IOSR Journal Of Humanities and Social Science (IOSR-JHSS)
Volume 30, Issue 9, Series 2 (September, 2025) 08-18
e-ISSN: 2279-0837, p-ISSN: 2279-0845.
www.iosrjournals.org

Non-Traditional Maritime Security Issues In The Philippines: Contemporary Challenges And Regional Responses

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Abstract
The Philippines, an archipelagic nation comprising over 7,600 islands, faces a complex array of non-traditional maritime security challenges that transcend conventional military threats. This study examines the evolution and impact of maritime security issues including illegal, unreported, and unregulated (IUU) fishing, drug trafficking, climate change impacts, marine pollution, human trafficking, piracy, terrorism, and cybersecurity threats within Philippine waters from 2012 to 2025. Through analysis of government reports, academic literature, and regional cooperation frameworks, this research demonstrates how these interconnected challenges threaten national sovereignty, economic development, and environmental sustainability. The study reveals that while traditional state-centric security approaches remain important, addressing non-traditional maritime threats requires comprehensive strategies that integrate environmental protection, regional cooperation, technological innovation, and multi-stakeholder governance. The findings indicate that effective maritime security in the Philippines depends on strengthening institutional capacity, enhancing regional cooperation mechanisms, and developing adaptive responses to emerging threats including climate change and transnational organized crime.
Keywords*: maritime security, Philippines, non-traditional threats, regional cooperation, climate change, transnational crime*

Date of Submission: 25-08-2025 Date of Acceptance: 05-09-2025

I. Introduction

Maritime security has evolved significantly in the 21st century, moving beyond traditional concerns of naval warfare and territorial defense to encompass a broad spectrum of transnational challenges that threaten state sovereignty, economic prosperity, and human security. For archipelagic states like the Philippines, these non-traditional maritime security issues present particularly complex challenges due to the country's extensive coastline, vast exclusive economic zone (EEZ), and strategic position along major shipping routes (Santarita, 2024). The transformation of the maritime security landscape reflects broader changes in international relations, where globalization, climate change, and technological advancement have created new vulnerabilities and interdependencies that transcend national boundaries.

The concept of non-traditional security emerged in academic and policy discourse during the 1990s as scholars and practitioners recognized that many contemporary threats could not be addressed through conventional military means (Buzan et al., 1998). These threats, including environmental degradation, pandemics, transnational crime, and economic vulnerabilities, require different analytical frameworks and policy responses than traditional military challenges. In the maritime domain, non-traditional security issues encompass a wide range of phenomena including illegal fishing, drug trafficking, human smuggling, piracy, terrorism, marine pollution, and climate change impacts that collectively challenge state capacity and regional stability.

For the Philippines, maritime security is not merely a policy concern but an existential imperative. As Roell (2019) observes, the Philippines' maritime domain spans over 3.1 million square kilometers, creating both opportunities and vulnerabilities that shape national development and security strategies. The country's position at the intersection of major shipping lanes between East Asia and the broader Indo-Pacific region makes it both a beneficiary of maritime trade and a target for various forms of transnational criminal activity. Moreover, as an archipelagic state with over 60% of its population living in coastal areas, the Philippines faces unique vulnerabilities to climate change impacts, marine environmental degradation, and other maritime-based threats (Climate Change Commission, 2024).

This study examines the non-traditional maritime security challenges facing the Philippines through a comprehensive analysis of recent trends, policy responses, and regional cooperation mechanisms. The research contributes to understanding how small and medium-sized states navigate complex security environments where traditional and non-traditional threats intersect, and where effective responses require innovative approaches to governance, regional cooperation, and international engagement.

II. Literature Review

Theoretical Frameworks for Non-Traditional Security

The theoretical foundation for understanding non-traditional maritime security draws from several interconnected academic traditions, including security studies, international relations theory, and environmental governance scholarship. The Copenhagen School's securitization theory provides a useful framework for understanding how maritime issues become constructed as security threats through political processes that designate certain phenomena as existential challenges requiring emergency responses (Buzan et al., 1998). In the Philippine context, this theoretical approach helps explain how issues such as illegal fishing and climate change have been elevated from technical policy concerns to national security priorities requiring comprehensive government responses.

Human security theory offers another important analytical lens, emphasizing the security of individuals and communities rather than focusing exclusively on state security (Tadjbakhsh & Chenoy, 2007). This approach is particularly relevant for understanding maritime security in the Philippines, where many threats directly affect coastal communities, fishermen, and other maritime-dependent populations. The human security framework highlights the interconnections between environmental degradation, economic vulnerability, and personal safety that characterize many contemporary maritime challenges.

Regional security complex theory, developed by Buzan and Wæver (2003), provides insights into how maritime security challenges in the Philippines connect to broader regional dynamics in Southeast Asia and the Indo-Pacific. This theoretical framework emphasizes that security issues are often best understood at the regional level, where patterns of amity and enmity, shared vulnerabilities, and cooperative mechanisms create distinctive security dynamics that transcend individual state boundaries.

