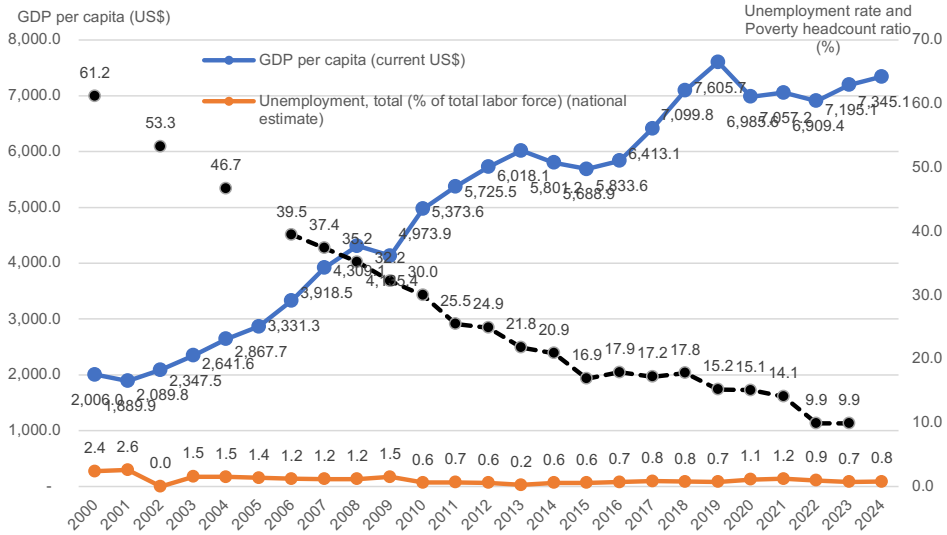
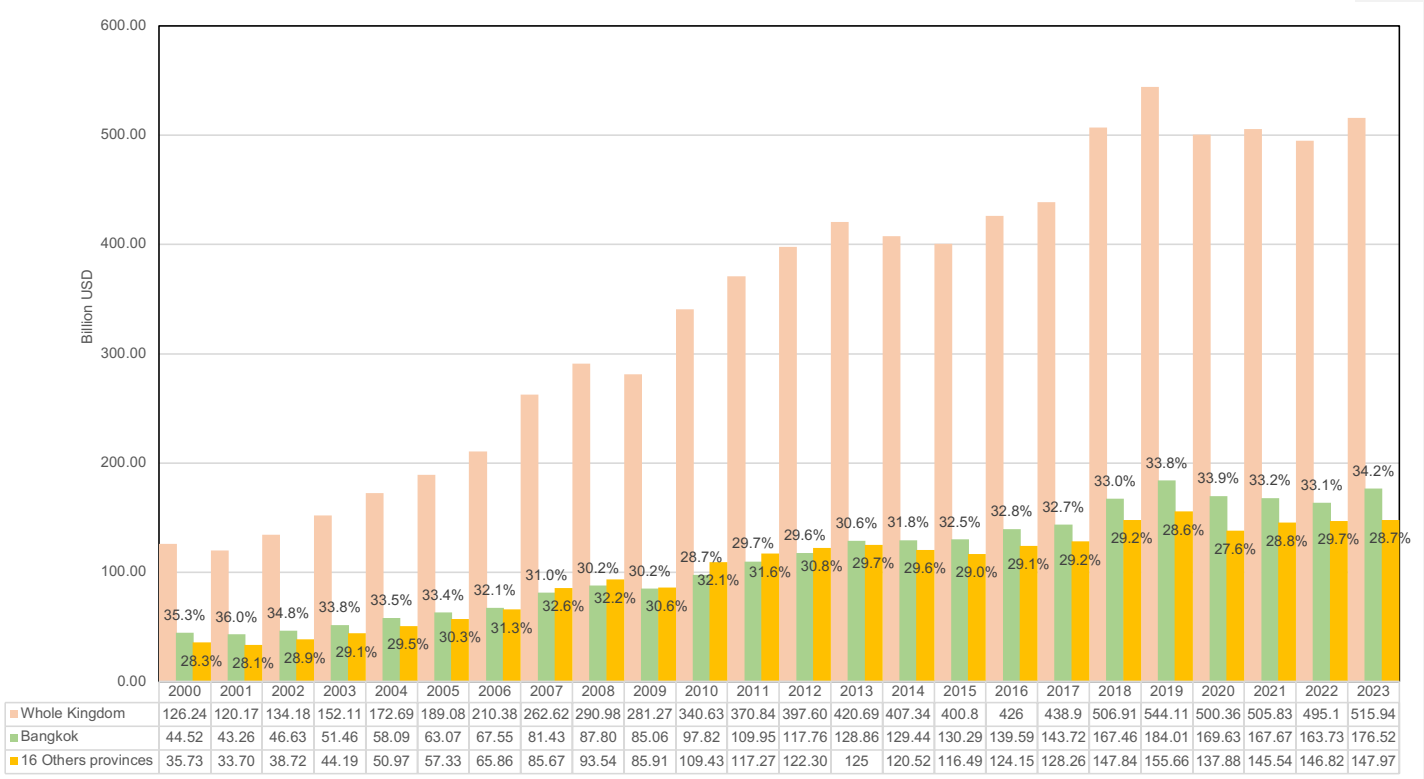



Figure 2: GDP per capita, unemployment rate, and poverty headcount ratio 2000-2023.




| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Whole Kingdom | 126.24 | 120.17 | 134.18 | 152.11 | 172.69 | 189.08 | 210.38 | 262.62 | 290.98 | 281.27 | 340.63 | 370.84 | 397.60 | 420.69 | 407.34 | 400.8 | 426 | 438.9 | 506.91 | 544.11 | 500.36 | 505.83 | 495.1 | 515.94 |
| Bangkok | 44.52 | 43.26 | 46.63 | 51.46 | 58.09 | 63.07 | 67.55 | 81.43 | 87.80 | 85.06 | 97.82 | 109.95 | 117.76 | 128.86 | 129.44 | 130.29 | 139.59 | 143.72 | 167.46 | 184.01 | 169.63 | 167.67 | 163.73 | 176.52 |
| 16 Others provinces | 35.73 | 33.70 | 38.72 | 44.19 | 50.97 | 57.33 | 65.86 | 85.67 | 93.54 | 85.91 | 109.43 | 117.27 | 122.30 | 125 | 120.52 | 116.49 | 124.15 | 128.26 | 147.84 | 155.66 | 137.88 | 145.54 | 146.82 | 147.97 |

Figure 3 Gross Provincial Product of Gulf of Thailand (Billion USD), 2000-2023 (Data retrieved from Office of the National Economic Social and Development Council (NESDC): https://www.nesdc.go.th/main.php?filename=gross_regional

**Provincial Economic Stratification and Implications for Marine Governance**

Based on 2023 GPP, GPP per capita, and poverty data (Annex 3), coastal provinces along the Gulf of Thailand can be grouped into three economic tiers with distinct governance implications.

