

Tackling IUU Fishing, Transnational Organized Crime (TOC) and Maritime Security Threats in the Bay of Bengal: The Role of India and Regional Cooperation Under International Law

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Structured Abstract

Article Type: Research Paper

Purpose—This article underscores the imperative to prioritize challenges associated with Illegal, Unreported, and Unregulated (IUU) fishing and its resultant maritime security threats, focusing on the Bay of Bengal region. It advocates for enhanced regional cooperation to combat IUU fishing and foster a more robust, sustainable, and resilient blue economy.

Design, Methodology, Approach—The study utilizes a multidisciplinary approach, drawing on insights from marine ecology, international law, and regional governance. It involves an extensive review of existing regulatory and policy frameworks, particularly international fisheries instruments, to identify gaps and areas for improvement.

Findings—The research reveals the multifaceted and interconnected threats posed by transnational maritime criminal syndicates, seriously endangering the conservation of fisheries resources. The region's maritime security architectures lack cooperation, collaboration, and regional integration. It is incumbent upon India to forge close collaborative ties with the various littoral states to bolster maritime security within the region. India can become the regional leader by providing necessary assistance and capacity building by reinforcing the maritime security capabilities of these states. The existing international legal framework is complex and unwieldy, and its implementation lacks effectiveness.

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Moreover, it identifies a deficiency in established maritime security architectures in the region, where cooperation and collaboration are lacking.

Practical Implications—The article calls for establishing a regional and global order of maritime governance through enhanced cooperation and partnership to address IUU fishing and related maritime security concerns. It highlights the practical implications of such collaboration, including preserving marine resources, promoting economic sustainability, and safeguarding coastal and fishing communities.

Originality, Value—This article contributes original insights by emphasizing the interconnected nature of IUU fishing threats, their impact on maritime security, and the prospects of a regional and global order at sea. It underscores the importance of regional cooperation and policy improvement in addressing these challenges, thereby offering value to scholars, policymakers, and stakeholders in the maritime domain.

Keywords: Bay of Bengal, blue economy, international law, IUU fishing, maritime security, regional cooperation, TOC

I. Introduction

Oceans are the common heritage of humankind and shared developmental space.¹ They are indispensable for maintaining national, regional, and global order, safety, peace, and tranquility. They also provide food, economic, and job security sources to millions of the coastal communities that depend on them. Hence, it becomes necessary to protect and preserve the ocean's ecosystem.² Most of the international maritime trade takes place through ocean routes³ and reaches global markets through the maritime infrastructure developed by the coastal states.⁴ The Bay of Bengal is highly dependent on maritime trade and fisheries, which contribute significantly to the economic growth of the littorals. It is an essential source of protein-based food globally regarding affordability as the global population grows.⁵ Depleted fisheries resources has suddenly become an existential threat for many, especially the communities that depend primarily on coastal economies for survival.⁶ As per an estimate, around 45 million people work as fishers, and globally, approximately 180 million people, including women, are employed in the fishing industry.⁷ Out of the total global fish production of around 180 million tons, 34 percent of the production shares comes from Asia, with major players like India and Bangladesh. About 14 million fishers are engaged in direct or indirect employment in the fisheries sector in India⁸ and Bangladesh,⁹ respectively. This region is also prone to law enforcement challenges, disorder,¹⁰ and illegal trading due to the lack of a comprehensive governance system,¹¹ adversely affecting the extensive growth of the blue economy.¹² The blue economy encompasses diverse and well-established marine sectors, including maritime security and sustainability under international treaties. It traverses beyond the narrow conceptions of economic growth only.¹³ In India, various burgeoning sectors such as marine renewable energy, saltwater desalination, seabed exploration, deep seabed mining, marine biotechnology, and the provision of specialized Information and Communications Technologies (ICT) services comprise the blue economy.¹⁴ India's blue economy Policy of 2020 defines the term blue economy as:

“a subset of the national economy comprising of the entire system of ocean resources and man-made economic infrastructure in marine, maritime and the onshore coastal zones within India’s legal jurisdiction, which aid in the production of goods and services and have clear linkages with economic growth, environmental sustainability and national security.”¹⁵

The Food and Agriculture Organization (FAO) has reported an alarming increase in the volume of IUU fishing worldwide.¹⁶ IUU fishing has become a “global crisis”¹⁷ encompassing a network of other TOC¹⁸ that results in international conflicts¹⁹ severely threatening the sustainability of fish stocks²⁰ and the livelihood of fishing communities.²¹ Yarwood²² critiques the tendency to ignore the individual as the referent object of security, arguing that it is the responsibility of the state to ensure the safety of the people who reside within its borders. In the context of maritime security, security for coastal communities would entail ensuring the safety of seafarers as well as the sustainable exploitation of the resources in the maritime domain.²³ By emphasizing the human security implications of unsustainable exploitation of the fisheries resources resulting from IUU fishing and understanding how coastal communities’ responses to these livelihood threats might impact national security, she explores the synergistic interaction between the state-centric and human-centric dimensions of security and underscores the centrality of effective state institutions in providing human security.

