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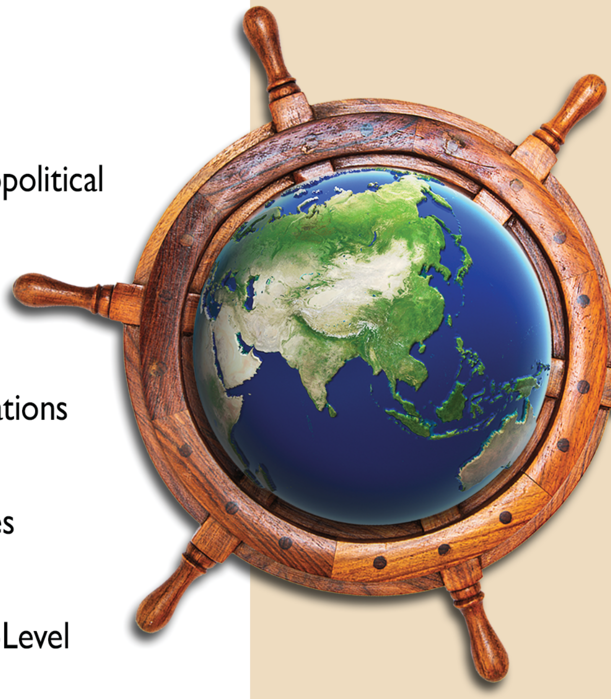

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Contents

Editor's Comments

Dear *JTMS* Readers,

Greetings once again from the *Journal of Territorial and Maritime Studies*. As we move through 2025, the maritime and geopolitical landscape continues to reveal both the enduring significance of the law of the sea and the adaptive resilience of states facing evolving regional and technological challenges. The articles in this issue illuminate how legal innovation, strategic calculation, and governance reform intersect across multiple maritime domains—from Europe and the Indo-Pacific to Southeast Asia and beyond.

Our first contribution, by Panagiotis Palaios and Andreas-Minos Zompanakis, explores the role of geopolitical uncertainty in defense procurement through a case study of the Hellenic Navy's 2021 frigate acquisition. By integrating the Analytic Hierarchy Process with a volatility-based geopolitical risk model, the authors demonstrate how strategic alliances, technology transfer, and defense industrial cooperation can reshape procurement outcomes, urging decision-makers to incorporate geopolitical variables into quantitative frameworks for future acquisitions.

Our second article, by Deniz Kocak, examines maritime critical infrastructure and hybrid threats in Southeast Asia. Drawing on securitization theory and content analysis of defense policy documents, the study reveals how the Association of Southeast Asian Nations (ASEAN) states pursue divergent technological and governance strategies despite shared vulnerabilities. Kocak highlights that modular, threat-specific cooperation—rather than broad multilateralism—offers the most viable path to regional resilience in the face of hybrid cyber and subsea threats.

The third contribution, by Gülay Çağla Fıratlı, revisits United Nations Convention on the Law of the Sea (UNCLOS) compulsory jurisdiction in disputes pending maritime delimitation. Through textual and contextual interpretation, the article argues that obligations of conduct under Articles 74(3) and 83(3) remain justiciable even where states have invoked the Article 298 opt-out clause. This insight strengthens the jurisprudence of cooperative conduct and underscores how legal interpretation can promote dialogue and provisional arrangements despite contested boundaries.

The fourth article, by Ipsa Sahu, turns to strategic diplomacy in the Indo-Pacific through the case of the Philippines. Using discourse analysis of official documents and elite narratives, Sahu maps Manila's adaptive engagement with the United States, China, India, Japan, and South Korea. The study shows how the Philippines navigates great-power rivalry by diversifying security partnerships, maintaining strategic autonomy, and advancing a rules-based maritime order that aligns smaller-state agency with multipolar realities.

For our fifth article, in a multi-level theoretical contribution, Tran Bach Hieu, Le Hoang Kiet, and Tran Xuan Hiep analyze Sino-Indian competition in the Indian Ocean Region through David Singer's system-state-individual framework. Their study conceptualizes the IOR as a "smokeless battlefield" shaped not by direct conflict but by infrastructure investment, soft diplomacy, and leadership-driven nationalism—offering a layered understanding of contemporary power politics in the maritime domain.

Our sixth piece, by Haidy Ahmed, proposes a new implementation agreement to UNCLOS—modeled on the BBNJ Agreement—to strengthen the governance and protection of submarine communications cables. Ahmed argues that such an agreement could balance the sovereign rights of coastal states with global digital interdependence, ensuring that the backbone of the world's internet infrastructure receives the same cooperative legal attention as marine biodiversity or straddling fish stocks.

Our seventh article, by Maxim Shoshany, applies a scientific-geospatial method to evaluate the equitability of the 2022 Lebanon–Israel maritime boundary agreement. Through an equal-breadth perpendicular line analysis, Shoshany concludes that, despite political controversy, the technical delimitation itself meets the fairness standards of international maritime jurisprudence—offering an objective benchmark for assessing future boundary negotiations in the eastern Mediterranean.

Finally, in our book review section, first, we feature *Cultural Influences on the Law of the Sea: History, Legacy, and Future Prospects*, edited by James Kraska and Hayoun Ryou-Ellison. This timely volume underscores how regional traditions, values, and historical experiences shape the interpretation and practice of maritime law, reminding us that legal universality is always tempered by cultural plurality. Second, *Connecting the Indian Ocean World: Across Sea and Land*, edited by Shimada & Seshan, eds., is a vibrant collection whose archival range and methodological diversity illuminate the lived textures of circulation and coastal-hinterland linkages across time.

Together, these contributions demonstrate the breadth of contemporary maritime studies—from the technicalities of vessel procurement to the legal frontiers of undersea governance, from Southeast Asia's hybrid vulnerabilities to the Mediterranean's enduring boundary debates. Each advances a richer understanding of how law, strategy, and technology intertwine across an increasingly contested oceanic order.

As always, we extend our deep gratitude to our authors, reviewers, and readers for their ongoing commitment to rigorous and innovative scholarship. Your support sustains *JTMS* as a forum for critical dialogue and maritime insight.

Warm regards,
Jongyun Bae
Editor

Supplier Selection of Combat Vessels Under Geopolitical Uncertainty: The Case of the Hellenic Navy

Panagiotis Palaios and *Andreas-Minos Zompanakis*

Structured Abstract

Article Type: Research Article

Purpose—The purpose of this paper is to develop a comprehensive decision-making framework for military procurement that integrates both technical evaluation and geopolitical uncertainty. The study aims to demonstrate how strategic considerations, such as alliances and defense industrial cooperation, may alter supplier preferences in the selection of major combat systems.

Design/Methodology/Approach—The analysis applies the Analytic Hierarchy Process (AHP) as a deterministic stage to evaluate alternative vessel designs according to operational and economic criteria. A second, stochastic stage incorporates geopolitical uncertainty through a modified Magrabe[1] approach using the Geopolitical Risk Index as a volatility proxy. The model is empirically applied to the 2021 frigate procurement of the Hellenic Navy.

Findings—Results show that the inclusion of geopolitical uncertainty may significantly affect the ranking of suppliers. Strategic benefits—such as alliance formation and technology transfer—can alter optimal choices derived from purely technical or economic criteria

Practical Implications—Defense procurement agencies should incorporate geopolitical risk and strategic benefits into quantitative evaluation frameworks to ensure more realistic and resilient acquisition decisions.

Originality/Value—This study introduces geopolitical uncertainty into AHP-based military supplier selection, offering a novel link between defense economics and international security analysis.

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defense procurement, strategic choices, uncertainty
JEL Classification: D81, H56, H57

I. Introduction

In response to the challenges faced in a volatile geopolitical and geostrategic environment, Greece has recently embarked on a number of decisive moves aimed at upgrading the Hellenic arsenal. One of these moves regards the purchase of three (with an option of a fourth) frigates for the Hellenic Navy. The decision to purchase the specific type of frigates finally chosen was preceded by keen competition among leading naval manufacturers both in Europe and the US. This paper does not aim to assess the selection procedure that the Hellenic government and the General Staff followed. It aims, however, to highlight the margins offered in such major weapon systems selection procedures when uncertainty accompanies the operational, economic and financial criteria employed. To do so, we shall first present a brief literature review on the subject, followed by a description of the decision-making method used. The empirical section of the paper shows how this method is then applied to choose between the various candidate vessels under purely deterministic criteria. Such choices, however, may be affected by various uncertain factors outlining the geostrategic and geopolitical environment in the areas of interest. The extent to which uncertainty affects, and even distorts, the reasoning of such major choices is then introduced in the paper followed by the concluding remarks.