High-GPP provinces (Chonburi, Rayong, Samut Prakan, Chachoengsao, Samut Sakhon), largely within the Eastern Economic Corridor (EEC), function as Thailand's primary industrial and logistics hubs, with high per capita income and very low poverty rates. These provinces generally possess stronger fiscal and institutional capacity for marine management.

Medium-GPP provinces (Songkhla, Surat Thani, Nakhon Si Thammarat) exhibit diversified economies combining tourism, agriculture, and light industry, with moderate income levels and transitional development patterns.

Low-GPP provinces (Chanthaburi, Phetchaburi, Prachuap Khiri Khan, Trat, Chumphon, Samut Songkhram, Pattani, Narathiwat) remain highly dependent on fisheries, agriculture, and nature-based tourism, with limited industrial investment and weaker fiscal capacity. Pattani and Narathiwat face persistently high poverty linked to security constraints.

These economic disparities translate into unequal institutional readiness for sustainable marine governance. Wealthier provinces are better positioned to finance conservation and enforcement, while lower-income provinces face constraints in planning, monitoring, and ecosystem restoration. Targeted fiscal support and context-specific financing mechanisms are therefore essential to ensure equitable and effective marine governance across the Gulf of Thailand (PEMSEA & DMCR, 2019).

#### 6.2.1.2 National Budgetary Allocations

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Marine and coastal resource management in the Gulf of Thailand is essential for Thailand's economic and environmental security. However, the government's capacity to sustain long-term investment in marine conservation is closely linked to national fiscal conditions and current account performance.

Thailand's fiscal position has undergone major shifts over the past two decades (Figure 4). Following the recovery from the 1997–1998 financial crisis, fiscal balances stabilized during 2003–2019, with deficits generally remaining below 3% of GDP, except during the 2009 global financial crisis. The COVID-19 pandemic caused a sharp deterioration, with deficits widening to –4.5% to –7.1% of GDP between 2020 and 2022. Public debt rose rapidly from below 40% of GDP before 2020 to over 60% in 2023. Although debt remains below the national ceiling, fiscal pressures have increased.

Thailand maintained strong current account surpluses until 2019, but shifted into deficit during 2020–2022 due to the collapse of tourism revenues. Surpluses returned in 2023–2024 with tourism and export recovery, but overall fiscal space remains constrained.

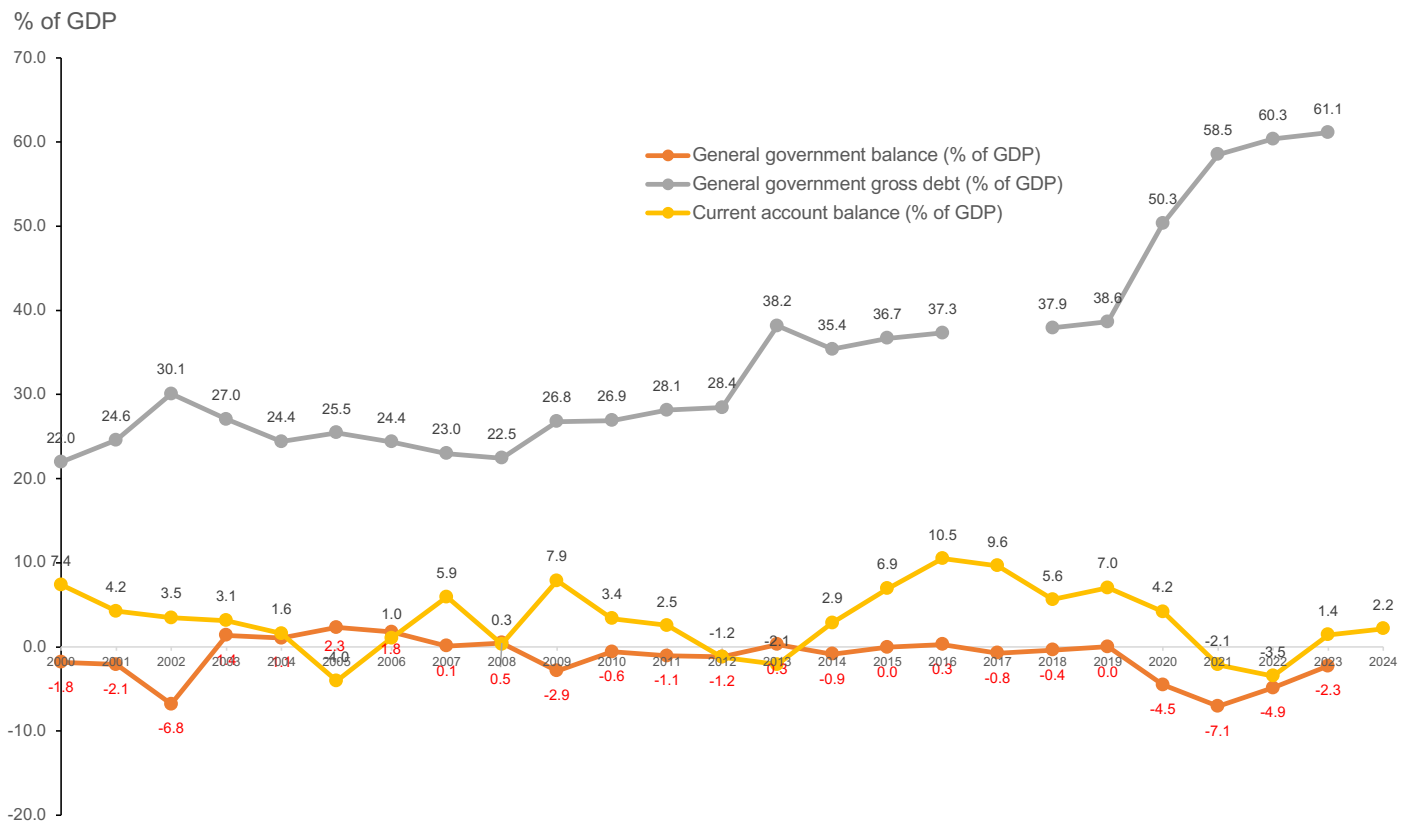


Figure 4 General government balance, general government debt, and current account of Thailand, 2000-2024.