Maritime Security in Southeast Asia

The scholarly literature on maritime security in Southeast Asia has grown substantially over the past two decades, reflecting both the increasing importance of maritime issues in regional affairs and the evolution of security challenges in the post-Cold War period. Bateman (2007) provides a comprehensive overview of maritime security challenges in Southeast Asia, highlighting the complex interplay between traditional territorial disputes and emerging non-traditional threats including piracy, environmental degradation, and illegal resource exploitation.

More recent scholarship has emphasized the transnational character of contemporary maritime security challenges. Bradford (2008) examines how drug trafficking networks exploit maritime routes and weak governance areas throughout Southeast Asia, while Liss (2011) analyzes the evolution of piracy and maritime crime in the region. These studies demonstrate how criminal networks adapt to changing enforcement patterns and exploit geographic and institutional vulnerabilities to conduct illicit activities across national boundaries.

Climate change has emerged as a central concern in recent maritime security literature. Doyle & Rumley (2019) examine how sea level rise, extreme weather events, and ecosystem degradation create new security challenges for Southeast Asian states. Their analysis emphasizes the interconnected nature of environmental and security challenges, showing how climate impacts can exacerbate existing vulnerabilities and create new sources of instability.

Philippine Maritime Security Studies

Scholarship specifically focused on Philippine maritime security has developed along several distinct trajectories. Historical studies have examined the evolution of Philippine maritime policy and institutional development, including the role of colonial legacies and post-independence state-building processes in shaping contemporary maritime governance (Batongbacal, 2018). These studies provide important context for understanding current challenges by highlighting long-standing patterns of institutional weakness, resource constraints, and external dependencies that continue to influence maritime security policy.

Contemporary studies of Philippine maritime security have increasingly focused on specific threat categories and policy responses. Cruz De Castro (2020) examines the intersection of territorial disputes in the South China Sea with broader maritime security challenges, arguing that geopolitical tensions with China have complicated efforts to address non-traditional threats through regional cooperation. This analysis highlights how traditional and non-traditional security issues interact in complex ways that require nuanced policy responses.

Environmental studies have contributed important insights into the ecological dimensions of Philippine maritime security. Alcala & Russ (2006) examine the degradation of marine ecosystems and its implications for food security and economic development. Their research demonstrates how environmental degradation creates cascading effects that undermine both human security and state capacity, requiring integrated approaches that address environmental protection and security concerns simultaneously.

III. Methodology

This study employs a mixed-methods approach combining quantitative data analysis with qualitative assessment of policy documents, government reports, and expert interviews. The research draws on multiple data sources including official government statistics from the Philippine Coast Guard (PCG), Philippine Drug Enforcement Agency (PDEA), and Department of Environment and Natural Resources (DENR), as well as international datasets from organizations such as the United Nations Office on Drugs and Crime (UNODC) and the International Maritime Organization (IMO).

Primary data collection involved analysis of incident reports, enforcement statistics, and policy documents covering the period from 2012 to 2025. Government reports from agencies including the PCG, Philippine National Police Maritime Group, and various regional offices provided detailed information on specific incidents and enforcement activities. International databases including the ReCAAP Information Sharing Centre's piracy reports and UNODC trafficking statistics provided comparative context and regional trends analysis.

Qualitative analysis focused on policy documents, legislative materials, and official statements that reveal government priorities and strategic approaches to maritime security challenges. This analysis examined how Philippine maritime security policy has evolved over the study period and identified key themes in government responses to different types of threats.

The study employed a case study approach to examine specific maritime security challenges in detail, including major drug trafficking incidents, illegal fishing enforcement operations, and climate adaptation initiatives. These case studies provide concrete examples of how non-traditional maritime security threats manifest in practice and how government agencies and other stakeholders respond to specific incidents and longer-term challenges.

Non-Traditional Maritime Security Threats in the Philippines

Illegal, Unreported, and Unregulated (IUU) Fishing

IUU fishing represents one of the most persistent and economically damaging non-traditional maritime security threats facing the Philippines. According to recent studies, more than 40% of all wild-caught seafood in the Philippine archipelago came from IUU fishing activities in 2019, resulting in estimated annual revenue losses of ₱62 billion (USD $1.3 billion) for the Philippine government (Santarita, 2024). These activities encompass a range of illegal practices including fishing without proper licenses, exceeding approved quotas, using prohibited fishing methods, and operating in restricted areas.

The scale and complexity of IUU fishing in Philippine waters reflects both the country's vast maritime domain and the limited capacity of enforcement agencies to monitor and control fishing activities across such an extensive area. The Philippine EEZ covers approximately 2.26 million square kilometers, making comprehensive surveillance extremely challenging even with modern technology and international assistance (Batongbacal, 2021). Foreign fishing vessels, particularly from China, have been repeatedly detected operating illegally in Philippine waters, often with the support or acquiescence of their home governments, creating diplomatic complications that extend beyond simple law enforcement concerns.