Growing trends emphasize that IUU fishing should be considered a criminal activity and should be dealt with through criminal sanctions.²⁴ The “illegal” in the IUU realm has been deemed “as a fisheries resource management problem rather than an egregious criminal act.”²⁵ At the same time, the “unreported” and “unregulated” seem to be administrative infringement.²⁶ Against this backdrop, this article looks into maritime security issues vis-à-vis IUU fishing as a TOC and the challenges in achieving sustainable fisheries.

II. Defining Maritime Security

The concept of security is multifaceted and complex, making it a subject of wider debate amongst academic and intellectual circles.²⁷ Security also means freedom from any danger.²⁸ Klein asserts that there is no universally accepted definition of maritime security because there are complex and varying disputes relating to conflicting jurisdictional claims among the coastal states.²⁹ Fisheries crime vis-à-vis the maritime security paradigm is not universally embraced, and its assimilation into regional policy frameworks has occasionally encountered opposition.³⁰ The categorization of IUU fishing as a constituent threat to maritime security has been debated. Bateman has aptly characterized the challenge posed by the lack of consensus among regional nations in the Asia-Pacific regarding the definition of maritime security as an inherent “wicked problem” of fundamental nature.³¹ Maritime security involves “protecting a state’s land and maritime territory, infrastructure, economy, environment and society from certain harmful acts occurring at sea.”³² According to Galani and Evans, the concept lacks a singular definition, as it comprises a convergence of threats and actions by state and non-state entities.³³ The multifaceted, evolving, and often imprecise nature of the definitions and the concept of “maritime security” have been expounded upon by Rahman.³⁴ The inherent complexity involved in comprehending maritime security poses challenges when endeavoring to establish collaborative frameworks

among a diverse range of stakeholders. The term could also be defined as “the stable order of the oceans subject to the rule of law at sea.” The definition of maritime security provided by the tri-service Naval Operations Concept 2010 that guides U.S. maritime strategy:

“Those operations conducted to protect sovereignty and resources, ensure free and open commerce, and to counter maritime-related terrorism, transnational crime, piracy, environmental destruction, and illegal seaborne immigration.”³⁵

This definition has a complex correlation with maritime environmental safety and maritime security of coastal communities.³⁶ Under international law, maritime security comprehensively encompasses global and human security³⁷ within its ever-expanding fold.³⁸ Thus, a workable definition of maritime security could be:

“Protection of common interests in the maritime domain by filling in the policy gaps and providing a common ground for cooperation among regional players through effective maritime strategy with a holistic risk management policies.”³⁹

Fisheries crime is a pressing global concern that has led to the question of whether it involves a novel idea of criminal activity.⁴⁰ On August 9, 2021, the United Nations Security Council (UNSC) president issued a “Maintenance of international peace and security” statement reiterating the Council’s commitment to maritime security.⁴¹ The gravity of the situation demanded urgent attention and concerted efforts from the international community to combat and address the challenges posed by such crimes at sea.⁴² Analyzing the above discussions, we understand that there is a general consensus that security is the common denominator.

III. IUU Fishing, TOC, and Maritime Security Threats in the Bay of Bengal

IUU fishing adversely affects marine ecosystems,⁴³ and if left unabated, can be an existential threat to sustainable fisheries.⁴⁴ It can take place in coastal waters, in the EEZs, on the high seas, or in areas that fall under the jurisdiction of Regional Fisheries Management Organizations (RFMOs).⁴⁵ RFMOs are regional bodies established by countries to manage fish stocks in a particular region. It can take many forms, including fishing without a license, exceeding fishing quotas, using prohibited gear, and fishing in protected areas.⁴⁶ These organizations have established various tools to combat transnational maritime crimes, such as regional registers of fishing vessels authorized to fish in their respective areas of competence, IUU vessel lists, transshipment regulations, boarding and inspection procedures, vessel monitoring systems (VMS), trade-related measures and sanctions, port state measures or catch documentation schemes, etc.⁴⁷ The Bay of Bengal region does not have any RFMOs to check IUU fishing. The Bay of Bengal Programme-Intergovernmental Organization (BOBP-IGO),⁴⁸ a regional fisheries advisory body, is a nodal agency for providing sustainable fisheries in the region. Its main objective is to promote the responsible development of fisheries governance and to institutionalize a framework for sustainable fisheries management in the region. It comprises four contracting parties: Bangladesh, India, Sri Lanka, and the Maldives. IUU fishing often takes place in secrecy and uses techniques such as falsifying catch reports, concealing their identities, and evading detection