These fiscal trends directly affect the government's ability to finance marine conservation, ecosystem restoration, and sustainable fisheries management in the Gulf of Thailand. During the COVID-19 period, budget priorities shifted toward economic recovery, delaying investments in long-term environmental protection. Although economic recovery is underway, limited fiscal space continues to pose challenges for sustained and proactive marine resource management.

## Budget Allocation of Government Agencies Related to Marine Resources

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Thailand's marine resource management depends heavily on continued public budget support to sustain conservation, restoration, and regulatory functions amid growing pressures from climate change, coastal development, fisheries, and tourism. The Department of Marine and Coastal Resources (DMCR) is the lead agency for marine and coastal management, working alongside the Department of National Parks, Wildlife and Plant Conservation (DNP) and the Department of Fisheries (DOF), whose mandates cover protected areas and fisheries nationwide. Effective governance, therefore, requires strong financial and strategic coordination across these agencies.

Budget data for 2013–2024 show that DMCR consistently receives a smaller allocation than DNP and DOF, despite its central marine mandate. DMCR's budget rose from USD 36.3 million in 2013 to USD 51.16 million in 2024, while DNP and DOF received substantially higher funding, reaching USD 315.37 million and USD 104.49 million in 2024, respectively (Figure 5).

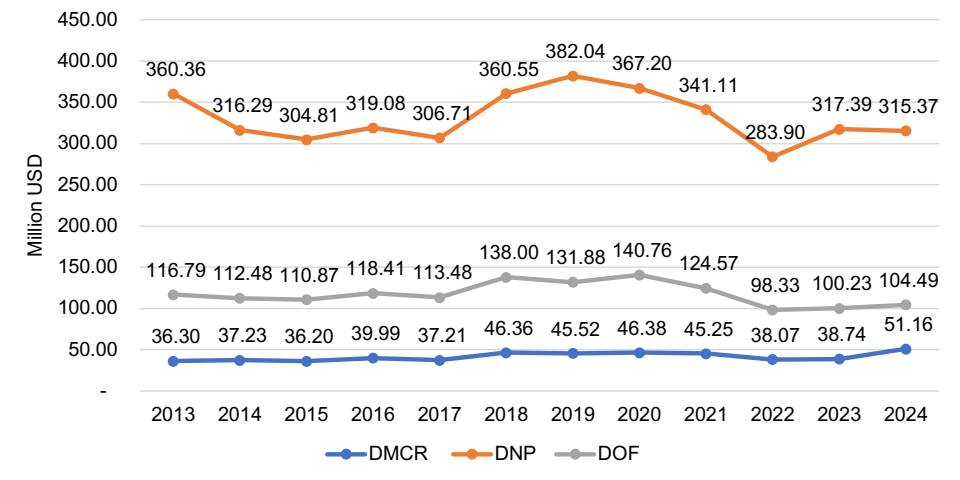


**Figure 5**: Budget Allocations for Agencies Involved in Marine Resource Management in Thailand, 2013–2024 (Source: *Annual Budget Expenditure Documents under the Budget Appropriation Acts for Fiscal Years 2013–2023,* Bureau of the Budget, Office of the Prime Minister. https://www.bb.go.th/index.php)

Given ongoing fiscal constraints, ensuring reliable financing for marine governance remains a critical challenge. Beyond public funding, greater use of Public–Private Partnerships (PPPs) and innovative instruments such as blue funds, blue bonds, and blue carbon credits will be essential to strengthen the long-term financial sustainability of marine conservation in Thailand.

#### 6.2.1.3 National and International Investments (Domestic direct investment and Foreign direct investment)

The Gulf of Thailand continues to attract strong domestic and foreign direct investment (DDI/FDI) due to its strategic location and economic potential. Between 2015 and 2024 (Annex 4), Thailand became increasingly reliant on FDI, which rose from 61% to 74.7% of total investment (BOI).

The Eastern Economic Corridor (EEC) is the dominant investment zone, attracting USD 10.45 billion in 2023, mainly in electronics, machinery, automotive, petrochemicals, EVs, and logistics. Major infrastructure projects further strengthen regional connectivity.

However, both FDI and DDI generate significant environmental pressures, including port expansion, land reclamation, industrial wastewater discharge, and coastal erosion. Strengthened environmental safeguards, community participation, and sustainable finance mechanisms are essential to balance economic growth with long-term ecosystem protection.

#### 6.2.1.4 Provincial Investments

Provincial investment along the Gulf of Thailand shows strong spatial inequality, reflecting uneven development across coastal provinces. Based on 2024 data from the Board of Investment (BOI) and the Department of Business Development (DBD) (Annex 5), investments can be grouped into high-, medium-, and low-investment provinces, revealing distinct regional development patterns.

High-investment provinces—Rayong, Chonburi, Samut Prakan, and Chachoengsao—account for approximately 94% of total investment in the Gulf of Thailand. These provinces form the economic core of the Eastern Economic Corridor (EEC) and function as national industrial and logistics hubs. Rayong and Chonburi dominate large-scale foreign direct investment in petrochemicals, energy, and manufacturing, while Samut Prakan and Chachoengsao show strong growth in both industrial and local business registration. Together, these provinces serve as the primary growth poles of the Gulf region and are deeply integrated into global supply chains.

Medium-investment provinces, including Samut Sakhon, Phetchaburi, Songkhla, Nakhon Si Thammarat, Chumphon, Surat Thani, and Prachuap Khiri Khan, show a mixed economic structure combining agriculture, seafood processing, and coastal tourism. These provinces function as emerging economic hubs, with moderate investment potential that depends on improved infrastructure, logistics connectivity, and market access.