Recent enforcement actions have demonstrated both the Philippine government's commitment to addressing IUU fishing and the practical challenges involved in effective maritime law enforcement. Prime Minister Marcos Jr. has called for stronger action against illegal fishing, including more aggressive enforcement measures and enhanced regional cooperation (Office of the President, 2025). However, enforcement efforts face significant constraints including limited patrol vessels, inadequate surveillance technology, and insufficient coordination between different government agencies responsible for maritime security.

The economic impacts of IUU fishing extend far beyond immediate revenue losses to encompass broader concerns about food security, environmental sustainability, and the livelihoods of legitimate fishing communities. Overfishing and destructive fishing practices associated with IUU activities contribute to the depletion of fish stocks that serve as essential protein sources for Philippine communities and important export commodities. Marine ecosystem degradation resulting from illegal fishing practices undermines the long-term sustainability of fisheries resources and threatens the economic foundations of coastal communities throughout the archipelago.

Regional cooperation has emerged as an essential component of efforts to combat IUU fishing, reflecting the transnational character of fishing fleet operations and the need for coordinated surveillance and enforcement activities. The Philippines participates in various regional fisheries management organizations and information-sharing mechanisms, including the Western and Central Pacific Fisheries Commission and bilateral agreements

with neighboring countries. However, the effectiveness of regional cooperation is often limited by political tensions, particularly with China, and varying levels of commitment to enforcement among regional partners.

Drug Trafficking and Maritime Routes

The Philippines has become an increasingly important transit point for international drug trafficking networks that exploit the country's extensive coastline, complex geography, and limited maritime enforcement capabilities. The Philippine Drug Enforcement Agency (PDEA) reports that criminal organizations have adapted sophisticated methods to transport illegal drugs through Philippine waters, taking advantage of the country's position along major shipping routes between drug-producing regions in South America and Asia and consumption markets in Australia and other developed countries (PDEA, 2025).

Maritime drug trafficking operations in the Philippines employ diverse methods and routes that reflect the adaptability and resources of organized criminal networks. PDEA Director General Aaron Aquino has identified the use of private airstrips, seaports, and maritime vessels as increasingly common methods for drug importation, with criminal organizations utilizing seaplanes, yachts, and small vessels to transport bulk quantities of illegal drugs to remote coastal areas (Philippine Drug Enforcement Agency, 2024). The country's more than 1,200 private ports present particular enforcement challenges, as many lack adequate security measures and regulatory oversight.

The COVID-19 pandemic significantly altered drug trafficking patterns in Southeast Asia, with maritime routes becoming more important as land and air transportation routes faced increased restrictions and surveillance (Asia Maritime Transparency Initiative, 2023). This shift has made the Philippines more attractive to drug trafficking organizations seeking alternative routes and has contributed to increasing drug seizures at Philippine ports and coastal areas. The March 2021 seizure of 119.93 kilograms of shabu valued at ₱816 million at Calapan Port in Oriental Mindoro exemplifies the scale of maritime drug trafficking operations targeting Philippine territory (Philippine Information Agency, 2025).

Regional drug trafficking networks operating in Philippine waters demonstrate sophisticated organizational capabilities and extensive international connections. These networks often involve cooperation between criminal organizations from multiple countries and employ advanced technology for communication, navigation, and surveillance avoidance (United Nations Office on Drugs and Crime, 2024). The use of "dead drops" and other covert methods allows criminal organizations to minimize their exposure to law enforcement while maintaining operational flexibility across multiple maritime jurisdictions.

The spillover effects of transit drug trafficking create additional security challenges within the Philippines, including the development of domestic drug markets, increased violence associated with criminal competition, and corruption of government officials. PDEA reports indicate that some areas previously declared "drug-cleared" under the Barangay Drug Clearing Program have experienced resurgence in drug activity, suggesting that sustained enforcement and community engagement efforts are necessary to prevent the re-establishment of criminal networks (Regional Intelligence Officer Maslian, 2025).

Maritime drug trafficking also intersects with other forms of transnational crime, including human trafficking, weapons smuggling, and money laundering, creating complex criminal networks that pose multiple threats to national security. The interconnected nature of these criminal activities requires comprehensive law enforcement approaches that address multiple threat vectors simultaneously while building capacity for sustained operations across the Philippines' extensive maritime domain.

Climate Change and Environmental Degradation

Climate change represents perhaps the most comprehensive and long-term non-traditional maritime security challenge facing the Philippines, with impacts that extend across environmental, economic, social, and security domains. Sea level rise rates in the Philippine Sea of 5-7 millimeters per year significantly exceed the global average of 2.8-3.6 millimeters annually, creating immediate threats to coastal communities and infrastructure while contributing to longer-term concerns about territorial integrity and population displacement (Climate Tracker Asia, 2024).