by authorities.⁴⁹ Fish stocks are rapidly declining globally, triggering a possible threat to peace and economic security, leading to competition,⁵⁰ and causing an imbalance in the ecological strata and structural system of the Bay of Bengal.⁵¹ The ever-growing demand for fish and changes in people's dietary habits globally⁵² also leads to overfishing and IUU fishing.⁵³ Industrial-scale illegal fishing and legal overfishing are also imminent threats to marine ecosystems linked to maritime crime in the coastal state maritime zones of the Bay of Bengal.⁵⁴ As with all transnational maritime crimes, it is practically impossible to estimate the total value of the IUU catch as it is not reported in the official government fishery records data.⁵⁵ Ian Urbina describes the illicit seafood trade as “a thriving global business that generates an estimated \$160 billion in annual sales.”⁵⁶ The challenges of “transshipment” also pose a significant threat to estimating the actual data due to the lack of proper mechanisms of monitoring, control, and surveillance (MCS) systems,⁵⁷ which are needed in the Bay of Bengal—a recent report from 2018 shows an estimated total of 4.56 million vessels are engaged in fishing globally.⁵⁸ Transshipment also poses transparency challenges regarding the documentation of the total catch and other supply-chain logistics.⁵⁹ Globally, “around 90% of the world's fish stock is now fully or overfished,”⁶⁰ and gross revenues generated at \$8.9 and \$17.2 billion annually.⁶¹ The predictable annual economic cost of IUU fishing catch is between \$10 and \$23.5 billion worldwide.⁶² With an annual financial loss estimated at \$26–50 billion, IUU fishing is more pervasive than it appears.⁶³

The littorals of the developing block suffer the most of these losses, with an estimated \$2–15 billion USD worth of fish accounting for nearly 65 percent of their total fish resources caught illegally.⁶⁴ The Asia Pacific Fishery Commission's (APFIC) draft report of 2015 estimates that IUU catch by foreign vessels in Asian countries ranges between 2.1 million to 2.5 million tonnes, worth \$3.7 billion to \$5.2 billion USD annually.⁶⁵ This report also identified 33 hotspots in Asia for illegal fishing by foreign vessels, with just six accounting for more than 80% of all illegal fishing.⁶⁶ The total loss per annum in the Asia-Pacific region is to the tune of 5 billion USD.⁶⁷ According to the assessment report conducted in 2015 by the Bay of Bengal Large Marine Ecosystem (BOBLME), a regional program aimed at improving the management of marine ecosystems and fisheries in the Bay of Bengal, the total worth of IUU fishing catches ranged from \$3.35 billion to \$10.40 billion annually.

Moreover, unreported fishing activities were estimated to be between \$1.35 billion and \$2.7 billion annually.⁶⁸ Notably, another report suggests that the Asian region suffers a total loss of around \$6 billion to \$20.75 billion annually, between 4.5 and 14.4 million tons of illegal catch.⁶⁹ By 2019, the situation in and around the “APFIC area” (excluding the South China Sea) had deteriorated further, with the estimated total illegal fishing landings totaling 6.6 million tonnes (MT) worth \$23.3 billion.⁷⁰

Due to multiple jurisdictional and procedural lacunae, these illicit criminal networks go undetected.⁷¹ In the year 2020, the United States Coast Guard speculated that IUU fishing is the single biggest threat to global maritime security, replacing piracy.⁷² The United Nations Convention against Transnational Organized Crime (UNOTC) comprehensively defines TOC, the nature of which is transnational, involves an organized criminal group, and is considered a “serious crime.”⁷³ The major components of TOC include: the crime spans multiple jurisdictions. The crime occurs in one jurisdiction, but extensive pre-crime activity in another state constitutes “substantial participation” in the crime. Even if the crime occurs in one state, it has severe repercussions in another.⁷⁴ IUU fishing also has

a direct nexus⁷⁵ with maritime security and encompasses transnational fisheries crime.⁷⁶ While there are links between IUU fishing and human rights abuses, and with IUU fishing organized crime, Mary Mackay et al. stress that addressing all human and environmental violations are important.⁷⁷ Three distinct business models operating within the world's oceans offer clarity on maritime criminal activities, which explain why certain crimes, such as forced labor, are associated with illegal fishing while other crimes, such as trafficking or smuggling, are less likely.⁷⁸ By disentangling these crimes, solutions can be better focused on to reduce illegal behavior on the sea and protect those vulnerable to fisheries exploitation, enhancing livelihoods, social well-being, and the sustainability of global fisheries.