Low-investment provinces—Trat, Chanthaburi, Samut Songkhram, Pattani, and Narathiwat—remain resource-dependent economies, dominated by agriculture, small-scale fisheries, and eco-tourism. These areas face persistent constraints, including weak infrastructure, small markets, and security challenges in the southern border provinces, limiting their ability to attract both domestic and foreign investment.

Overall, provincial investment patterns reveal high economic concentration in the EEC provinces and structural vulnerability in peripheral coastal areas. These disparities directly affect provincial capacity for environmental management and sustainable marine governance. High-investment provinces exert intense development pressure on coastal ecosystems, while low-investment provinces face financial and institutional constraints in conservation and restoration. This underscores the need for spatially targeted investment policy, equitable budget allocation, and differentiated governance strategies to support sustainable blue economy development across the entire Gulf of Thailand.

## 6.2.2 Institutional Setting

### 6.2.2.1 Institutions, Regulatory Agencies, Administrative Arrangements

Thailand's marine and coastal governance operates through a multi-level institutional system involving sectoral agencies, inter-ministerial coordination mechanisms, and national policy committees. The Department of Marine and Coastal Resources (DMCR), under the Ministry of Natural Resources and Environment (MONRE), holds the primary mandate for coastal and marine resource management. It works closely with key MONRE agencies (Fig 6), including the Department of National Parks, Wildlife and Plant Conservation (DNP), Pollution Control Department (PCD), Office of Natural Resources and Environmental Policy and Planning (ONEP), Department of Climate Change and Environment (DCCE), and Department of Mineral Resources (DMR), which together support ecosystem protection, environmental regulation, and climate policy implementation.

Beyond MONRE, several sectoral agencies play critical roles. The Department of Fisheries (DOF) under the Ministry of Agriculture and Cooperatives leads fisheries and aquaculture management; the Royal Thai Navy (RTN) is responsible for maritime security and IUU fishing enforcement; the Marine Department (MD) regulates navigation and ports; the Department of Industrial Works (DIW) oversees industrial pollution control; and the Ministry of Foreign Affairs (MFA) coordinates Thailand's international marine governance engagement (Annex 6).

Policy integration is guided by several national committees, including the Maritime Interests Protection Policy Committee (MIP), Marine and Coastal Resources Committee (NMCRC), National Environment Board (NEB), National Biodiversity Committee (NBC), National Climate Change Policy Committee (NCCP), National Pollution Control Committee (NPC), and National Fisheries Committee (NFC), supported by technical subcommittees (Annex 7). These bodies formulate policy recommendations that are consolidated and submitted to the Cabinet for approval, ensuring alignment across sectors.

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As Marine Spatial Planning (MSP) advances, the MIP and NMCRC play leading strategic roles in integrating the National MSP Framework into legal and policy instruments, supported by specialized subcommittees (World Bank, 2025). Overall, Thailand's institutional framework provides a strong national governance backbone; however, coordination gaps and uneven provincial implementation continue to constrain fully integrated and effective marine and coastal governance.

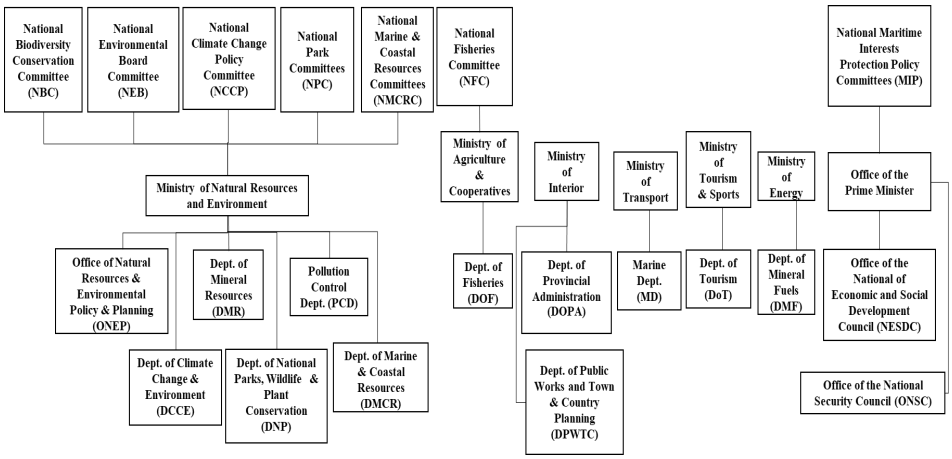


Figure 6. Government agencies and policy committees relevant to governing marine and coastal resources in Thailand

#### 6.2.2.2 Regional Governance, Bilateral and Multilateral Engagement

The Department of Marine and Coastal Resources (DMCR) plays a central role in advancing Thailand's regional and international engagement for sustainable marine and coastal governance. Through active participation in global, regional, and bilateral cooperation frameworks, Thailand aligns national marine management with international commitments, including the 2030 Agenda for Sustainable Development, the Kunming–Montreal Global Biodiversity Framework (GBF), and the UN Decade of Ocean Science (2021–2030).

At the global level, DMCR cooperates closely with key international organizations such as UNESCO, IOC, UNEP, IOI, and CMS, supporting marine science, biodiversity conservation, marine litter management, protection of migratory species, and capacity development.

Thailand also participates in major international legal and policy processes, including the BBNJ Agreement under UNCLOS, enhancing its role in global ocean governance.

At the regional level, Thailand is actively engaged through ASEAN, COBSEA, APEC, and the Indian Ocean Rim Association (IORA), contributing to regional initiatives on marine pollution control, climate change adaptation, sustainable fisheries, blue economy development, and marine scientific cooperation. DMCR further strengthens regional integration through leadership roles in ASEAN working groups and technical subcommittees related to coastal and marine environments.

Bilateral and innovation-based partnerships also support Thailand's marine governance, particularly through public–private collaboration on marine debris management and technological solutions for pollution reduction.

Overall, Thailand's extensive engagement across multilateral, regional, and bilateral platforms reflects a strong commitment to cooperative, science-based, and integrated ocean governance. These partnerships enhance Thailand's technical capacity, regional leadership, and contribution to sustainable marine and coastal management in the South China Sea and the wider Indo-Pacific region (see Annex 8).