The Philippines has experienced an average sea level rise of approximately 60 centimeters, about three times higher than the global average, with particularly severe impacts in low-lying coastal areas including parts of Metro Manila and the Visayas (Energy Tracker Asia, 2024). These changes threaten the stability of maritime boundaries, create potential displacement of coastal populations, and exacerbate existing vulnerabilities related to storm surge protection, freshwater availability, and agricultural productivity in coastal areas.

Ocean acidification and warming represent additional climate-related threats that directly impact marine ecosystems and the communities that depend on them. The absorption of increased atmospheric carbon dioxide by seawater creates carbonic acid that threatens coral reef systems, which serve as essential habitat for commercial fish species and provide natural coastal protection against storm surge and erosion (Santarita, 2024). Coral

bleaching events have become increasingly frequent and severe throughout Philippine waters, undermining both biodiversity conservation and the economic foundations of tourism and fishing industries.

Extreme weather events, including more frequent and intense tropical cyclones, create additional security challenges through their impacts on infrastructure, emergency response capabilities, and economic stability. The Philippines experiences an average of 20 tropical cyclones annually, with recent events including Tropical Cyclone Winston demonstrating the potential for catastrophic damage to critical infrastructure and coastal communities (Philippine Climate Change Commission, 2024). These events test the resilience of emergency management systems and can overwhelm local response capabilities, requiring regional and international assistance.

The security implications of climate change extend beyond immediate environmental impacts to encompass potential conflicts over scarce resources, population movements, and territorial disputes. Changes in fish migration patterns resulting from ocean warming could exacerbate existing tensions over fishing rights and maritime boundaries, while sea level rise may affect the legal status of maritime features that serve as the basis for territorial claims in the South China Sea (United Nations, 2023).

Climate adaptation efforts in the Philippines have focused on building resilience through early warning systems, infrastructure improvements, and community-based adaptation strategies. The government has developed comprehensive climate change policies and disaster risk management frameworks, but implementation faces significant challenges related to resource constraints, institutional capacity, and the scale of required adaptations (National Disaster Management Office, 2023).

Marine Pollution and Environmental Crime

Marine pollution constitutes a significant non-traditional maritime security threat that undermines ecosystem health, economic development, and human security throughout the Philippines. As the third-largest contributor to marine plastic pollution globally, the Philippines generates over 2.7 million tons of plastic waste annually, with approximately 20% entering ocean environments (Climate Impact Tracker, 2024). This pollution affects marine biodiversity, fisheries productivity, and coastal tourism while creating long-term environmental and health challenges for coastal communities.

The scale of marine plastic pollution in the Philippines reflects broader patterns of waste management challenges, rapid economic development, and changing consumption patterns that have outpaced environmental protection infrastructure. The country's designation as a "sachet economy" due to its heavy reliance on single-use plastics illustrates how economic and social factors contribute to environmental challenges that ultimately affect maritime security (World Bank, 2021). Daily consumption of 163 million sachets creates enormous waste streams that often end up in waterways and coastal areas due to inadequate waste management systems.

Marine pollution intersects with climate change impacts to create compound environmental stresses that threaten coastal ecosystems and communities. Plastic pollution contributes to coral reef degradation by spreading pathogens and blocking sunlight necessary for coral growth, while also contaminating the marine food chain through microplastic ingestion by fish and other marine organisms (Earth.org, 2024). These environmental changes directly affect food security and economic opportunities for coastal communities that depend on healthy marine ecosystems.

Oil pollution from shipping accidents, illegal discharge, and inadequate port facilities creates additional environmental and security challenges. The Philippines' position along major international shipping routes increases exposure to potential oil spills and other hazardous material releases that can cause extensive environmental damage and economic losses. Recent incidents have demonstrated the need for improved emergency response capabilities and regional cooperation in addressing maritime pollution incidents.

Industrial pollution from land-based sources contributes significantly to marine environmental degradation through runoff of agricultural chemicals, untreated sewage, and industrial waste. The concentration of population and economic activity in coastal areas throughout the Philippines creates multiple pollution sources that collectively impact marine water quality and ecosystem health. Addressing these pollution sources requires integrated approaches that coordinate land-use planning, industrial regulation, and environmental protection across multiple government agencies and jurisdictions.

Human Trafficking and Maritime Routes

Human trafficking through maritime routes represents a persistent security challenge that exploits the Philippines' complex geography, porous borders, and limited enforcement capabilities. According to United Nations Office on Drugs and Crime reports, approximately 30% of human trafficking from the Philippines utilizes sea routes, with criminal organizations employing fishing boats, speedboats, and commercial vessels to transport victims to destination countries, particularly Malaysia (UNODC, 2008). The "Southern Backdoor" route through the southern Philippines has become a primary corridor for human trafficking operations targeting undocumented migrants seeking economic opportunities abroad.