The UNGA Resolution no. 65/37 categorically speaks about the continuing problem of TOC at sea and its relation to other illicit activities that take place with it. The UNGA resolution no. 64/72 on sustainable fisheries highlights the association between IUU fishing and TOC.⁷⁹ As per a 2020 UNGA resolution, IUU fishing is a possible threat to maritime security, and there is a growing concern regarding criminal prosecution and punishment of the rogues involved.⁸⁰ A report by INTERPOL suggests that fisheries crime can be said to encompass all the crimes committed in the fisheries sector.⁸¹ Thus, maritime security threats due to IUU fishing remain among the most unpalatable challenges.⁸² It is a significant facilitator of poaching and illicit trade in contraband, which undermines maritime, environmental, and economic security and the sovereignty of coastal states.⁸³ Maritime security is among the most crucial facets of a sustainable and resilient blue economy.⁸⁴ Given the ever-growing maritime security threats, the international community ensures better security at sea for crime-free trading and economic activities through a policy and legal framework at the international level to address this critical issue outlining the measures, obligations, and cooperation mechanisms mandated by these laws to combat IUU fishing effectively.⁸⁵ The heterogeneous nature of these crimes, coupled with the inherent challenges in addressing offenses that traverse boundaries, underscores the necessity for a comprehensive, cohesive, and effectively implemented international legal framework to adequately combat them. However, the conceptualization of TOC in the maritime domain remains ambiguous and subject to debate.⁸⁶ Regrettably, the existing international legal framework is intricate and unwieldy, and its implementation lacks effectiveness. Moreover, the lack of clarity regarding the extent and characteristics of these crimes has resulted in a research and academic gap, hindering the formulation of a concerted international policy response.

IV. IUU Fishing and Maritime (*In*)security: Analysis of the International Legal Framework

This part of the article discusses the relevant international legal frameworks to combat the devastating practices of IUU fishing. UNCLOS,⁸⁷ also known as the "Constitution of the Oceans,"⁸⁸ is one of the earliest regimes to recognize the need for regional cooperation and collaborative efforts toward maritime security threats.⁸⁹ The preamble addresses the problems of biodiversity and the conservation of marine living resources, identifying the issues of the ocean in general.⁹⁰ The challenges of IUU fishing and the

resultant maritime security threats are a “tragedy of commons.” It is futuristic to include and address maritime crimes, security challenges, and potential threats relating to maritime security issues.⁹¹

Article 61 obligates the coastal states to define the total allowable catch (TAC) in their EEZ, consider the resultant effects of fishing on the harvested species, and take measures for their restoration.⁹² No single state can have a particular state-centric plan; the states must come together to safeguard their common interests. Article 87 establishes the “Freedom of the High Seas,” which includes various freedoms for all states to navigate and use the resources in international waters, including the freedom to fish.⁹³ Moreover, it should also consider the interests of coastal states concerning specific fish stocks and the special obligations established for straddling stocks and highly migratory species.⁹⁴ Under Article 93, the states must render assistance in protecting the marine environment. Article 117 establishes an obligation to collaborate in managing and preserving resources,⁹⁵ while Article 118 mandates the conservation and management of living resources and the utilization of international fisheries commissions.⁹⁶ Article 119 stipulates that parties must consider “any internationally recommended minimum standards” as they apply measures to conserve living resources.⁹⁷ Article 192 of UNCLOS entails that the flag state is under a “duty” to adopt measures to secure adherence to regulations and deter IUU fishing by vessels under its flag.⁹⁸ Article 235(3) says, “States shall cooperate in the implementation of existing international law and the ongoing progress of international law.”⁹⁹ Despite these efforts, there are still complexities and practical problems in managing and conserving fisheries. In the summary of its second Report of Session 2021–22, the House of Lords recently highlighted that UNCLOS is not perfect for global needs; it has lost its relevancy in the 21st century, and there is a pressing need to update it.¹⁰⁰