## 6.2.3 Legal and Policy Setting

Thailand's marine and coastal governance is underpinned by a comprehensive legal and policy framework that integrates international obligations, regional cooperation, and national implementation. These instruments define mandates, principles, and mechanisms for addressing key challenges such as biodiversity conservation, marine pollution, climate change, and sustainable resource use. Thailand's frameworks are closely aligned with global commitments, including the 2030 Agenda for Sustainable Development, the Kunming–Montreal Global Biodiversity Framework (GBF), and the UN Decade of Ocean Science for Sustainable Development (2021–2030).

### 6.2.3.1 International Legal and Policy Frameworks

Thailand is Party to major international conventions governing biodiversity, pollution, and climate change (Annex 9). Biodiversity governance is guided by the Convention on Biological Diversity (CBD) and the GBF, including the 30x30 marine protection target. Additional instruments include the Ramsar Convention, CITES, the World Heritage Convention, and the Convention on Migratory Species (CMS), supporting protection of wetlands, endangered species, and migratory marine fauna.

Marine pollution and maritime governance are shaped by UNCLOS, MARPOL, the London Convention, Basel Convention, OPRC, Rotterdam Convention, and Stockholm Convention. Climate governance is guided by the UNFCCC, Kyoto Protocol, Paris Agreement, Montreal Protocol, and UNCCD, forming the basis for mitigation, adaptation, and ecosystem-based resilience in coastal systems. Thailand integrates these obligations into national laws and action plans.



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Thank you for raising this broader policy-cycle perspective. Overall, the current marine governance arrangements in Thailand represent a significant improvement compared with the pre-2015 situation. The Promotion of Marine and Coastal Resources Management Act (2015) established a formal system of national and provincial committees, which did not exist before. These committees provide clearer structures for planning, coordination, and decision-making, and they serve as mechanisms for monitoring by receiving and reviewing annual marine and coastal reports prepared by DMCR.
Since 2015, therefore, there is a more complete policy cycle in place—from goal-setting and planning, through implementation, to regular reporting and review of coastal conditions.

In addition, the newer legal and policy frameworks increasingly reference ecosystem-based management, climate change adaptation, and disaster risk reduction, which helps align national governance with regional and transboundary EBM commitments. However, as discussed in the chapter, the practical effectiveness of these arrangements still depends on factors such as data quality, institutional capacity, and the extent to which monitoring results are systematically fed back into policy revision and adaptive management.

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**Commented [ss17R15]:** ) Thank you for raising this important point. In terms of the policy cycle, Thailand has established several monitoring and evaluation programs, particularly through DMCR's regular assessments of major coastal habitats such as coral reefs, mangroves, and seagrass beds. These programs provide long-term datasets that help track ecological changes across the country.

However, there are several weaknesses that still require attention. Current monitoring indicators—especially for coral reefs—focus primarily on biophysical status (e.g., percentage of live and dead coral), which offers only a partial understanding of ecosystem condition. These indicators do not capture the broader ecosystem ... [1]

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#### 6.2.3.2 Regional Legal Policy Frameworks and Forums

Thailand actively participates in regional cooperation mechanisms in the East Asian Seas and Indian Ocean regions (Annex 10), strengthening transboundary governance and ecosystem-based management. Key platforms include PEMSEA for Integrated Coastal Management (ICM) and Marine Spatial Planning (MSP); ASEAN environmental agreements and working groups; and the Indian Ocean Tuna Commission (IOTC) for tuna fisheries management and IUU fishing control.

Thailand also engages in the ASEAN Agreement on the Conservation of Nature and Natural Resources and the Regional Plan of Action to Combat IUU Fishing (RPOA–IUU), enhancing regional coordination on monitoring, enforcement, and information exchange. Collectively, these regional frameworks reinforce Thailand's commitment to cooperative and transboundary marine governance aligned with global sustainability goals.

#### 6.2.3.3 National Policies and Strategies Relevant to Marine and Coastal Resources

Thailand has established a comprehensive legal and policy framework for the management, conservation, and sustainable use of its marine and coastal resources. These frameworks translate the country's international and regional commitments into national implementation through laws, strategic plans, and coordinated action among multiple government agencies. Together, they provide the legal and institutional foundation for promoting ecosystem-based management, blue economy development, and climate-resilient coastal governance in the South China Sea (SCS) and the Gulf of Thailand.

**a) Key Legal Frameworks**

Thailand's marine and coastal governance is underpinned by a comprehensive legal framework emphasizing participatory management, biodiversity conservation, and sustainable resource use. Core legislation includes the Promotion of Marine and Coastal Resources Management Act (2015), which establishes national and provincial committees and provides the legal basis for marine and coastal protected areas; the Royal Ordinance on Fisheries (2015), which strengthens sustainable fisheries management and IUU fishing control; and the National Environmental Quality Promotion and Conservation Act (1992, amended 2018), which governs pollution control and Environmental Impact Assessment (EIA).

Additional key laws include the Wildlife Preservation and Protection Act (2019), the National Park Act (2019), the Marine Interest Protection Act (2019), and the Protection and Promotion of Ethnic Groups' Way of Life Act (2025). Two major draft laws—the Climate Change Act and the National Biodiversity Act—are currently under parliamentary consideration and are expected to significantly strengthen Thailand's climate and biodiversity governance once enacted.

These primary laws are supported by ministerial regulations, technical guidelines, and sector-specific legislation that operationalize standards for conservation, pollution control, and participatory management (see Annex 11).

### b) National Policy Frameworks and Strategic Plans

Thailand's marine and coastal governance is guided by integrated national strategies aligned with the Sufficiency Economy Philosophy (SEP) and international sustainability commitments (Annex 12). Key frameworks include the 20-Year National Strategy, the 13th National Economic and Social Development Plan, the National Environmental Quality Management Plan, the Climate Change Master Plan and National Adaptation Plan, the National Biodiversity Strategies (NBSAP and Long-term Biodiversity Strategy), and the National Marine and Coastal Resources Management Policy and Plan. Together, these policies establish the foundation for biodiversity conservation, blue economy development, and climate-resilient coastal governance.