Our scope is to present an updated methodology of the supplier selection process that considers the technical aspects of the evaluation together with the uncertainty of the international environment. This research comes to fill the relevant gap in the literature by focusing on the case study of the Hellenic Navy's combat vessels supplier selection. We make two main contributions to the existing literature. First, we expand the AHP to include geopolitical uncertainty and second, we update the extremely limited literature focusing on the supplier selection process in the military sector (combat vessels). The findings of our research show that geopolitical uncertainty may affect the ranking of preferred suppliers in the case of combat vessels. Specifically, when uncertainty and strategic benefits are introduced in the analysis, we observe that the initial supplier selection order based on the deterministic AHP is affected to a considerable extent. Consequently, when it comes to the policy implications, the paper underlines the necessity to consider not only the technical, operational and economic benefits related to the purchase of defense equipment, naval vessels in our case, but also possible relevant geopolitical benefits during the selection process, following strategic alliances.

The rest of the paper is organized as follows: Section II presents a review of previous studies. Section III discusses the methodology employed. We present and discuss our results and the data in section IV, while section V reports a sensitivity analysis, under two alternative scenarios. Section VI summarizes the results and presents our conclusions.

II. Literature Review

As early as the beginning of the nineties, Insua and French[2] perform a sensitivity analysis within a Bayesian context in a multi-objective decision-making framework. According to the authors, this analysis traces the leading inputs in determining equipment selection, which can thus be revised more carefully. The paper points to a number of solution-concepts and shows how to identify possible competitors in the case of each such solution. Finally, it concludes by offering examples and suggesting ways of conveying the information to the decision-maker. Later, Hartley[3] analyzed the demand and supply sides of the defense market with an application to the UK case. Using a non-technical, however highly descriptive approach, the paper deals with the usefulness or otherwise of retaining a sound domestic industrial base rather than "shopping around."

In the years to follow, the relevant literature assumes the tendency to become more technical, focusing mainly on the supply side, with Sarkis and Talluri[4] using a model for evaluation and selection of suppliers considering strategic, operational, tangible, and intangible measures. Chan,[5] on the other hand, proposed a method called Chain of Interaction aiming at facing the difficulties linked to the dynamic nature of supply chain management. He suggested an AHP that systemizes all initial steps, like the formation of selection criteria that lead to the implementation of the AHP. The proposed Interactive Selection Model can be applied to supplier selection through the identification of buyer–supplier interactions and the valid data-collection methods. An interesting paper by Bui et al.,[6] pointed to a risk-based framework for military capability planning, within which evolutionary algorithms are used to tackle problems with two or even more conflicting objectives. The framework allows the addition of a risk-based objective to the problem to support risk assessment during the planning process. The paper thus suggests a risk-assessment mechanism analyzing the performance of any proposed framework in a risk-pro or risk-averse environment.

Turning to examining selection processes in a fuzzy environment, Lee[7] applies a fuzzy analytical hierarchy processing model, which incorporates the benefits, opportunities, costs and risks. This evaluates suppliers using a variety of factors that formulate the buyer-to-supplier relationship aiming at obtaining a performance ranking of the suppliers. The paper includes a case study of backlight unit supplier selection for a TFT-LCD manufacturer, with the proposed model facilitating the decision process. Being a general form model, it can be applied by a wide variety of firms that make decisions on supplier selection. Always in the fuzzy logic context, Lin[8] uses the fuzzy analytic network process approach to consider the effects of interdependence among selection criteria and to handle inconsistent and uncertain judgments. At a next phase, the paper resorts to fuzzy multi-objective linear programming to select the best suppliers for achieving optimal order allocation in a fuzzy environment. In another interesting paper, Li and Zabinski[9] present Pareto-optimal solutions to demonstrate the contribution of stochastic programming as well as chance-constrained programming models in the case of a robust supplier selection. The authors underline the tradeoff between costs and risks using multi-parametric programming techniques to analyze the alternative Pareto-optimal supplier selection solutions as it concerns the chance-constrained programming models thus providing insights into the robustness of the solutions with respect to the number of suppliers and the costs. By contrast, New et al.[10] are much more specific, defining the policy for Reliability Centered Maintenance in the Royal Navy and the Royal Fleet

Auxiliaries. The paper focuses on how employment of Reliability Centered Maintenance is integrated into the Safety Case regime and evaluates and discusses its potential benefits. A very useful contribution has been made by Pal et al.,[11] who present a critical evaluation of the relevant literature on supplier selection methods. The issue of supplier selection applied to an automobile company in India is also addressed by Luthra et al.[12] The authors propose a framework to evaluate sustainable supplier selection by using an integrated AHP approach that identifies 22 sustainable supplier selection criteria and three dimensions of criteria (economic, environmental, and social) through literature and experts' opinions. The paper aims at contributing to the process of distinguishing the important supplier selection criteria but also at evaluating the most efficient supplier for sustainable supply chains while remaining competitive in the market. In the same context, Taherdoost and Brard[13] provide an assessment of the research on the issues of supply chain management, the supplier selection criteria and an evaluation of the supplier selection methods. The paper concludes that the application of a structured decision-making technique is vital, especially when considering both qualitative and quantitative criteria. In the same context, in a case study on international plastic raw material suppliers for a US based manufacturer, Hosseini and Khaled[14] distinguish between three categories of resilience capacities (selection absorptive, adaptive and restorative capacity) in a paper that examines the various relevant criteria for the choice of a supplier. The authors use predictive analytics models to describe the resilience value of each supplier, while improving predictive performance by combining binomial logistics regression and neural networks. Alikhani et al.[15] focus on a simultaneous consideration of factors like sustainability and risk to propose a multi-method approach based on quantitative empirical investigations, and analytical modeling. Their approach incorporates both sustainability and suppliers' risk factors into the supplier selection problem and regards both risk-neutral and risk-averse decision-makers. The AHP approach is again used in an application to healthcare supply chain issues by Bhosale and Umap.[16] The paper evaluates suppliers using fuzzy stochastic data. The authors argue that the method is applicable to cases in which supplier selection must take place in a short time period. Finally, a useful paper in more ways than one is Ocampo et al.,[17] which presents a revision of different methods of supplier selection from 2006 to 2016. The authors distinguish between individual, integrated and emerging supplier selection approaches, with the latter involving novel methodologies addressing specific supplier selection issues that include uncertain environment, risks, and sustainability.

Turning again to defense equipment issues, Qin et al.[18] provide reference for the enhancement of naval equipment capability by studying the structure and main contents of task-oriented naval equipment support system. The study is based on hierarchical thinking, proposing relevant evaluation indices and aggregation methods. Finally, in a recent contribution, Dos Santos et al.[19] focus on the specific case of choosing a medium-size warship to be built for the Brazilian Navy through the application of the AHP method. The paper considers a number of ship projects with regard to several operational and economic criteria. The evaluations of BN officers with recognized experience and knowledge in military operations has been used as an important input to this selection procedure. The evaluation is accompanied by a sensitivity analysis based on the relationship between standard deviation and mean scores to verify and increase the reliability of the ranking.

The literature review analysis revealed the usefulness of the AHP methodology in evaluating different options, among them in the selection process of the military sector.

When it comes to military applications, it is evident that the selection process in real life is affected by geopolitical factors, and therefore it would be interesting and useful to introduce geopolitical uncertainty in the AHP selection method. Our research comes to fill that gap by focusing on the case study of the supplier selection for combat vessels of the Hellenic Navy.

III. Materials and Methods

The comparison of the various vessels proposed to the Hellenic Navy requires the application of a method that will quantify the characteristics of each of the designs and will determine the standards considered for the selection process.

3.1 AHP Methodology

The method applied in this paper belongs to the Multi-Criteria Decision-Making methods (MCDM)[20] family and is known as the Analytic Hierarchy Process.[21] This method is based on developing matrices by comparing pairs of design choices, in our case vessel types. The score assigned to each vessel choice is produced by setting "how many times more preferred (better)" is one vessel choice over the other for a specific criterion, following Saaty's[22] scale of relative importance (Table 1).