V. The Challenges of Enforcement Under International Fisheries Law

Enforcement is a significant challenge and “weak point” that permeates all aspects of international law, but it becomes particularly arduous in the maritime realm. UNCLOS exhibits deficiencies in effectively addressing maritime security threats. As a result, it was necessary to develop binding legal frameworks within the Food and Agriculture Organization’s (FAO) domain. This endeavor established two significant instruments: the Compliance Agreement 1993¹⁰¹ and the United Nations Fish Stocks Agreement (UNFSA) 1995.¹⁰² The primary responsibilities outlined within the former pertain to the necessity for vessels engaging in fishing to obtain authorization, along with the duties of the flag states. The latter seeks to strengthen the states by establishing and enhancing fisheries regimes accordingly. UNFSA is implemented exclusively for fisheries management and calls on the states to ensure the exchange of information on sustainable fishing.¹⁰³ It provides conservation and management measures for highly migratory and straddling fish stocks found in EEZs and adjacent high-seas areas by creating RFMOs. It stipulates that states seeking to fish in areas regulated by an RFMO must join the relevant organization and adhere to its conservation and management measures (CMMs).¹⁰⁴ The UNFSA places significant emphasis on the dedication of states

to the preservation of natural resources in global waters, particularly within the established framework of RFMOs.¹⁰⁵ RFMOs aim to promote the long-term conservation and sustainable use of fishery resources and, in some cases, protect the ecosystems in which these resources are found. These intergovernmental organizations hold annual meetings where fisheries management decisions are made, relying on advice from scientific advisory bodies. The CMMs adopted by RFMOs cover a wide range of measures, such as setting total allowable catches, limiting fishing effort, regulating gear types, and addressing the by-catch of non-target species.¹⁰⁶ UNFSA is implemented exclusively for fisheries management and calls on the states to ensure the exchange of information on sustainable fishing.¹⁰⁷ It is of utmost priority that all the littorals in the Bay of Bengal become parties to the UNFSA for a better cohesion of ideas to combat IUU fishing. The UNFSA marked a shift in the international policy framework in that it introduced the precautionary principle. Thereafter, the first international treaty that is legally binding and explicitly designed to tackle IUU fishing is the Agreement on Port State Measures to Prevent, Deter, and Eliminate IUU Fishing (PSMA).¹⁰⁸ It provides “measures to combat IUU fishing should build on the primary responsibility of flag states and use all available jurisdiction under international law, including port state measures, coastal state measures, market state related measures, and measures to ensure that nationals do not support or engage in IUU fishing.”¹⁰⁹ The Code of Conduct for Responsible Fisheries (CCRF) further complements these measures for Responsible Fisheries,¹¹⁰ which work with the fishing provisions of the UNCLOS. Within the FAO voluntary scheme, the Code, principles, standards, and behaviors for responsible fisheries practices are set out with the goal of long-term conservation, management, sustainable use, and the growth of living marine resources in the form of an action framework.¹¹¹ The Code was introduced in 1995 and was adopted voluntarily by more than 170 members of the FAO. The obligations required of states for the Code to be effective include that states must incorporate the Code’s principles and goals into their national fisheries policies and legislation. Furthermore, states must encourage the fishing industry to implement codes of good practice that are consistent with the Code.¹¹² Destructive fishing practices must be prohibited in all states and only vessels permitted to fish in accordance with regulations and laws must be ensured in all states.¹¹³ The Code provides measures for the avoidance of overfishing, including regulating the size of the fishing fleet and also encouraging use of fishing gear that does not result in the catch of by-catch species and species which are endangered.¹¹⁴

VI. Issues of National Security: Maritime Challenges and Priorities in India

India is growing significantly in fisheries as it has the largest EEZ of 2.02 million sq. km and an enormous shoreline of 7,516.6 km.¹¹⁵ This unique geographical positioning gives it both a potential for blue growth and, at the same time, makes it vulnerable to illicit criminal activities.¹¹⁶ The “Territorial Waters, Continental Shelf, Exclusive Economic Zone and other Maritime Zones Act, 1976,”¹¹⁷ is instrumental in combatting IUU fishing. Consequently, India upholds its sovereign rights, encompassing fishing rights, within these defined waters, adhering to both domestic and international maritime legal frameworks.

The “Maritime Zones of India (Regulation of Foreign Vessels) Act, 1981,”¹¹⁸ is significant in overseeing foreign fishing vessels within India’s maritime zones and related domains. It grants authority to the Indian Coast Guard to intercept and board foreign fishing vessels as deemed necessary, and to seize and detain such vessels, inclusive of their fishing gear, equipment, stores, or cargo, along with any fishing gear abandoned by these vessels. The littorals have yet to implement a domestic legal framework based on international legal regimes, which impedes achieving maritime security in the region.¹¹⁹ Likewise, India also lacks a comprehensive maritime security policy or law to implement and enforce the protection of its maritime domain.¹²⁰ The Merchant Shipping Bill of 2016 aims to improve transparency and effectively manage maritime shipping affairs; however, it failed to identify and address maritime security concerns.¹²¹ The National Policy on Marine Fisheries 2017 categorically talks about combating IUU fishing¹²²:

India being a party to several International Agreements/Arrangements to deter, prevent and eliminate Illegal, Unreported and Unregulated (IUU) fishing, the Government will establish a sound mechanism both at the port and at sea to ensure that the Indian fishing fleet does not engage in any IUU fishing within its own EEZ, high seas and EEZs of other nations.¹²³

The Marine Fisheries Regulation and Management Bill of 2019 has delineated the definition of IUU fishing.¹²⁴ Furthermore, this legislation includes provisions specifying penalties for both domestic and foreign fishing vessels involved in IUU fishing activities.¹²⁵ In a complementary vein, the National Policy on Marine Fisheries of 2020 addresses with notable emphasis the predicament of IUU fishing carried out by Indian fishers, whether within the national jurisdiction or beyond, in violation of domestic laws or international agreements to which India is a signatory.¹²⁶ The policy document also underscores the imperative of cooperative engagements in fisheries management, either through bilateral or regional channels, with India’s maritime neighbors.¹²⁷ It explicitly encourages government action in accordance with this imperative. The Indian Marine Fisheries Bill, 2021,¹²⁸ aims to promote the livelihood and socio-economic well-being of traditional and small-scale fishers in India. The Bill proposes that “the Central Government shall, in consultation with the State Governments, maintain a system of monitoring, control and surveillance to support fisheries management and ensure safety and security of fishing vessels and fishers at sea.”¹²⁹ Furthermore, the Central Government is required, after engaging in consultations with the State Governments, to promulgate a National Plan of Action as developed by the FAO, commonly referred to as the IPOA-IUU, which functions as a fundamental framework intended to supervise measures for the governance of IUU fishing activities in both the EEZ and the high seas.¹³⁰ This framework encompasses a multitude of aspects, which may include a comprehensive evaluation of the magnitude and intricacies associated with tackling the problem of IUU fishing.¹³¹ Recently, on January 31, 2023, the Maritime Anti-Piracy Act 2022¹³² was promulgated “to give effect to the UNCLOS relating to repression of piracy on high seas and for matters connected therewith or incidental thereto.”¹³³ It defines piracy and aims to “boost India’s credibility as a partner in eradicating piracy and bolster India’s global standing and maritime security.”¹³⁴ Together, these laws constitute the fundamental domestic legal framework governing India’s maritime zones and establish the national maritime security apparatus to combat IUU fishing perpetrated by foreign vessels.

India needs to invest more in maritime industries for its future blue economy. In 2012, the United Nations Environment Program (UNEP) introduced the concept of “green economy in blue world,” highlighting the crucial significance of the marine environment as a fundamental component for a much-needed paradigm shift in the bioeconomy. This new approach, termed the “blue economy,” was coined by the Pacific Small Island Developing States (SIDS) and emphasized the urgent need to integrate and prioritize sustainable practices within marine ecosystems.¹³⁵ The blue economy can be described as a methodical approach to harnessing ocean resources, where short- and long-term economic activities are harmoniously integrated. This integration is guided by principles that prioritize social inclusion, environmental sustainability, and innovative practices both on and around the sea.¹³⁶ It is within the denominational conception of the national interest of any state to achieve the ideals for prioritizing and securing its vulnerable maritime borders. There is a growing need for India to direct its attention and engage as a strategic partner in the Bay of Bengal region. Notably, this will require developing and enabling institutions at the domestic level to deal with the issues at hand comprehensively.

VII. The Institutional Mechanism for Dealing with Maritime Security Threats: The Role of the Indian Navy and the Coast Guard

India’s interest lies in gaining an extended degree of pre-eminence in the wake of China’s growing hegemony in the region, as it has once again emerged as a dominant player in the realm of IUU fishing.¹³⁷ India started the Sagarmala Program of 2015 for port-led economic development in the maritime domain¹³⁸ to improve comprehensive security.¹³⁹ The program provides training to build infrastructure in shipbuilding, capacity building in maritime logistics, enhancing port, and development other relevant areas of the marine economy to develop a comprehensive blue economy.¹⁴⁰ The Indian Navy and Coast Guard provide innovative solutions, like the Joint Operations Centre and Coastal Security Scheme networks to enhance maritime security by securing its shipping and shore installations.¹⁴¹ They have started putting defense and security systems to help provide comprehensive security.¹⁴² The Integrated Underwater Defense and Surveillance Systems (IUHDSS) have also been used to trace and thwart any terrorist operation underwater.¹⁴³ Complete scanning of cargo is done through the installation of radiation sensors.¹⁴⁴ Various other initiatives include enhancing security measures by installing devices for surveillance.¹⁴⁵ India has implemented a strategy aimed at fostering a sense of community among the littoral nations of the Bay of Bengal region.¹⁴⁶ The strategy involves regular naval exercises and patrols along the Sea Lines of Communication (SLOC), with participation from other nations via initiatives such as MILAN, the Indian Navy’s multilateral biennial naval exercise.¹⁴⁷ Improving Maritime Domain Awareness (MDA) and enhancing capacity building in information gathering and sharing is a significant challenge¹⁴⁸ and India has signed several defense and security agreements, conducted joint naval exercises, and established networks for enhancing MDA.¹⁴⁹ The Indian Maritime Doctrine of 2016 presents a more constrained interpretation of Maritime Domain Awareness (MDA), characterizing it as “the awareness of the position and intentions of all actors, whether they are one’s own, hostile, or neutral,