Recent incidents demonstrate the continuing scope and evolving methods of maritime human trafficking affecting Philippine territory. In May 2025, the Bureau of Immigration reported the repatriation of three Filipino women who were trafficked to Malaysia through illegal maritime routes and forced into sex work after being promised legitimate employment as waitresses with salaries of ₱40,000-60,000 monthly (Bureau of Immigration, 2025). These victims traveled from Palawan to Malaysia aboard small boats to evade immigration procedures, illustrating the vulnerability of remote coastal areas to exploitation by criminal networks.

The geographic characteristics of the Philippines create both opportunities and challenges for combating maritime human trafficking. The country's extensive coastline and numerous islands provide multiple potential entry and exit points that are difficult to monitor comprehensively, while traditional movement patterns and cultural connections across maritime boundaries can be exploited by criminal organizations to facilitate illegal activities. The use of small vessels operating in shallow waters and remote coastal areas allows trafficking networks to avoid detection by conventional patrol vessels and surveillance systems.

Gender dynamics play a significant role in Philippine maritime human trafficking, with women and girls comprising the majority of trafficking victims. Analysis of government case files indicates that of 123 documented trafficking victims, only three were male, with the majority of female victims falling into the 18-27 age bracket (UNODC, 2008). This gender pattern reflects both the demand for female labor in destination countries and the particular vulnerabilities that young women face in the context of economic migration and limited employment opportunities.

Regional cooperation has become essential for addressing maritime human trafficking given the transnational character of trafficking networks and the need for coordinated enforcement across multiple jurisdictions. The Philippines participates in various regional initiatives including information sharing arrangements with Malaysia and Indonesia, joint patrol operations in border areas, and capacity building programs supported by international partners. However, the effectiveness of regional cooperation is often limited by political sensitivities, resource constraints, and varying levels of commitment to anti-trafficking efforts among regional partners.

Piracy and Maritime Terrorism

While traditional piracy has declined significantly in Philippine waters over the past decade, maritime terrorism and related security threats continue to pose challenges, particularly in the southern Philippines where terrorist organizations have historically maintained maritime capabilities. The Abu Sayyaf Group (ASG) and affiliated organizations have demonstrated persistent capacity for maritime operations including kidnapping, bombing attacks on ferries, and other forms of violence targeting both vessels and coastal communities (ReCAAP Information Sharing Centre, 2024).

The evolution of maritime terrorism threats in the Philippines reflects broader changes in regional terrorist networks, counter-terrorism operations, and geopolitical dynamics. While major terrorist attacks such as the 2004 bombing of SuperFerry 14 in Manila Harbor, which killed 116 people, have not been repeated, security agencies continue to assess terrorist groups as maintaining maritime operational capabilities (Maritime Security Expert Fabe, 2024). The geographic characteristics of the Sulu-Celebes Sea region, including shallow waters, numerous islands, and extensive mangrove areas, provide tactical advantages for terrorist organizations seeking to evade government forces.

Recent assessments by the ReCAAP Information Sharing Centre indicate a reduction in the threat level for crew kidnapping in the Sulu-Celebes Sea from "potentially high" to "moderate," reflecting successful trilateral cooperation between the Philippines, Malaysia, and Indonesia in conducting joint patrols and intelligence sharing (ReCAAP ISC, 2023). The last reported incident of crew abduction for ransom occurred in January 2020, and no crew members are currently being held captive by terrorist organizations. However, security agencies maintain that terrorist groups retain the capability to conduct maritime attacks and continue to pose potential threats to shipping and coastal communities.

The nexus between maritime terrorism and other forms of transnational crime creates additional security challenges that require comprehensive responses. Terrorist organizations often engage in criminal activities including drug trafficking, kidnapping, and illegal resource extraction to finance their operations, while criminal networks may provide services and support to terrorist groups. This convergence of terrorism and organized crime creates complex security environments where traditional counter-terrorism approaches must be integrated with broader law enforcement efforts.

International cooperation through mechanisms including the Trilateral Cooperation Agreement between the Philippines, Malaysia, and Indonesia has proven essential for addressing maritime terrorism threats in the region. Joint patrols, intelligence sharing, and coordinated enforcement operations have contributed to the decline in terrorist maritime activities while building regional capacity for sustained counter-terrorism efforts (Maritime Security Cooperation Agreement, 2017).

Cybersecurity Threats to Maritime Infrastructure

Cybersecurity has emerged as an increasingly important dimension of maritime security as the Philippines' port and shipping infrastructure becomes more digitized and connected to global networks. Recent incidents including the 2024 security breach affecting four systems of the Maritime Industry Authority (MARINA) demonstrate the vulnerability of critical maritime infrastructure to cyberattacks that could disrupt vessel registration, seafarer certification, and other essential maritime services (Digital Watch Observatory, 2024).