### c) Sectoral Policies and Implementation Mechanisms

Sectoral plans translate national strategies into operational action (Annex 13). Key instruments include the Marine Spatial Planning (MSP) Framework (2023), the National and Marine Debris Management Plans (updated 2023), the Biodiversity Master Plan (2023–2027), and the Coastal Erosion Prevention and Management Master Plan (2023–2037). These frameworks support ecosystem-based management, pollution control, habitat restoration, climate adaptation, and cross-sectoral coordination in marine and coastal areas.

## 6.2.4. Civil Society and Participation

Civil society organizations (CSOs), local communities, the private sector, and academic institutions play an important supporting role in Thailand's marine and coastal governance by contributing to policy implementation, community-based conservation, scientific research, and public awareness. Their engagement strengthens local stewardship, promotes co-management, and enhances governance integration and resilience across coastal areas of the Gulf of Thailand. Participatory and collaborative mechanisms—including community networks, research partnerships, and public–private initiatives—are key channels through which shared responsibility and inclusive governance are advanced at the local level. International engagement mechanisms are addressed separately in Section 6.2.2.2.

### 6.2.4.1 Key Civil Society and Non-Governmental Organizations (NGOs) in Thailand

Thailand hosts a diverse network of national NGOs, community organizations, and academic institutions active in marine conservation, sustainable livelihoods, and environmental governance, including the Marine Science Association of Thailand, the Seub Nakhasathien Foundation, the Environmental Litigation and Advocacy for the Wants (EnLAW) Foundation, the Sustainable Development Foundation (SDF), and the Raks Thai Foundation. Major universities such as Prince of Songkla University, Mahidol University, Kasetsart University, Ramkhamhaeng University, and Burapha University contribute scientific research, monitoring, and policy-relevant knowledge. Together, these actors form an essential bridge between national policy frameworks and local-level implementation.

**Commented [MK19]:** Are stakeholders and CSOs effectively engaged, and are there vertical (regional, national and subnational) and lateral linkages?

**Commented [ss20R19]:** Thank you for raising this point. Thailand's legal framework provides clear mechanisms for stakeholder and CSO participation, particularly through the Promotion of Marine and Coastal Resources Management Act (2015) and the Royal Ordinance on Fisheries (2015), which allow community representatives to participate in both provincial and national committees. These mechanisms create formal structures that support participation across governance levels.
However, evidence from two major studies shows that the effectiveness of these participatory arrangements remains limited.

Satumanatpan et al. (2018) found that coastal provincial committees suffer from weak sectoral integration among agencies and infrequent meetings, which undermines horizontal coordination at the provincial level. In addition,

Satumanatpan et al. (2024) identified several constraints affecting meaningful participation of small-scale fishers: committee work tends to be reactive rather than strategic; women's representation remains limited due to low participation in registered community organizations; and the flexible number of district chiefs relative to fixed community seats can create perceived imbalance in decision-making.
Overall, while Thailand has established formal structures to promote participation, both horizontal coordination and the inclusiveness of community engagement require further strengthening.

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**Commented [MK21R19]:** Thank you!

#### 6.2.4.2 Legal Basis for Public Participation

Thailand has a strong legal foundation for public participation in marine and coastal resource management. The Promotion of Marine and Coastal Resources Management Act (2015) and the Royal Ordinance on Fisheries (2015) mandate participatory committees, co-management arrangements, and community-based fisheries management. Complementary laws—including the Official Information Act, the National Environmental Quality Act, and decentralization legislation—further guarantee access to information, participation in EIAs, and local government authority in environmental management.

However, empirical studies indicate that the effectiveness of these participatory mechanisms remains uneven. Provincial coordination is often weak, participation can be reactive, and representation of women and small-scale fishers remains limited in some areas (Satumanatpan et al., 2018; 2024).

#### 6.2.4.3 Co-management and Participatory Mechanisms

Thailand has progressively expanded co-management through provincial marine and coastal committees, community-based conservation networks, and participatory monitoring programs. These mechanisms support mangrove conservation, fisheries management, MPAs, and marine biodiversity monitoring. Public–private partnerships and CSR initiatives increasingly supplement government efforts and financing for conservation.

Overall, Thailand has established formal structures and practical mechanisms for participation and co-management. While these frameworks represent a major strength of the governance system, their effectiveness is constrained by coordination gaps, uneven capacity, and inclusiveness challenges. Continued institutional strengthening, capacity building, and long-term financial support are required to ensure that participation translates into sustained conservation and livelihood outcomes.

### 6.2.5 Governance performance and effectiveness

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Over the past 15 years, Thailand has established a relatively strong legal, policy, and institutional foundation for marine and coastal governance, with a clear shift from fragmented, sector-based management toward more integrated approaches (Satumanatpan et al., 2018). The Promotion of Marine and Coastal Resources Management Act (2015) marked a major institutional advance by creating formal national and provincial committees for coordination, planning, and annual reporting by the Department of Marine and Coastal Resources (DMCR).

Despite this progress, several structural weaknesses persist. Inter-ministerial coordination at the national level remains largely procedural, with overlapping mandates and regulatory inefficiencies continuing to constrain implementation (Satumanatpan, NEA 2025). While ecosystem-based management (EBM), climate adaptation, and disaster risk reduction are increasingly reflected in policy frameworks, their effectiveness depends on data quality,

institutional capacity, and the extent to which monitoring results inform adaptive management.

**Monitoring, Evaluation, and Policy Cycle**

DMCR conducts long-term monitoring of coral reefs, mangroves, and seagrass, generating valuable biophysical time-series data. However, current indicators focus mainly on habitat condition (e.g., live coral cover) and remain weak in assessing ecosystem services and socio-economic outcomes such as fisheries productivity, shoreline protection, tourism, and community well-being (National Trialogue Workshop, 2025). Stronger integration of ecological, economic, and social indicators is needed to support adaptive governance.

**Participation, Coordination, and Stakeholder Engagement**

Thailand's legal framework formally enables stakeholder participation through the Marine and Coastal Resources Management Act (2015) and the Royal Ordinance on Fisheries (2015). In practice, however, participatory mechanisms remain uneven. Provincial coastal committees face weak sectoral integration, infrequent meetings, and limited data availability (Satumanatpan et al., 2018). Further constraints include reactive committee agendas, limited women's representation, and perceived imbalances in decision-making authority (Satumanatpan et al., 2024).