Table 1: Saaty's (2005) scale of relative importance

Scale	Numerical rating $(v_{i,j})$	Explanation according to Saaty (2008)	Reciprocal $\left(\frac{1}{v_{i,j}}\right)$
Extremely preferred	9	The evidence favoring vessel *i* over vessel *j* for the selected criterion of the system is of the highest possible order	1/9
Very strong to extremely	8	Intermediate stages of relative contribution of vessels (i, j) to the selected criterion of the system	1/8
Very strongly preferred	7		1/7
Strongly to very strongly	6		1/6
Strongly preferred	5		1/5
Moderately to strongly	4		1/4
Moderately preferred	3		1/3
Equally to moderately	2		1/2
Equally preferred	1	Two vessels (i, j) contribute equally to the selected criterion of the system	1

According to Saaty, the scale indicates how many times more important or dominant one element is over another, with respect to the criterion used. The scores assigned vary between 1 and 9 for each specific criterion of a system, with 1 attributed to vessel choices which are equal between them and whereas 9 identifies a vessel choice which the panel of experts considers nine times more preferred than the other for a specific criterion of a system. The scale described in Table 1 is used to evaluate the relative importance of each pair of vessels, as reported in Table 2.

Table 2: Saaty's (2005) matrix of relative assessments ($x_{i,m}$) for each criterion of the design-vessel ($v_{i,j}$) and their ranking vector

Type of Vessel	Vessel 1 $(j = 1)$	Vessel 2 $(j = 2)$	.... $(j = \cdots)$	Vessel N $(j = N)$	Vessel's ranking vector $(x_{i,m})$
Vessel 1 $(i = 1)$	1	$\left(\frac{1}{v_{1,2}}\right)$	$\left(\frac{1}{v_{1,\ldots}}\right)$	$\left(\frac{1}{v_{1,N}}\right)$	$\frac{1}{N}\sum_{j=1}^{N}\left(\frac{v_{1,j}}{\sum_{i=1}^{N} v_{i,j}}\right)$
Vessel 2 $(i = 2)$	$(v_{2,1})$	1	$\left(\frac{1}{v_{2,\ldots}}\right)$	$\left(\frac{1}{v_{2,N}}\right)$	$\frac{1}{N}\sum_{j=1}^{N}\left(\frac{v_{2,j}}{\sum_{i=1}^{N} v_{i,j}}\right)$
.... $(i = \cdots)$	$(v_{\ldots,1})$	$(v_{\ldots,2})$	1	$\left(\frac{1}{v_{\ldots,N}}\right)$	$\frac{1}{N}\sum_{j=1}^{N}\left(\frac{v_{\ldots,j}}{\sum_{i=1}^{N} v_{i,j}}\right)$
Vessel N $(i = N)$	$(v_{N,1})$	$(v_{N,2})$	$(v_{N,\ldots})$	1	$\frac{1}{N}\sum_{j=1}^{N}\left(\frac{v_{N,j}}{\sum_{i=1}^{N} v_{i,j}}\right)$

The last column of Table 2 denotes the formula for calculating the ranking vector of each vessel. This calculation is carried out by taking the average of the scores attributed to one choice over the sum of the scores that the rest of the choices received when compared to that one, as follows:

$$\frac{1}{N}\sum_{j=1}^{N}\left(\frac{v_{1,j}}{\sum_{i=1}^{N} v_{i,j}}\right), for\ vessel\ i = 1 \quad (1)$$

$$\frac{1}{N}\sum_{j=1}^{N}\left(\frac{v_{2,j}}{\sum_{i=1}^{N} v_{i,j}}\right), for\ vessel\ i = 2 \quad (2)$$

....

$$\frac{1}{N}\sum_{j=1}^{N}\left(\frac{v_{N,j}}{\sum_{i=1}^{N} v_{i,j}}\right), for\ vessel\ i = N \quad (3)$$

Where $v_{i,j}$ is the relative importance between two alternative designs i, j of each design (vessel). We repeat the same process for each criterion of the same system.

Thereafter, following the same method, we construct the matrix of the relative importance for the each of the selected criteria (reliability, effectiveness, flexibility, redundancy) and their ranking vector (Table 3), as follows:

$$\frac{1}{4}\sum_{j=1}^{4} \square \left(\frac{m_{1,j}}{\sum_{i=1}^{4} \square\, m_{i,j}}\right), \mathit{for\ criterion\ reliability} \ (4)$$

$$\frac{1}{4}\sum_{j=1}^{4} \square \left(\frac{m_{2,j}}{\sum_{i=1}^{4} \square\, m_{i,j}}\right), \mathit{for\ criterion\ effectiveness} \ (5)$$

$$\frac{1}{4}\sum_{j=1}^{4} \square \left(\frac{m_{3,j}}{\sum_{i=1}^{4} \square\, m_{i,j}}\right), \mathit{for\ criterion\ flexibility} \ (6)$$

$$\frac{1}{4}\sum_{j=1}^{4} \square \left(\frac{m_{4,j}}{\sum_{i=1}^{4} \square\, m_{i,j}}\right), \mathit{for\ criterion\ redundancy} \ (7)$$

Where $m_{i,j}$ is the relative importance for the selected criteria ($m_{i,j}$))

Table 3: Matrix of relative importance for the selected criteria (m_i) and their ranking vector

criterion	Reliability ($j = 1$)	Effectiveness ($j = 2$)	Flexibility ($j = 3$)	Redundancy ($j = 4$)	Criterion ranking vector (m_i)
Reliability ($i = 1$)	1	$\left(\frac{1}{m_{1,2}}\right)$	$\left(\frac{1}{m_{1,3}}\right)$	$\left(\frac{1}{m_{1,4}}\right)$	$\frac{1}{4}\sum_{j=1}^{4} \square \left(\frac{m_{1,j}}{\sum_{i=1}^{4} \square\, m_{i,j}}\right)$
Effectiveness ($i = 2$)	$(m_{2,1})$	1	$\left(\frac{1}{m_{2,3}}\right)$	$\left(\frac{1}{m_{2,4}}\right)$	$\frac{1}{4}\sum_{j=1}^{4} \square \left(\frac{m_{2,j}}{\sum_{i=1}^{4} \square\, m_{i,j}}\right)$
Flexibility ($i = 3$)	$(m_{3,1})$	$(m_{3,2})$	1	$\left(\frac{1}{m_{3,4}}\right)$	$\frac{1}{4}\sum_{j=1}^{4} \square \left(\frac{m_{3,j}}{\sum_{i=1}^{4} \square\, m_{i,j}}\right)$
Redundancy ($i = 4$)	$(m_{4,1})$	$(m_{4,2})$	$(m_{4,3})$	1	$\frac{1}{4}\sum_{j=1}^{4} \square \left(\frac{m_{4,j}}{\sum_{i=1}^{4} \square\, m_{i,j}}\right)$

The final evaluation of each of the design-vessels for each of the systems (propulsion and power generation, armament and electronics) is calculated as the weighted average, where the weight is the relative importance of each criterion of all of the ranking vectors of the vessels. Therefore, the final evaluation of the *w* vessel (v_w) for all the criteria, of each system, is calculated as follows:

$$m_1 v_w + m_2 v_w + m_3 v_w + m_4 v_w = \sum_{i=1}^{4} m_i u_w \quad (8)$$

We repeat the above process for each of the three systems (propulsion and power generation, armament, electronics). The total assessment of a design choice is calculated by summing the scores over each criterion multiplied by the weight factor of the same criterion.

A fourth group of performance determinants, namely the main particulars, is also included using conventional grade scales, depending on the performance of each vessel applying the four criteria (complement, service speed, range and endurance, autonomy). Having evaluated the four systems we get the total weighted evaluation of each vessel (design), which expresses an operational benefit for the buyer, namely the Total Benefit Index. Thereafter, we calculate the Total Cost Index considering the weight of each vessel's price in the average price of the vessels. The net benefit index for each vessel is the difference between the Total Benefit and the Total Cost indices, which shows the ordering of the vessels according to the deterministic methodology.