within the dynamically evolving maritime domain within areas of strategic interest.”¹⁵⁰ Broadly, MDA comprises two fundamental components: “situational awareness,” rooted in observable and known information, and “threat awareness,” rooted in the anticipation or suspicion of potential threats.¹⁵¹ In essence, MDA represents a comprehensive state of knowledge concerning the maritime environment, which necessitates near-real-time updates and continual maintenance. This, however, remains an ideal that states can only aspire to attain but never wholly achieve. States can, at best, endeavor to sustain a credible level of near-constant “situational awareness” and issue specific “threat warnings” within their designated areas of interest, albeit for limited durations. The Indian “Information Fusion Centre”¹⁵² and the National Committee on Strengthening Maritime and Coastal Security (NCSMCS)¹⁵³ facilitate collecting, gathering, extrapolating, analyzing, and sharing of information from and to all the countries contiguous to the Indian Ocean to respond to an immediate maritime security. As the challenges of maritime security become increasingly apparent in today’s globalized world, nations are recognizing that their economic and security interests are interconnected and reliant on their ability to cooperate through regional organizations. Endeavors executed and implemented in several nations through collaborative efforts between naval entities and non-governmental organizations can also serve as best practices.¹⁵⁴ The coastal states must work towards the common goal and help share relevant information in fighting IUU fishing through regional cooperation.

VIII. Regional Cooperation as an Effective Mechanism

The emphasis on collaboration in the maritime domain ushers in a primary objective of international legal frameworks to foster collaboration in order to attain communal objectives to address emerging maritime security challenges.¹⁵⁵ There has been a growing trend among states to emphasize the importance of a “rule-based order” in global discussions.¹⁵⁶ The Bay of Bengal has become strategically important for India as a mechanism to strengthen its relationships across the region. The regional association, such as the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), is well-positioned to tackle regional challenges, including ecosystem-based fisheries management.¹⁵⁷ The ensuing “BIMSTEC way” places paramount importance on consensus-building and diplomatic accommodation as fundamental principles for resolving disputes and fostering security cooperation. Within the larger context of the Indo-Pacific maritime strategy, BIMSTEC’s importance as a promising sub-regional alliance has gained momentum.¹⁵⁸ Moreover, the region faces IUU fishing challenges, making issues like sustainable utilization of the Bay’s marine resources a shared priority among BIMSTEC member countries.¹⁵⁹ Technological solutions such as blockchain for trade logistics management and drone surveillance of the oceans can prove to be viable and instrumental means in tackling these issues.¹⁶⁰ However, BIMSTEC needs collaboration and the spirit of multilateralism in the shared interest and common good over and above the private good through capacity building.¹⁶¹ India should avoid assuming a domineering posture and, instead, present itself as a collaborative and equal partner among other BIMSTEC member countries, fostering better regional integration.¹⁶² Fisheries are transboundary, so cooperation is needed through

regional fisheries bodies to manage fisheries resources successfully.¹⁶³ India also asserts the importance of the “Association of Southeast Asian Nations (ASEAN)” in creating a peaceful and sustainable ocean economy in the region.¹⁶⁴ The IPOA-IUU also mandates in absolute terms, that the countries need to establish a wide-ranging, coordinated, and integrated action towards eliminating IUU fishing.¹⁶⁵ The IPOA-IUU “toolkit” is important to address and counter actions involving vessels engaged in IUU fishing.¹⁶⁶ It outlines the concept of “port access” and provides a detailed account of the data that a coastal state needs to gather, along with the steps involved in identifying instances of IUU fishing.¹⁶⁷ In addition to the various regional organizations focused on fisheries management, the Indian Ocean Tuna Commission (IOTC)¹⁶⁸ is tasked with maintaining a specialized IUU vessel database and overseeing the conservation and sustainable use of highly migratory species of tuna and similar fish species in the Indian Ocean and adjacent waters. Additionally, the commission supports developing member States (as well as cooperating States) to bolster their compliance capacities through focused capacity-building initiatives. Moreover, the BOBLME, focuses on the joint management of specific fisheries species. The Indian Ocean Rim Association (IORA),¹⁶⁹ an intergovernmental organization, operating at the ministerial level, fosters regional collaboration to address fisheries-related concerns, specifically addressing IUU fishing. IORA’s action plan spanning 2017 to 2021 primarily perceives IUU fishing as a fisheries management problem and not as a fisheries crime, creating an opportunity to expand the scope past fisheries management. A strategic alignment between domestic efforts to combat IUU fishing and established regional norms and institutions could significantly fortify maritime security within the region.