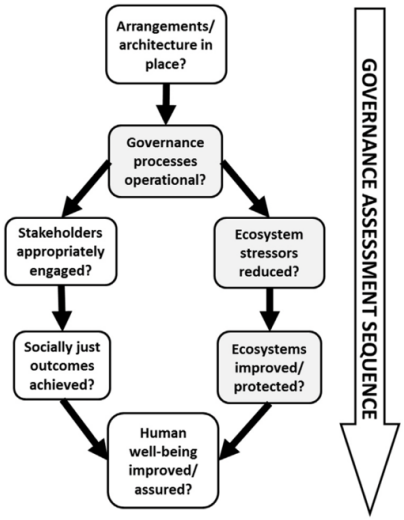
**Governance Principles**

Although this assessment does not directly evaluate transparency, accountability, and equity, these principles are supported by Thailand's broader legal framework, including the Official Information Act (1997), the Civil Service Act (2008), the 2017 Constitution, and the Gender Equality Act (2015). Together, these laws establish an enabling environment for participatory and accountable governance, although enforcement and practical application remain uneven.

Overall, Thailand's marine and coastal governance shows significant institutional progress, but its effectiveness is constrained by coordination gaps, limited socio-economic monitoring, and uneven stakeholder inclusion. Strengthening adaptive monitoring systems, inclusive participation, and inter-agency coordination remains essential for improving long-term governance performance.

## 6.3 Discussion and Conclusions

### 6.3.1 Risk Assessment: Current Governance Capacity




**Commented [MK24]:** Just placing here the process for governance assessment as a reminder...

National indicators suggest that Thailand's overall governance capacity for coastal and marine management is moderate but uneven. Under the Environmental Performance Index (EPI 2024), Thailand ranks 90th globally, with improvements in climate change performance (+12.5) and ecosystem vitality (+1.9), but declining trends in biodiversity and habitat (–0.7) and fisheries (–1.9), alongside persistently weak water resource management. These patterns reflect continuing stress on coastal ecosystems.

World Bank Worldwide Governance Indicators place Thailand in the medium tier for government effectiveness and regulatory quality, with a declining trend in regulatory performance and low control of corruption (World Bank, 2025). These national-level governance constraints influence provincial capacity, particularly consistency in policy implementation, enforcement, and multi-agency coordination.

At the provincial level, governance performance varies widely. Coastal committee studies reveal weak sectoral integration, infrequent meetings, and limited stakeholder engagement (Satumanatpan et al., 2018). Further constraints include reactive committee agendas, low women's representation, and imbalances in committee composition affecting small-scale fishers (Satumanatpan et al., 2024). These shortcomings undermine social equity, inclusion, and adaptive capacity.

Overall, Thailand exhibits moderate national governance capacity, but uneven provincial implementation remains a key risk to effective ecosystem protection and human well-being.

TWAP Governance Architecture Self-Assessment (Fanning et al., 2017) shows:

- Completeness = 50 (basic institutional and legal structures exist),
- Integration = 0.1 (very weak cross-sectoral and multi-level coordination),
- Engagement = 70 (relatively strong stakeholder participation).

This indicates that while institutions and participation mechanisms are in place, fragmented integration remains the principal structural weakness constraining adaptive, ecosystem-based, and transboundary governance in the South China Sea and Gulf of Thailand.

### 6.3.2 Current governance capacity to respond to climate and major environmental changes, as well as population growth and demand

Thailand shows moderate capacity to respond to climate and environmental change, supported by national frameworks but constrained by fragmented coordination and uneven enforcement. Core agencies (DMCR, DCCE, DOF) possess growing technical capacity, yet the absence of an enacted Climate Change Act weakens legal coherence.

Climate and coastal monitoring systems exist but remain poorly integrated, limiting their effectiveness for planning. Provincial governments face persistent staffing and budget constraints, while rapid urbanization, coastal development, and resource demand outpace institutional capacity. These conditions underscore the need for stronger coordination, clearer legal mandates, and adaptive governance mechanisms.

### 6.3.3 Strategies to enhance government responses to climate change and achieve sustainability of the coastal and marine environments

Thailand's climate response is guided by the Climate Change Master Plan (2015–2050) and the National Adaptation Plan, which emphasize resilience and ecosystem-based adaptation in coastal and marine areas. The draft Climate Change Act, currently under parliamentary consideration, is expected to strengthen the legal foundation for coordinated, cross-sectoral climate governance and long-term sustainability.

### 6.3.4 Recommended priority actions including regional cooperation

Based on identified risks and governance gaps, the following priority actions are recommended:

**1. Improve cross-sectoral and multi-level coordination.**

Enhance institutional linkages among DMCR, DCCE, DOF, ONEP, DNP, the Marine Department, and provincial authorities to ensure coherent implementation of national policies. Strengthening the operational effectiveness of coastal provincial committees—including regular meetings, clear agendas, and technical support—will be essential for more consistent provincial-level implementation.



**Commented [ss25]:** Thailand's current governance capacity to respond to climate change and major environmental pressures is moderately developed but remains uneven across sectors and administrative levels. National agencies—such as DMCR, ONEP, DNP, DCCE, the Royal Thai Navy, and the Marine Department—possess clear mandates, established regulatory frameworks, and increasing experience in implementing climate-related and coastal management programs. However, coordination across ministries remains fragmented, with overlapping responsibilities and limited mechanisms for integrated land–sea planning. Capacity at the provincial and local levels is also highly variable: while some coastal provinces have developed action plans and technical units capable of monitoring environmental change, many still lack sufficient expertise, financial resources, and long-term data to effectively assess risks or support community-based adaptation.
In terms of knowledge and information systems, Thailand benefits from growing climate data platforms (e.g., coastal erosion monitoring, marine water quality networks, early warning systems), supported by research institutions and DMCR's technical centers. Nonetheless, data sharing between agencies is inconsistent, and integration of scientific, local, and traditional knowledge into planning remains limited. Population growth, coastal urbanization, tourism expansion, and increasing demand for marine resources continue to intensify pressures on ecosystems, highlighting gaps in enforcement capacity, cross-sectoral coordination, and integrated spatial planning. Overall, while Thailand has made significant progress in building national frameworks and technical capacity, strengthening multi-level coordination, long-term financing, and adaptive governance mechanisms remains critical for responding effectively to future climate and environmental challenges.