The Philippines faces significant cybersecurity challenges across multiple sectors, with maritime infrastructure representing a particularly vulnerable target due to its critical role in national and regional economic systems. A 2024 survey indicated that 86.75 million Filipinos use digital platforms for various purposes including banking and commerce, creating extensive attack surfaces for cybercriminals while highlighting the potential economic impacts of successful cyberattacks (Risk and Threat Perception, 2024). The maritime sector's increasing reliance on digital systems for cargo handling, port management, and vessel operations creates new vulnerabilities that require specialized security measures.

Regional cybersecurity cooperation has become essential for addressing maritime cyber threats given the interconnected nature of digital infrastructure and the transnational character of many cyber threats. Recent exercises including the 2024 maritime cybersecurity tabletop exercise conducted by the U.S. Department of Homeland Security in Manila involved testing responses to sophisticated cyberattacks on port infrastructure, including automated cargo handling systems and communication networks (Industrial Cyber, 2024). These exercises highlight the importance of international cooperation in building capacity for cybersecurity incident response and strengthening critical infrastructure protection.

The evolution of cyber threats affecting maritime infrastructure reflects broader trends in cybercrime including the use of advanced persistent threats (APTs), ransomware attacks, and state-sponsored cyber operations. Philippine cybersecurity officials report detecting foreign attempts to access intelligence data, including "sleeper" threats that had been embedded in government systems before being discovered through enhanced cybersecurity measures (Reuters, 2025). These threats demonstrate the need for continuous monitoring, threat intelligence sharing, and adaptive security measures that can respond to evolving cyber threat landscapes.

Regional Cooperation and Policy Responses

Philippine Coast Guard Modernization and Capacity Building

The Philippine Coast Guard (PCG) has undergone significant modernization efforts aimed at enhancing capacity to address non-traditional maritime security threats through improved vessels, equipment, training, and operational procedures. Recent acquisitions including offshore patrol vessels and enhanced surveillance capabilities have strengthened the PCG's ability to conduct maritime law enforcement operations across the Philippines' vast EEZ (Philippine Coast Guard, 2024). The delivery of Guardian-class patrol boats through the Pacific Maritime Security Program represents a major enhancement of Philippine maritime enforcement capabilities, providing platforms capable of extended operations in offshore waters.

International cooperation has played a crucial role in PCG modernization efforts, with partnerships including agreements with the Indian Coast Guard, Vietnam Coast Guard, and other regional partners providing opportunities for joint training, capacity building, and operational cooperation. The December 2024 bilateral meeting between the Philippine and Indian Coast Guards focused on enhancing collaboration in maritime search and rescue, law enforcement, marine pollution response, and capacity building (Press Information Bureau India, 2024). These partnerships provide access to technical expertise, training opportunities, and operational support that enhance Philippine maritime security capabilities.

Training and human resource development have become increasingly important components of PCG modernization as the complexity of maritime security challenges requires specialized skills and knowledge. Recent multinational training events including the 2025 Boarding Officer Course conducted in Davao City with participation from Vietnamese and Indonesian partners demonstrate the importance of regional cooperation in building enforcement capabilities (U.S. Embassy Philippines, 2025). These programs provide practical skills training while fostering relationships that support ongoing operational cooperation.

Technological innovation has emerged as a key focus area for PCG modernization, with investments in surveillance systems, communication equipment, and data analysis capabilities aimed at improving situational awareness and enforcement effectiveness. The integration of satellite technology, automatic identification systems, and other modern surveillance tools has enhanced the PCG's ability to monitor vessel movements and detect illegal activities across Philippine waters. However, the scale of the surveillance challenge requires continued investment and regional cooperation to achieve comprehensive maritime domain awareness.

ASEAN Maritime Security Cooperation

The Association of Southeast Asian Nations (ASEAN) has developed increasingly sophisticated frameworks for maritime security cooperation that address both traditional and non-traditional threats through multilateral initiatives, information sharing, and capacity building programs. The ASEAN-India Joint Statement on Maritime Cooperation emphasizes the importance of addressing emerging maritime issues including terrorism, piracy, human trafficking, drug smuggling, illegal fishing, and marine pollution through enhanced regional collaboration (ASEAN, 2023).

Regional cooperation mechanisms including the Regional Cooperation Agreement on Combating Piracy and Armed Robbery Against Ships in Asia (ReCAAP) provide platforms for information sharing and coordinated responses to maritime security threats. The ReCAAP Information Sharing Centre facilitates real-time information sharing among member countries and provides analytical products that support operational planning and threat assessment. Recent reports indicate significant improvements in maritime security conditions in key areas including the Sulu-Celebes Sea, where coordinated patrols and intelligence sharing have contributed to reduced terrorist and criminal activity.