3.2 Selection Methodology Under Uncertainty

The results obtained under the AHP methodology consider different criteria and systems, thus allowing an in-depth analysis of the possible benefits and costs of each design. However, a supplier selection process that deals with military equipment should also consider factors that aim at diminishing the impact of uncertainty, such as conventional or hybrid threats. Therefore, the candidate suppliers of military equipment are usually in the position, in close cooperation with their governments, to offer to the possible buyer extra benefits—which we call strategic benefits—in the form of alliances, technology transfer or even by strengthening the domestic Defense Industrial Base, to reduce uncertainty. To incorporate uncertainty in our evaluation, we apply Magrabe's[23] formula. Specifically, we develop the following formula, in line with Wu[24]:

$$NBI_u = TBI\ N(d_1) - TCI\ N(d_2) \quad (9)$$

where NBI_u is the Net Benefit Index under uncertainty, *TBI* is the Total Benefit Index and *TCI* is the Total Cost Index. *N(·)* denotes the cumulative normal distribution function. It also holds that:

$$d_1 = \frac{ln\left(\frac{TBI}{TCI}\right) + \sigma^2 \frac{T}{2}}{\sigma\sqrt{T}} \quad (10)$$

and

$$d_1 = d_2 - \sigma\sqrt{T} \quad (11)$$

Further, it holds that:

$$\sigma^2 = \sigma_{TBI}^2 + \sigma_{TCI}^2 - 2\rho\sigma_{TBI}\sigma_{TCI} \ (12)$$

where σ^2 is the combined volatility, ρ is the correlation between *TBI* and *TCI* and *T* is the duration of the contract.

It should be noted that several researchers use different approaches to determine volatility. For example, Taudes[25] and Kumar[26] argued that volatility can be estimated by the experience of the parties included in the process or even by conducting operational research. Bardhan et al.[27] calculate the volatility by developing alternative scenarios.

In estimating the volatility of our supplier selection process, we frame our analysis in two steps. In the first step, aiming at comparing the evolution of two indices (*NBI*, NBI_u) depending on various values of volatility, we conduct numerical simulations (volatility scenarios) with volatility ranging from 0 to 1 (0.1, 0.2, 0.3, … 0.9). At a second step, we introduce in our model the current volatility using as proxy the Geopolitical Risk Index (GPR) by Caldara and Iacoviello[28] and specifically three different versions of it: (a) Geopolitical Threats Index, (b) Geopolitical Acts Index and (c) Geopolitical Risk Index, which is the average of the previous two indices. In doing so, we can compare the *NBI*, NBI_u indices, assuming an objective measure of the current volatility.

IV. Empirical Results

We frame our empirical analysis in two stages. First, we apply the AHP to quantify the characteristics of each of the designs (Table A.1 of the Appendix) and calculate the *NBI*s. Second, we apply the selection methodology under geopolitical uncertainty to calculate the NBI_u s and compare the results, namely the vessels' ordering under deterministic and stochastic environment, respectively.

4.1. Criteria Selection and Their Ranking Vector

The first step to comparing the six frigate designs is selecting criteria according to which the optimization will take place. Analyzing the operational requirements prevailing in the Greek maritime environment, together with the integrated defense doctrine to which the Hellenic Navy is required to abide, the selected criteria are reliability, effectiveness, flexibility and redundancy.

More specifically, reliability measures the extent to which the systems of a vessel perform as designed, which implies that the higher the reliability the lower the degree of unplanned repairs. Effectiveness measures the degree to which the vessel can execute the mission required by the buyer, while flexibility measures the ability to undertake different types of operations or missions. Finally, redundancy measures the extent to which the vessel's critical systems are backed up and therefore the vessel's ability to remain operational following sustained damage. Table 4 depicts the values of the relative importance assigned to each of the criteria. Table 5 presents the corresponding ranking vector for each of the criteria, in which reliability appears to be the most important one, as it measures the extent to which the systems of a vessel perform as designed. Given the friction prevailing in the Aegean and the Eastern Mediterranean Sea, which requires pronounced military power, reliability ensures not only attainment of the operational targets but also a low degree of unplanned repairs. Concerning effectiveness, this describes the degree to which the vessel can execute the mission required by the buyer, at the lowest possible cost. This is a paramount constraint, given the tight fiscal restrictions imposed on the Greek economy. Turning to redundancy, the high-friction environment under which the vessel is expected to perform entails considerable damage possibilities, which should not deprive the vessel from accomplishing its mission. Finally, flexibility measures the ability to undertake different types of operations or missions. This has not been rated as being a top priority for the Hellenic Navy because the environment in which its units are expected to operate requires more specialization than flexibility.

Table 4: AHP Matrix for selected criteria.

Criteria	**Reliability**	**Effectiveness**	**Flexibility**	**Redundancy**
Reliability	1.000	3.000	6.000	1.000
Effectiveness	0.333	1.000	8.000	3.000
Flexibility	0.167	0.125	1.000	0.200
Redundancy	1.000	0.333	5.000	1.000

Table 5: Ranking vectors for the selected criteria using AHP.

Ranking Vector	
Reliability	0.3913
Effectiveness	0.3336
Flexibility	0.0458
Redundancy	0.2293

4.2. Evaluation of the Systems

At the next step, we focus on four systems comprising the design of each vessel, namely, propulsion and power generation, armament, electronics and main particulars. Our study takes for granted that all sellers offer a more or less similar full-support logistic package.

4.2.1 Propulsion. The role of the propulsion and power generation systems of each vessel is decisive.[29] Given that the Hellenic Navy has shown preference for diesel or gas engines (mainly for their "or" propulsion variants like CODOG and COGOG), we need to observe that diesel engines provide a cost efficient and very reliable option while gas turbines offer greater power density (acceleration and top speed), suffering, however, from higher consumption and being a more fragile arrangement. Indeed, diesel engines grant considerable fuel economy, as well as extreme reliability and toughness, while their wide commercial use means there are many ports where they can be repaired. For a balanced evaluation, one must consider the diesel engine's disadvantages too, which sum up to their weight and size, as well as their noise and vibration.[30]

Turning to the alternative engine options, gas engines are compact with excellent acceleration and power. Electric motors are silent and efficient at low RPMs, while IEP is more damage resistant with more design freedom.

Each frigate proposed to the Hellenic Navy may be equipped with several propulsion and power generation choices; however, our paper will focus on the arrangements considered during the evaluation by the Hellenic Navy. The attribution of the scores in this case has required the consultation of a panel of experts whose extensive experience and knowledge in naval warship design or naval operations satisfies the requirement described in AHP literature. The final evaluation depicted in Table 6, after considering the ranking vector of the criteria themselves (weight factors) shows that MMSC scores highest due to its redundant and effective arrangement, followed closely by the MEKO class vessel, whereas FREMM and SIGMA frigates obtain similar scores for their propulsion and power generation design choices.

Table 6: Evaluation of Propulsion and Power Generation system, each vessel and criteria, using AHP.

Reliability							
	MMSC HF2	**FDI**	**SIGMA 11515 HN**	**MEKO A300**	**FREMM-IT**	**TYPE 31 HN**	**Ranking Vector**
MMSC HF2	1	0.125	0.125	0.125	0.2	0.5	0.028
FDI	8.000	1	1	1	0.333	1	0.168
SIGMA 11515 HN	8.000	1.000	1	1	1	4	0.211
MEKO A300	8.000	1.000	1.000	1	4	7	0.313
FREMM-IT	5.000	3.000	1.000	0.25	1	5	0.216
TYPE 31 HN	2.000	1.000	0.250	0.142	0.2	1	0.064
Effectiveness							
	MMSC HF2	**FDI**	**SIGMA 11515 HN**	**MEKO A300**	**FREMM-IT**	**TYPE 31 HN**	**Ranking Vector**
MMSC HF2	1	8	5	3	4	4	0.373
FDI	0.125	1	4	0.25	1	4	0.121
SIGMA 11515 HN	0.200	0.250	1	3	6	8	0.200
MEKO A300	0.333	4.000	0.333	1	6	8	0.198
FREMM-IT	0.250	1.000	0.167	0.166	1	5	0.074
TYPE 31 HN	0.250	0.250	0.125	0.125	0.2	1	0.034
Flexibility							
	MMSC HF2	**FDI**	**SIGMA 11515 HN**	**MEKO A300**	**FREMM-IT**	**TYPE 31 HN**	**Ranking Vector**
MMSC HF2	1	0.5	0.333	0.5	1	0.5	0.090
FDI	2.000	1	3	0.5	3	2	0.224
SIGMA 11515 HN	3.000	0.333	1	0.333	2	3	0.162