IX. Conclusion and the Way Forward

The security conversations will be incomplete unless we acknowledge the overwhelming presence of all the prominent criminal players who exploit the resources at a very granular level. Ocean ecosystems are fragile and face transnational maritime security threats from criminals who exploit the protective shield of sovereignty, thereby affording themselves a sanctuary from which they can act with impunity.¹⁷⁰ There is a general lack of legally binding international instruments in all ocean regions to provide integrated coverage at the regional level for fisheries and biodiversity conservation. Existing tools for conservation lack effective compliance and enforcement mechanisms at global and regional levels. There is also a general lack of coordination amongst the different institutions due to their diversity. The UNCLOS is silent on the general obligations of states regarding maritime security and climate change. The lack of clarity is sometimes an impediment for the states in “providing peace and order.”¹⁷¹ Thus, one of the most critical requirements for the littorals is to strengthen a more robust MCS regime in vulnerable regions,¹⁷² which requires immediate cooperation in technological advancement.¹⁷³ Maritime security was addressed in the first coastal security workshop of BIMSTEC held in November 2019.¹⁷⁴ Sensitization and awareness of the local groups, highlighting the weak target spots, and developing local-level community-based surveillance mechanisms can be applied through the imposition of a seasonal ban on the fishing of viable and significant species.¹⁷⁵ Despite the establishment of regional economic cooperative organizations like the BIMSTEC, their

capabilities to address maritime challenges are inadequate.¹⁷⁶ The divergent and narrow priorities among the littoral states of the region underscore the concept of a Hierarchy of Relevance, wherein issues crucial to one nation might not hold the same importance for others. Consequently, vital concerns related to robust maritime governance and security have not received due attention within existing multilateral platforms such as the IORA, BIMSTEC, and the SAARC.¹⁷⁷ India should prioritize its marine fisheries for a prosperous coastal economy. It will require a top-down approach by sensitizing the local fisher and coastal communities and all other necessary and needed support from government agencies in empowering the coastal communities about the importance of conservation of fishing zones. One way is to make these communities aware through various awareness programs and community-based interactions. Effective and timely exchange of information, maritime domain awareness, and training of surveillance personnel are ways maritime security can achieve its full potential. Thus, this is a wake-up call for the Bay of Bengal littorals to work collectively to keep security threats at bay. To effectively address maritime security challenges, the importance of increased cooperation and coordination among all stakeholders, including states, international organizations, and the private sector cannot be stressed enough. There are significant obstacles to the establishment of a collaborative, joint initiative for the preservation and governance of fisheries resources within the region. One is that the BOBP-IGO and the BOBLME do not have the effective mandates and there is not enough participation in the BOBP-IGO from all the eight Bay of Bengal countries. As a consequence of these complexities, the region currently lacks an RFMO with a well-defined mandate. The proactive establishment of RFMOs has the potential to effectively serve multiple significant objectives. One such objective is the centralization and fortification of the precautionary approach, which, despite its importance, has not yet garnered complete acceptance as a universally recognized principle of customary international law.¹⁷⁸ Thus, the establishment of new RFMOs presents a significant opportunity for fishing states to cultivate enhanced models for collaborative decision-making regarding conservation and management measures. Notably, there is a pressing need for progress in implementing an ecosystem-based fisheries management approach.¹⁷⁹ Thus, the BOBP-IGO has the potential to become an effective RFMO with a regional commitment to protect and manage the coastal and marine environment of the Bay of Bengal. Reforming the domestic legal framework to comply with international standards as there is no fisheries law in place after the amendment of the Fisheries Act 1897¹⁸⁰ in 2015.¹⁸¹ India should promulgate a new Fisheries Act, which will provide a clear and coherent legal framework consistent with international law, introducing well-designed sanction schemes with serious penalties to effectively deter IUU fishing. Ratification of the PSMA is urgent to fully enable the implementation of these provisions under the domestic regime. Creating NPOA-IUU, the political commitment for combating IUU fishing, setting up a dedicated “Central Organization” for Combating IUU Fishing should be high on India’s agenda.

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