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**Commented [MK27]:** Once the other chapters are completed suggest to look across the proposed actions to harness synergies and develop a a more integrated action program.

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**2. Enhance legal coherence for climate and environmental governance.**

Finalizing and enacting the draft *Climate Change Act* should be prioritized to provide a binding legal framework for climate action. Aligning climate-related frameworks with the Marine and Coastal Resources Management Act (2015), National Adaptation Plan, and marine spatial planning processes will support integrated land–sea management and long-term resilience planning.

**3. Strengthen provincial implementation capacity.**

Increase technical staffing, financial resources, and targeted training for provincial and local authorities, particularly in areas facing high exposure to coastal erosion, flooding, pollution, and fisheries pressures. Integrating climate risk assessments into local planning and enhancing monitoring capacity will improve adaptive responses.

**4. Promote inclusive and equitable stakeholder participation.**

Enhance mechanisms for the meaningful involvement of small-scale fishers, women, and community-based organizations in provincial decision-making processes. Expanding representation and improving transparency can strengthen governance legitimacy and support socially just outcomes.

**5. Accelerate ecosystem protection and climate-resilient management.**

Scale up mangrove, seagrass, and coral reef restoration; strengthen pollution control; and expand protected area management using nature-based and ecosystem-based approaches. Improving enforcement and compliance mechanisms will be critical for reducing ecosystem stresses.

**6. Strengthen data integration and science–policy linkages.**

Develop interoperable data systems among national agencies and increase the use of shared datasets for planning and decision-making. Enhancing collaboration with research institutions will support monitoring of environmental change, fisheries productivity, and climate impacts.

**7. Enhance regional cooperation in the South China Sea.**

Deepen engagement through ASEAN, COBSEA, PEMSEA, SEAFDEC, and UNEP/GEF platforms to improve coordinated monitoring of marine pollution, management of shared fish stocks, exchange of adaptation practices, and development of regional early warning systems. Establishing regional protocols for data-sharing and transboundary ecosystem management should be prioritized.

**8. Mobilize sustainable and long-term financing.**

Strengthen domestic budgeting for climate and coastal management and explore regional and international financing mechanisms, including climate funds, blue carbon financing, and blended finance instruments to support implementation and monitoring at national and provincial levels.

## 6.4 Methodology and analysis

This governance assessment was conducted using a desk-based analytical approach combined with comparative indicator-based evaluation, aligned with the Transboundary Water Assessment Programme (TWAP) Governance Architecture Assessment Framework (Fanning et al., 2017). The analysis focuses on four core governance components: economic arrangements, institutional setting, legal and policy frameworks, and civil society and stakeholder engagement.

Data were compiled through a desk-based review of official government documents, national strategies and legislation, budget and investment statistics, international reporting instruments, and peer-reviewed literature. Key national data sources included the Department of Marine and Coastal Resources (DMCR), Office of the National Economic and Social Development Council (NESDC), Bureau of the Budget, Board of Investment (BOI), and relevant ministry reports. International governance indicators, including the World Bank Worldwide Governance Indicators and the Environmental Performance Index (EPI), were used to contextualize national governance performance.

To assess transboundary governance architecture, Thailand's national governance system was evaluated using the TWAP Governance Architecture Assessment Framework, based on three dimensions: completeness, integration, and engagement. A structured self-assessment was conducted using expert judgment informed by institutional mandates, legal coverage, participation mechanisms, and inter-agency coordination arrangements. Supporting quantitative and qualitative evidence from previous regional studies and project reports was used to validate the assessment results.

The analysis integrates findings across governance components to identify systemic strengths, gaps, risks, and enabling conditions relevant to transboundary ecosystem management. Particular attention is given to stakeholder participation, inter-sectoral coordination, financing capacity, and implementation effectiveness at both national and provincial levels. All detailed datasets, methodological tools, and supplementary materials used in this assessment are provided in the Annexes to support transparency and replicability.

**Glossary**

| | |
|---|---|
| DMCR | Department of Marine and Coastal Resources |
| DCCE | Department of Climate Change and Environment, the primary<br>A government agency in Thailand responsible for climate policy and environmental management. |
| DOF | Department of Fisheries |
| GDP | Gross Domestic Product: the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. |
| GPP | Gross Provincial Product; the total economic value of all final goods and services produced within a specific province during a given period. |

TDA Transboundary Diagnostic Analysis
TWAP Transboundary Water Assessment Programme
More xxxx

**Acknowledgement**

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**Author contributions**

Suvaluck Satumanatpan: Methodology, Validation, Investigation, Visualization, Writing- Original draft, Writing- Review & Editing, Megan Kinght: Methodology, Writing- Review & Editing

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**Page 14: [1] Commented [ss17R15]** **suvaluck satumanatpan** **11/18/25 4:08:00 PM**

) Thank you for raising this important point. In terms of the policy cycle, Thailand has established several monitoring and evaluation programs, particularly through DMCR's regular assessments of major coastal habitats such as coral reefs, mangroves, and seagrass beds. These programs provide long-term datasets that help track ecological changes across the country.

However, there are several weaknesses that still require attention. Current monitoring indicators—especially for coral reefs—focus primarily on biophysical status (e.g., percentage of live and dead coral), which offers only a partial understanding of ecosystem condition. These indicators do not capture the broader ecosystem functions and services provided by coral reefs, such as coastal protection, fish nursery functions, tourism value, and cultural significance. As a result, the existing monitoring framework does not fully support evidence-based policy or the integration of ecosystem service considerations into management decisions.

To strengthen continuous improvement within the policy cycle, DMCR would benefit from enhanced capacity to assess coastal ecosystems in a more holistic way. This includes developing monitoring guidelines that integrate both ecological and socio-economic dimensions, enabling a clearer understanding of how changes in ecosystem health affect local livelihoods and community well-being. Additionally, improved compliance mechanisms, greater public awareness, and targeted capacity building at provincial and local levels would help address persistent gaps in implementation.

Overall, expanding the monitoring framework to include ecosystem service indicators—and strengthening institutional capacity to apply them—would significantly improve the effectiveness of Thailand's coastal governance and better support adaptive management.