	MMSC HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN	Ranking Vector
MEKO A300	2.000	2.000	3.000	1	4	5	0.339
FREMM-IT	1.000	0.333	0.500	0.25	1	3	0.101
TYPE 31 HN	2.000	0.500	0.333	0.2	0.333	1	0.083
Redundancy							
	MMSC HF2	**FDI**	**SIGMA 11515 HN**	**MEKO A300**	**FREMM-IT**	**TYPE 31 HN**	**Ranking Vector**
MMSC HF2	1	6	5	7	3	5	0.418
FDI	0.167	1	0.25	0.333	0.142	0.2	0.034
SIGMA 11515 HN	0.200	4.000	1	1	0.25	0.333	0.076
MEKO A300	0.143	3.000	1.000	1	0.166	0.2	0.060
FREMM-IT	0.333	7.000	4.000	6	1	4	0.265
TYPE 31 HN	0.200	5.000	3.000	5	0.25	1	0.149
Final Evaluation							
	0.235	0.124	0.174	0.218	0.175	0.074	

4.2.2 Armament. Armament choices are crucial, by definition, for the operational ability of each naval unit. Again, every class may be equipped with a wide variety of different systems, and thus the evaluation must be based on the relevant arrangements proposed during the selection process. The defense equipment arrangement borne by the vessel will determine, to a large extent, the missions and roles that the ships will be able to undertake. The results (Table A.2 of the Appendix) show that MEKO, FREMM and FDI are in rather equal terms. The vessels are equipped with anti-air (e.g., Aster–30, ESSM) missiles, anti-surface (e.g., Exocet, Harpoon) missiles and anti-submarine (e.g., CAPTAS–4) systems that ensure hit-to-kill capabilities and a high possibility to defeat suturing attacks. MMSC performs poorly in this case mainly because of two reasons: first, the lack of hull mounted sonar, and second, the fact that its initial design referred to a littoral combat vessel, meaning that the addition of extra armament may come at a cost concerning its stability during open-sea operations in the eastern Mediterranean.

Most types of vessels are well-equipped in terms of point- and area-defense systems. In terms of anti-submarine systems, the MMSC and possibly the Type 31 seem to be lagging behind. In the case of the former, even if a towed sonar is installed, this may present compatibility problems due to the waterjets' noise.

Regarding aircraft carried, all types are equipped with a reliable helicopter (Seahawk, NH90 or Wildcat) and the MMSC and the FDI use, in addition, UAVs (Firescouts for the former and Schiebel Camcopters for the latter).

4.2.3 Electronics. In all cases, the sensors and processing systems of all types of vessels are state of the art in terms of technology. An exception may be the Lockheed Martin COMBATSS-21 combat management system, a modified version of Aegis, the technology of which dates to the '80s.

The electronics on board, in several cases coordinated with the armament of the vessel, cover a wide range of systems, such as target identification, navigational equipment, electronic countermeasures and integrated communication systems. However, unlike the armaments case, we assume that all vessels are equipped with cutting-edge technology tailored to fulfill the requirements of modern sea warfare, and therefore we rate them as being of equivalent performance (Table A.3 of the Appendix).

4.2.4 Main Particulars. We finally evaluate a fourth group of performance determinants, namely Main Particulars, which is composed of four criteria (complement, service speed, range and endurance/autonomy) that may be crucial for the performance of the vessels but have not been included in the evaluation thus far. To rate each of the main particulars we develop grade scales, depending on the performance of all vessel types regarding each of the four criteria as this is considered by the Hellenic Navy. In fact, the Hellenic Navy requirements call for a high number of endurance days and a range as long as possible, compatible with the Integrated Defense Doctrine demands. There is also a preference for a rather low complement figure given the country's declining birth rate. Table 7 shows the grade scales and Table 8 the corresponding evaluation for each vessel. The weight of each of the criteria in the final average of the Main Particulars system is 25%. We observe that FDI scores highest mainly due to its autonomy (45 days), a performance which, however, is close to that of almost all competitors, with the exception of the MMSC, which is a littoral combat vessel. On the issue of the limited range of MMSC, we should add that the shallow draft of the vessel, despite its advantage in the Aegean Sea, may become a serious disadvantage for operations in the eastern Mediterranean Sea as it affects the ship's stability, especially in bad weather conditions. On the other hand, one cannot overlook the MMSC's speed performance along with the limited complement needs.

Table 7: Grade scales of Main Particulars.

Complement		**Range**		**Service Speed**		**Endurance/autonomy**	
personnel	*grade scale*	*nautical miles*	*Grade scale*	*Knots*	*Grade scale*	*days*	*Grade scale*
80–100	0.25	3000–3500	0.05	25–30	0.05	15–24	0.05
100–120	0.20	3500–4500	0.10	30–35	0.10	25–34	0.10
120–140	0.15	4500–6000	0.15	35–40	0.15	35–44	0.15
140–160	0.10	6000–7500	0.20	40–45	0.20	45–54	0.20
160–180	0.05	7500–9000	0.25	45–50	0.25	55–60	0.25

Table 8: Evaluation of Main Particulars.

Criteria	MMS C HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN
Complement (25%)	0.222	0.222	0.222	0.111	0.111	0.111
Speed (25%)	0.250	0.250	0.125	0.125	0.125	0.125
Range (25%)	0.053	0.158	0.158	0.211	0.211	0.211
Endurance/Autonomy (25%)	0.118	0.235	0.118	0.118	0.235	0.176
Average	**0.161**	**0.216**	**0.156**	**0.141**	**0.170**	**0.156**

4.3 Total Benefit, Total Cost and Net Benefit Indices

Having evaluated the four systems of each vessel, we thereafter get the total weighted evaluation of each vessel. Each of the vessel's four systems offers an operational benefit and therefore the total weighted evaluation shows the total benefits for each vessel (Table 9). Note that propulsion and power generation and armament bear equal weights (25% each), while electronics bear a slightly lower weight (20%) contrary to the main particulars (30%), because of their relative importance as indicated by the Hellenic Navy requirements. We observe that, according to our methodology, the order of the vessels, concerning the operational benefits, is as follows: FDI (0.186), MEKO (0.186), FREMM (0.175), SIGMA (0.169), MMSC (0.146) and TYPE 31 (0.138).

Table 9: Total Benefit Index

Total criteria (main + particulars)	MMSC HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN
Propulsion and Power Generation (25%)	0.235	0.124	0.174	0.218	0.175	0.074
Armament (25%)	0.047	0.214	0.168	0.213	0.213	0.145
Electronics (20%)	0.135	0.183	0.183	0.183	0.135	0.183
Main Particulars (30%)	0.161	0.216	0.156	0.141	0.170	0.156
Total Benefit Index	**0.146**	**0.186**	**0.169**	**0.186**	**0.175**	**0.138**

Note: The sum of all the TBI indices equals 1.

At the next step, we calculate the total cost of purchasing each vessel. Due to the lack of relevant data, we ignore the cost of maintenance of the vessels, thus focusing on the purchasing cost. Row 2 of Table 10 depicts the purchasing cost for each vessel and row 3 the average price of the vessels. The fourth row shows the ratio of each vessel's price over the average price while the Total Cost Index (row 5) is given by the ratio of percentage average price over the sum of the percentage average prices. Therefore, the sum of the Total Cost Index yields the ordering of the vessels in a form comparable to the Total Benefit Index.

Table 10: Total Cost Index

	MMSC HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN
Cost of Purchase (in mil. Euros)	510	765	600	575	750	500
Average price			616.67			
% Average Price	0.827	1.241	0.973	0.932	1.216	0.811
Total Cost Index	**0.138**	**0.207**	**0.162**	**0.155**	**0.203**	**0.135**

Notes: The sum of all the TCI indices equals 1.

Finally, Table 11 shows the net benefit index for each vessel, which is the difference between the Total Benefit Index and the Total Cost Index. In order to have a clearer picture of the differences among the indices of the vessels, we multiply the net benefit index by 1,000.