ASEAN maritime security cooperation has evolved to address emerging challenges including cybersecurity threats, climate change impacts, and transnational organized crime through specialized working groups and technical cooperation programs. The development of regional frameworks for maritime cybersecurity, marine environmental protection, and fisheries management demonstrates the expansion of regional cooperation beyond traditional security concerns to encompass comprehensive approaches to maritime governance.

The effectiveness of ASEAN maritime security cooperation depends on continued political commitment from member states, adequate resource allocation for regional programs, and the development of institutional mechanisms that can adapt to evolving threat environments. Recent initiatives including joint exercises, training programs, and information sharing arrangements have strengthened regional capacity for maritime security cooperation while building relationships that support sustained collaboration.

Bilateral Security Partnerships

The Philippines has developed extensive bilateral partnerships with major maritime powers including the United States, Japan, Australia, and India that provide critical support for maritime security capacity building and operational cooperation. The Mutual Defense Treaty with the United States includes provisions for cooperation in addressing maritime security threats, while recent agreements with Japan and Australia provide additional frameworks for security cooperation and capability development.

Security cooperation with the United States encompasses multiple dimensions including training, equipment provision, intelligence sharing, and joint operations that enhance Philippine maritime security capabilities. Recent programs including the Southeast Asia Training Team activities and Export Control and Related Border Security initiatives provide specialized training and equipment that strengthen Philippine capacity to address transnational threats (U.S. Embassy Philippines, 2015). These partnerships also provide access to advanced technology and intelligence capabilities that enhance situational awareness and enforcement effectiveness.

Regional partnerships with countries including India, Vietnam, and Malaysia provide additional opportunities for cooperation in addressing shared maritime security challenges. Recent agreements including memoranda of understanding on coast guard cooperation facilitate joint training, information sharing, and operational coordination that strengthen regional maritime security. The February 2025 Philippine Coast Guard port visit to Vietnam included joint exercise planning and tabletop exercises that prepare for upcoming search and rescue and firefighting exercises, demonstrating the practical benefits of bilateral cooperation (Philippine News Agency, 2025).

The development of trilateral and minilateral partnerships has emerged as an important mechanism for enhancing maritime security cooperation while maintaining flexibility to address specific challenges. The trilateral cooperation between the Philippines, Malaysia, and Indonesia in the Sulu-Celebes Sea provides a model for focused cooperation that addresses specific geographic and thematic challenges through coordinated patrols, intelligence sharing, and joint operations.

IV. Policy Recommendations And Future Directions

Integrated Maritime Governance

Addressing the complex array of non-traditional maritime security challenges facing the Philippines requires integrated approaches to maritime governance that coordinate activities across multiple government agencies, levels of government, and stakeholder communities. Current fragmentation in maritime governance, where responsibilities and mandates of different agencies sometimes overlap or conflict, creates operational difficulties and reduces the effectiveness of security responses (Diplomatist, 2024). Developing more integrated

governance frameworks requires clarifying agency roles, improving coordination mechanisms, and establishing clear lines of authority for different types of maritime security challenges.

The development of a comprehensive National Maritime Security Strategy that addresses both traditional and non-traditional threats through coordinated whole-of-government approaches could provide the foundation for more effective maritime governance. Such a strategy would need to integrate military, law enforcement, environmental, economic, and social dimensions of maritime security while establishing clear priorities and resource allocation frameworks. The strategy should also incorporate regional and international cooperation as essential components of national maritime security rather than auxiliary considerations.

Institutional capacity building remains essential for effective maritime governance, particularly in areas such as maritime domain awareness, enforcement capabilities, and regulatory oversight. Investments in training, technology, and infrastructure should be guided by comprehensive assessments of capability gaps and strategic priorities rather than ad hoc responses to immediate crises. The development of specialized expertise in areas such as maritime cybersecurity, environmental crime investigation, and transnational criminal network analysis requires sustained commitment to human resource development and institutional learning.

Regional Cooperation Enhancement

Strengthening regional cooperation mechanisms provides essential support for addressing transnational maritime security challenges that exceed the individual capacity of any single state to manage effectively. Current regional frameworks including ASEAN maritime security initiatives and bilateral partnerships provide important foundations, but could be enhanced through more systematic information sharing, coordinated enforcement operations, and joint capacity building programs.

The development of regional maritime domain awareness capabilities through shared surveillance systems, coordinated patrols, and integrated data analysis could significantly enhance collective security while reducing individual state costs. Such capabilities would require sustained political commitment, significant financial investment, and the development of trust and confidence among regional partners. However, the benefits of enhanced regional maritime domain awareness could include more effective responses to transnational threats and reduced opportunities for criminal exploitation of jurisdictional gaps.

Regional cooperation in addressing climate change impacts on maritime security requires innovative approaches that integrate adaptation, mitigation, and security considerations. Collaborative efforts in areas such as early warning systems, disaster response capabilities, and ecosystem-based adaptation could strengthen regional resilience while addressing shared vulnerabilities. The development of regional frameworks for climate-related migration and displacement could help prevent climate impacts from becoming sources of regional instability.