Table 11: Net Benefit Index

	MMSC HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN
Net Benefit Index	0.051	0.055	0.058	0.072	0.049	0.047
Net Benefit Index × 1,000	**51.244**	**55.051**	**58.424**	**72.496**	**49.061**	**47.057**

4.4 Vessel Selection Under Geopolitical Uncertainty

Introducing a stochastic element in the selection process, in the sense of geopolitical uncertainty, presupposes a theoretical framework and a set of assumptions in our model. In fact, our theoretical approach builds on the realist assumption that the international system consists of states seeking relative power advantages over competitors within an anarchic international order, as described by Hobbes[31] and Morgenthau.[32] In that sense, power is a tool for a state to serve its national interests, and such a strategy demands primarily the formation of a political or military alliance, technology transfer and strengthening of the national Defense Industrial Base. Such power determinants contribute to overcoming the consequences of the security dilemma,[33] as this is rooted in the anarchy of the state system.[34]

The problem according to the political realism approach is that the target of international peace is a non-realistic one and that states are bound to face, sooner or later, the threat of war as a means of influence of rival states.[35] It is straightforward that those threats increase geopolitical uncertainty faced by the states, which then seek to increase their power as a reaction to the threat of the adversary state, thus contributing to uncertainty reduction. Suppliers of military equipment are not only positioned to consider such threats faced by states but to offer extra benefits to potential buyers to counterbalance the uncertainty caused by the threat. It goes without saying that such a contribution is expected to be over and above all conventional operational benefits that the state receives from the purchase of new military equipment per se. We consider those extra benefits as being of strategic nature as they include, among others, a formation of a political or military alliance, technology transfer and strengthening of the national Defense Industrial Base of the buyer. Strategic benefits can be interpreted as an extra cost (benefit) paid (received) by the seller (buyer) to increase its ability to face uncertainty caused by threats of its adversaries. Therefore, the higher the uncertainty, the higher the threat that the seller undertakes to counterbalance and therefore, the higher the expected net benefit for the buyer country. Equivalently, the higher the uncertainty, the higher the strategic benefits offered by the seller. In both interpretations, we expect a positive relationship between the value of the NBI_u and the volatility as this is described by Eq.12 and proxied, according to our theoretical approach, by different types of geopolitical uncertainty.

In the light of the analysis developed in this section, the main advantages of introducing uncertainty are the following: First, the military selection process accounts for the impact of geopolitical uncertainty and second, the selection process considers the extra benefits that a country receives from a potential supplier of military equipment to counterbalance uncertainty.

Focusing on our case, the sellers that offered strategic benefits to the Hellenic Navy were Naval Group (French–Greek Military Partnership) and Lockheed Martin (because of the leading role of the US in NATO and the strengthened cooperation between Greece and US in the last decades). Thus, figure 1 presents the evolution of the NBI_u under various values (scenarios) of volatility for each type of vessel. It should be noted that with the exception of Lockheed Martin (MMSC HF2) and Naval Group (FDI), the other sellers did not offer any strategic benefit in the sense defined above, and consequently, no matter what the level of volatility is, the net benefits received by each vessel remain unchanged and equal the net benefits shown in Table 8.

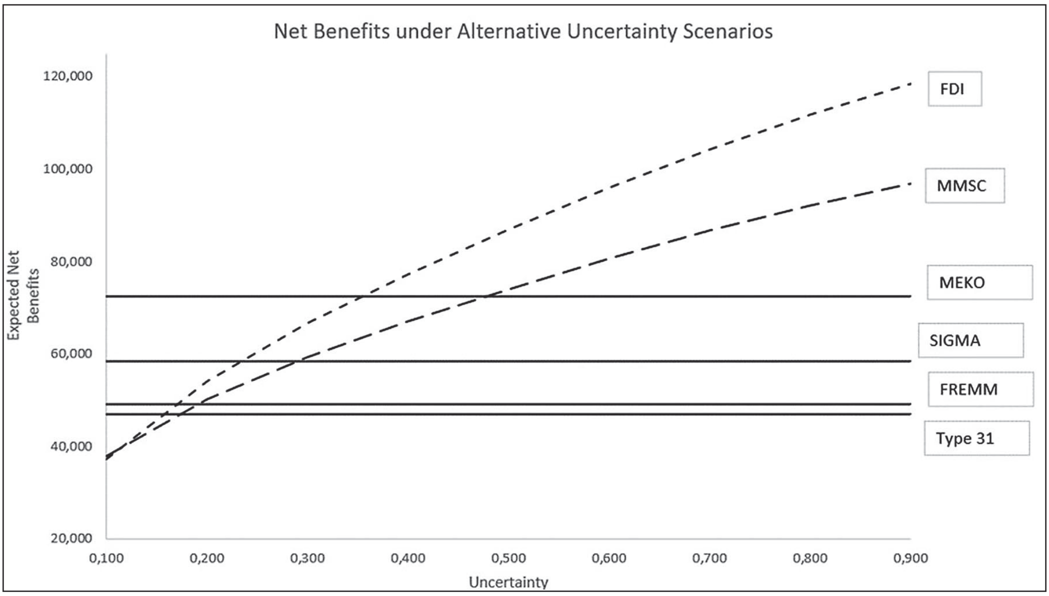

Figure 1: Evolution of NBI_u under alternative volatility scenarios

Figure 1 depicts the importance of incorporating possible strategic benefits in the selection process of military equipment based on different volatility (uncertainty) scenarios. Thus, based on the net benefits under uncertainty index, NBI_u for the FDI and MMSC HF2 frigates exceed those of other competitors that did not offer any specific strategic benefit. Therefore, the selection ordering changes depending on the existence of such strategic offers and the level of volatility.

A final important issue that remains to be examined is a robustness check of these findings that favor the selection of FDI and MMSC HF2 not under scenarios, but in the context of an application of our model as described in section 3.2. To do so, we use as a proxy the Geopolitical Risk Index (GPR), specifically three different versions of it: (a) Geopolitical Threats Index, (b) Geopolitical Acts Index and (c) Geopolitical Risk Index, which is the average of the previous two indices. Table 12 depicts the NBI_u values for FDI and MMSC HF2 under the above three indices. For comparison reasons we add the corresponding *NBI* for the other frigates, that remains unaffected by the geopolitical environment due to the lack of strategic benefits.

Table 12: Net Benefit Index under alternative geopolitical threats

	MMSC HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN
Geopolitical Threats (σ^2=0.459)	71.188	83.028	58.424	72.496	49.061	47.057
Geopolitical Acts (σ^2=0.471)	72.023	84.174	58.424	72.496	49.061	47.057
Geopolitical Risk (σ^2=0.463)	71.467	83.411	58.424	72.496	49.061	47.057

According to our results FDI has by far the highest NBI_u value, with MEKO being in the second place with minimal difference from MMSC HF2. We conclude, therefore, that any suppliers' selection procedure concerning defense equipment must necessarily include considering the benefits that arise from possible strategic offers and their importance in strengthening a country's position in the global or regional hierarchy, depending on the prevailing geopolitical environment.

V. Sensitivity Analysis

In this section, we present two alternative scenarios concerning the evaluation of the vessels under uncertainty. If we accept that the weights assigned to the different systems and main particulars can be regarded as the standard ones, we shall move to examining the ordering of the vessels under two extreme scenarios. In these scenarios, we assume criteria regarding the propulsion and power generation, armament, and electronics as well as the main particulars. In our initial scenario, we have assumed that the weights of the main designs and the particulars were 25% for the propulsion and power generation, 25% for the armament, 20% for the electronics and 30% for the main particulars. This distribution ensures that the frigates can serve multiple roles in a balanced way.

However, to check the sensitivity of our results, we now assume that the requirements of the Hellenic Navy are such that the operational capabilities of the frigates focus more on the Aegean Sea, which means that distances are very short and therefore speed and autonomy do not play a primary role. In fact, there may be higher requirements for multiple-role missions with stronger armaments and electronics rather than patrol missions far from the naval base of the frigates. Of course, each navy would prefer a vessel that covers all different types of missions, but due to scarcity there are always tradeoffs and opportunity costs. The new distribution of the weights becomes 20% for the main particulars, 30% for electronics, 30% for armaments and 20% for propulsion-power generation. Table 13 shows the net benefit index under alternative geopolitical threats for the above "Aegean Sea" system weight distribution scenario. The evolution of the corresponding NBI_u is shown in Figure 2. We observe that there is no substantial change in the ordering of the vessels. However, we find that the net benefit under uncertainty of the MMSC exceeds that of the MEKO for lower level of uncertainty ($\sigma^2 \geq 0.300$), namely even when the strategic benefits are of lower importance. This evidence is in line with the fact that the MMSC vessel was initially designed as a littoral vessel and therefore it performs more efficiently in close seas as the Aegean Sea of this scenario.

Table 13: Total Benefit Index (Aegean Sea scenario)

	MMSC HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN
Geopolitical Threats (σ^2=0.459)	74.332	89.266	55.998	63.698	47.932	50.760
Geopolitical Acts (σ^2=0.471)	75.178	90.443	55.998	63.698	47.932	50.760
Geopolitical Risk (σ^2=0.463)	74.615	89.689	55.998	63.698	47.932	50.760

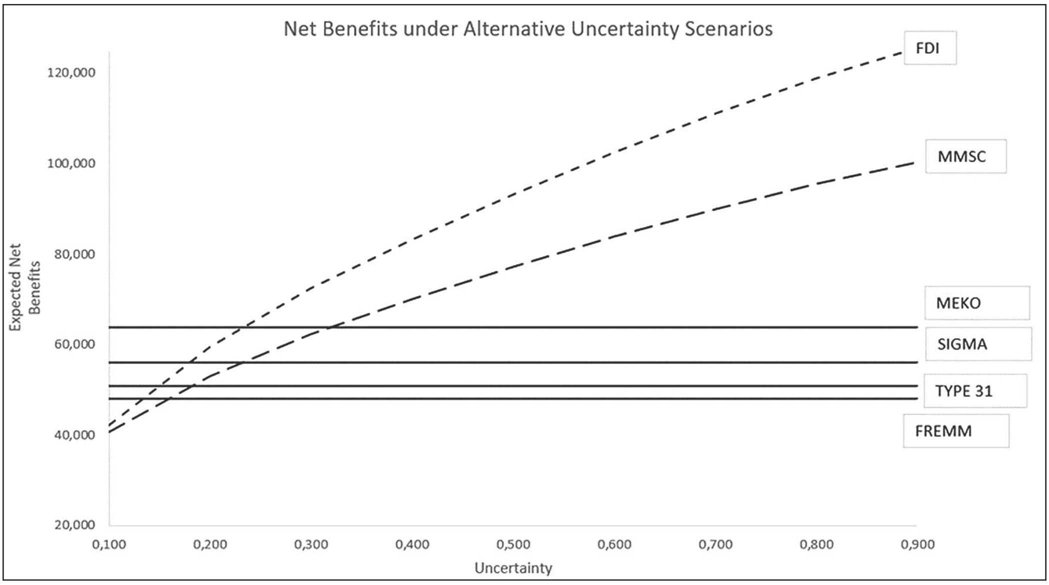

Figure 2: Evolution of NBI_u under alternative volatility scenarios and Aegean Sea scenario for systems weight distribution.

In the second sensitivity scenario, the operational requirements of the vessels change in an attempt to focus more on operations far from the Aegean Sea reaching as far as the Red Sea, considering the recent geopolitical events. In such case the distribution of the weights becomes 50% for the main particulars, 15% for electronics and 17.50% for propulsion-power generation and 17.50% for armament. Table 14 shows the net benefit index under alternative geopolitical threats for the above "Red Sea" system weight distribution scenario. The evolution of the corresponding NBI_u is shown in Figure 3. We now observe that the net benefit under uncertainty of the MMSC vessel exceeds that of MEKO only for very high levels of uncertainty ($\sigma^2 \geq 0.700$), namely when the strategic benefits play a major role. These findings are in line with the fact that the MMSC vessel was initially developed as a littoral vessel, which means that it has less capabilities for operations far from the naval base, as the "Red Sea" scenario requires.

Table 14: Total Benefit Index (Red Sea scenario)

	MMSC HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN
Geopolitical Threats (σ^2=0.459)	62.380	83.826	60.010	75.095	47.961	51.204
Geopolitical Acts (σ^2=0.471)	63.178	84.976	60.010	75.095	47.961	51.204
Geopolitical Risk (σ^2=0.463)	62.647	84.210	60.010	75.095	47.961	51.204

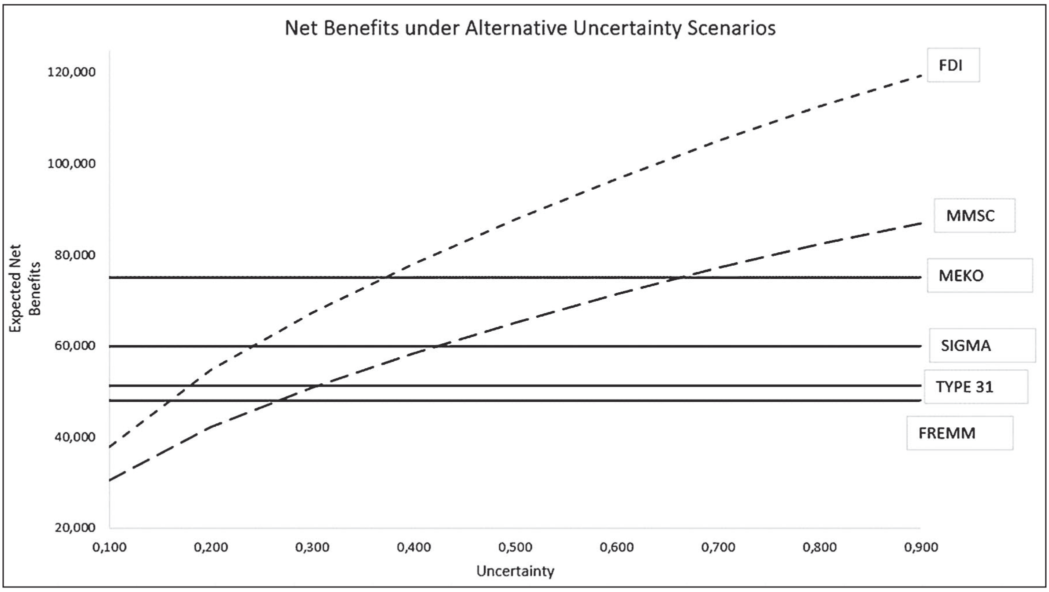

Figure 3: Evolution of NBI_u under alternative volatility scenarios and Red Sea scenario for systems weight distribution.

VI. Conclusions—
Policy Implications

This paper provides empirical evidence on the issue of supplier selection as regards combat vessels, applied to the case of the order placed by the Hellenic Navy in 2021. Our scope is to present a new methodology for the supplier selection process that considers the technical aspects of the evaluation together with the uncertainty of the international environment. This methodology is developed in two stages. We first apply the AHP method to quantify the characteristics of each of the vessels and calculate the net benefits for each vessel following a deterministic selection process. At a second step, to account for possible geopolitical threats we introduce a stochastic element in our model's selection process in the sense of geopolitical uncertainty. On this basis, we consider the extent to which the initial hierarchy ordering of the vessels is altered when introducing the geopolitical threats variable and possible strategic benefits from military alliances. To the best of our knowledge, geopolitical uncertainty has not been examined before in a military supply selection model.

Our empirical results point to the conclusion that geopolitical uncertainty may affect the preferential ordering of a supplier selection in the case of combat vessels. When uncertainty and strategic benefits are introduced in the analysis, we observe that the initial supplier selection order based on the deterministic AHP is affected to a considerable extent. Therefore, the paper underlines the necessity to consider not only the technical, operational and economic benefits related to the purchase of defense equipment, naval vessels in our case, but also possible relevant geopolitical benefits during the selection process, following strategic alliances.