Technology and Innovation

Leveraging technological innovation provides important opportunities for enhancing maritime security capabilities while addressing resource constraints that limit traditional enforcement approaches. Emerging technologies including unmanned surveillance systems, satellite-based monitoring, artificial intelligence for data analysis, and blockchain systems for supply chain tracking could significantly enhance maritime security capabilities if properly implemented and integrated into existing operational frameworks.

The development of integrated maritime surveillance systems that combine satellite imagery, automatic identification systems, vessel monitoring systems, and other data sources could provide comprehensive situational awareness across the Philippines' extensive maritime domain. Such systems would require significant initial investment but could provide long-term cost savings while enabling more effective and targeted enforcement operations. Regional cooperation in developing and operating such systems could further reduce costs while enhancing effectiveness.

Cybersecurity capabilities require particular attention as maritime infrastructure becomes increasingly digitized and connected to global networks. Developing specialized cybersecurity capabilities for maritime systems requires technical expertise that may not be available domestically, suggesting the importance of international cooperation and capacity building in this area. Regular cybersecurity exercises, threat intelligence sharing, and incident response planning are essential components of maritime cybersecurity that require sustained attention and resource allocation.

V. Conclusion

This comprehensive analysis of non-traditional maritime security issues in the Philippines reveals the complex, interconnected nature of contemporary maritime challenges and the need for adaptive, multifaceted responses that transcend traditional security approaches. The research demonstrates that illegal fishing, drug trafficking, climate change impacts, marine pollution, human trafficking, piracy, terrorism, and cybersecurity

threats create compound vulnerabilities that require integrated policy responses rather than isolated sectoral approaches.

The study's findings indicate that effective maritime security in the Philippines depends on three critical elements: strengthening domestic institutional capacity, enhancing regional cooperation mechanisms, and developing adaptive responses to emerging and evolving threats. The Philippine Coast Guard's modernization efforts, supported by international partnerships and regional cooperation frameworks, provide important foundations for enhanced maritime security capabilities. However, the scale and complexity of non-traditional maritime security challenges exceed the capacity of any single agency or even any single country to address effectively.

Regional cooperation through ASEAN frameworks, bilateral partnerships, and multilateral initiatives has proven essential for addressing transnational threats that exploit jurisdictional boundaries and governance gaps. The success of trilateral cooperation in reducing maritime terrorism in the Sulu-Celebes Sea demonstrates the potential for focused, geographically targeted cooperation to achieve concrete security improvements. However, sustaining and expanding such cooperation requires continued political commitment, adequate resource allocation, and the development of institutional mechanisms that can adapt to evolving threat environments.

Climate change emerges from this analysis as a threat multiplier that exacerbates existing vulnerabilities while creating new security challenges that require fundamental adaptations in maritime governance and regional cooperation. The Philippines' experience with accelerated sea level rise, extreme weather events, and ecosystem degradation provides important lessons for other vulnerable coastal states while highlighting the need for integrated approaches that address security, development, and environmental challenges simultaneously.

The evolution of cyber threats affecting maritime infrastructure represents an emerging challenge that requires specialized technical capabilities and new forms of international cooperation. The Philippines' experience with cyberattacks on maritime authorities demonstrates the vulnerability of critical infrastructure to digital threats while highlighting the need for enhanced cybersecurity capabilities and regional cooperation in addressing cyber threats.

Looking ahead, the effectiveness of Philippine maritime security will depend on the country's ability to build adaptive governance systems that can respond to evolving threat environments while maintaining the flexibility to address new challenges as they emerge. This requires sustained investment in institutional capacity, continued commitment to regional cooperation, and the development of innovative approaches that leverage technology and international partnerships to overcome resource constraints.

The broader implications of this study extend beyond the Philippines to encompass lessons for other archipelagic and coastal states facing similar challenges. The Philippines' experience demonstrates both the potential for small and medium-sized states to develop effective responses to complex maritime security challenges and the limitations that such states face when operating independently. Regional cooperation emerges as not merely beneficial but essential for addressing transnational threats effectively.

This research contributes to broader scholarly understanding of non-traditional security challenges by demonstrating how maritime issues serve as a lens for examining the intersection of environmental, economic, social, and security concerns in the contemporary international system. The study's findings support theoretical approaches that emphasize the transnational character of contemporary security challenges and the need for comprehensive, multilevel governance responses that transcend traditional state-centric approaches.

The policy implications of this research extend beyond maritime security to encompass broader questions about governance, regional cooperation, and international relations in an era of complex interdependence and shared vulnerabilities. The Philippines' experience provides important insights for other developing states facing similar challenges while highlighting the potential for innovative approaches to governance and cooperation that can address contemporary security challenges more effectively than traditional approaches.

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