Appendix to "Supplier Selection of Combat Vessels Under Geopolitical Uncertainty: The Case of the Hellenic Navy"

Table A1: Designs

Design	Website
MMSC HF2	https://www.lockheedmartin.com/en-us/products/multi-mission-surface-combatant.html
FDI	https://www.naval-group.com/en/greece-launches-its-program-three-defense-and-intervention-frigates-fdi-hn-naval-group
SIGMA 11515 HN	https://www.damen.com/vessels/defense-and-security/sigma-frigates/sigma-multi-mission-frigate-11515
MEKO A300	https://www.thyssenkrupp-marinesystems.com/en/products-services/surface-vessels/frigates
FREMM-IT	https://www.fincantieri.com/en/products-and-services/naval-vessels/bergamini-class/
TYPE 31HN	https://www.babcockinternational.com/what-we-do/marine/defense/type-31/

Table A2: Evaluation of Armament system, each vessel and criteria, using AHP.

Reliability							
	MMSC HF2	**FDI**	**SIGMA 11515 HN**	**MEKO A300**	**FREMM-IT**	**TYPE 31 HN**	**Ranking vector**
MMSC HF2	1	0.2	0.2	0.2	0.2	0.2	0.038
FDI	5.000	1	1	0.5	0.5	1	0.147
SIGMA 11515 HN	5.000	1.000	1	0.5	0.5	1	0.147
MEKO A300	5.000	2.000	2.000	1	1	2	0.261
FREMM-IT	5.000	2.000	2.000	1	1	2	0.261
TYPE 31 HN	5.000	1.000	1.000	0.5	0.5	1	0.147

Effectiveness							
	MMSC HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN	Ranking vector
MMSC HF2	1	0.250	0.333	0.333	0.333	0.333	0.057
FDI	4.000	1	2	2	2	3	0.313
SIGMA 11515 HN	3.000	0.500	1	1	1	2	0.174
MEKO A300	3.000	0.500	1.000	1	1	2	0.174
FREMM-IT	3.000	0.500	1.000	1	1	2	0.174
TYPE 31 HN	3.000	0.333	0.500	0.5	0.5	1	0.106
Flexibility							
	MMSC HF2	**FDI**	**SIGMA 11515 HN**	**MEKO A300**	**FREMM-IT**	**TYPE 31 HN**	**Ranking vector**
MMSC HF2	1	0.25	0.25	0.25	0.25	0.25	0.048
FDI	4.000	1	1	1	1	1	0.190
SIGMA 11515 HN	4.000	1.000	1	1	1	1	0.190
MEKO A300	4.000	1.000	1.000	1	1	1	0.190
FREMM-IT	4.000	1.000	1.000	1	1	1	0.190
TYPE 31 HN	4.000	1.000	1.000	1	1	1	0.190
Redundancy							
	MMSC HF2	**FDI**	**SIGMA 11515 HN**	**MEKO A300**	**FREMM-IT**	**TYPE 31 HN**	**Ranking vector**
MMSC HF2	1	0.25	0.25	0.25	0.25	0.25	0.048
FDI	4.000	1	1	1	1	1	0.190
SIGMA 11515 HN	4.000	1.000	1	1	1	1	0.190
MEKO A300	4.000	1.000	1.000	1	1	1	0.190
FREMM-IT	4.000	1.000	1.000	1	1	1	0.190
TYPE 31 HN	4.000	1.000	1.000	1	1	1	0.190
Final evaluation							
	0.047	0.214	0.168	0.213	0.213	0.145	

Table A3: Evaluation of electronics system, each vessel and criteria, using AHP.

Reliability							
	MMSC HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN	Ranking vector
MMSC HF2	1	1	1	1	1	1	0.167
FDI	1.000	1	1	1	1	1	0.167
SIGMA 11515 HN	1.000	1.000	1	1	1	1	0.167
MEKO A300	1.000	1.000	1.000	1	1	1	0.167

	MMSC HF2	FDI	SIGMA 11515 HN	MEKO A300	FREMM-IT	TYPE 31 HN	Ranking vector
FREMM-IT	1.000	1.000	1.000	1	1	1	0.167
TYPE 31 HN	1.000	1.000	1.000	1	1	1	0.167
Effectiveness							
	MMSC HF2	**FDI**	**SIGMA 11515 HN**	**MEKO A300**	**FREMM-IT**	**TYPE 31 HN**	**Ranking vector**
MMSC HF2	1	0.333	0.333	0.333	1	0.333	0.071
FDI	3.000	1	1	1	3	1	0.214
SIGMA 11515 HN	3.000	1.000	1	1	3	1	0.214
MEKO A300	3.000	1.000	1.000	1	3	1	0.214
FREMM-IT	1.000	0.333	0.333	0.333	1	0.333	0.071
TYPE 31 HN	3.000	1.000	1.000	1	3	1	0.214
Flexibility							
	MMSC HF2	**FDI**	**SIGMA 11515 HN**	**MEKO A300**	**FREMM-IT**	**TYPE 31 HN**	**Ranking vector**
MMSC HF2	1	1	1	1	1	1	0.167
FDI	1.000	1	1	1	1	1	0.167
SIGMA 11515 HN	1.000	1.000	1	1	1	1	0.167
MEKO A300	1.000	1.000	1.000	1	1	1	0.167
FREMM-IT	1.000	1.000	1.000	1	1	1	0.167
TYPE 31 HN	1.000	1.000	1.000	1	1	1	0.167
Redundancy							
	MMSC HF2	**FDI**	**SIGMA 11515 HN**	**MEKO A300**	**FREMM-IT**	**TYPE 31 HN**	**Ranking vector**
MMSC HF2	1	1	1	1	1	1	0.167
FDI	1.000	1	1	1	1	1	0.167
SIGMA 11515 HN	1.000	1.000	1	1	1	1	0.167
MEKO A300	1.000	1.000	1.000	1	1	1	0.167
FREMM-IT	1.000	1.000	1.000	1	1	1	0.167
TYPE 31 HN	1.000	1.000	1.000	1	1	1	0.167
Final evaluation							
	0.135	0.183	0.183	0.183	0.135	0.183	

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Author Contributions

The authors have equally contributed to all parts of this paper. All the authors have read and approved the final manuscript.

Data Availability Statement

The data employed in this research paper and the codes to replicate the results are available upon request.

Consent for Publication

This study presents original material that has not been published elsewhere.

Disclosure Statement

The authors declare that they have no competing interests, or other interests that might be perceived to influence the results or discussion reported in this paper.

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Andreas-Minos Zompanakis has been involved in technical ship management for the past 15 years, having held positions from superintendent engineer to technical manager with a variety of ship owning companies. During his career he has been responsible for the technical management of small-scale LNG, ethylene, LPG and CO2 carriers as well as LNG bunker vessels, medium-size LPG tankers, and MR/LR1/LR2 oil and product tankers. He has also been responsible for the new building projects of ethylene and LNG bunker vessels with shipyards in Korea and China. As of late, he has joined the American Bureau of Shipping in the Global Gas Solutions team and is involved in many of the gas related developments within the shipping industry such as the development of LCO2 carriers, the application of ammonia and hydrogen as fuels as well as the standardization and advancement of LNG bunkering. He holds a MSc in marine engineering and naval architecture from the National Technical University of Athens and a MSc in marine technology from TU Delft.

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Maritime Critical Infrastructure in Southeast Asia: Policy Frameworks and Resilience

Deniz Kocak

Structured Abstract

Article Type: Research Article

Purpose—This study examines how Southeast Asian states can ensure their critical maritime infrastructure's security in the face of hybrid threats and geopolitical tensions through technological innovation and regional cooperation.

Design, Methodology, Approach—Applying Balzacq's practice-centered securitization framework and Krippendorff's content analysis, the study examines defense documents from five Southeast Asian states and the Association of Southeast Asian Nations (ASEAN) Maritime Outlook across four dimensions: threat concepts, technological approaches, governance structures and regional cooperation mechanisms.

Findings—Southeast Asian states share threat perceptions but differ in priorities and tech capacity: Singapore leads with AI and digital twins, while Vietnam relies on conventional deterrence. Cooperative arrangements like the Malacca Straits Patrol remain geographically confined, while sovereignty concerns and differing conceptions of hybrid threats impede integrated regional defense concepts.

Practical Implications—States should adopt modular, threat-specific cooperation rather than broad multilateral schemes and pair tech modernization with institutional reforms that reconcile sovereignty with shared vulnerability management.

Originality, Value—Through Balzacq's securitization theory, this study links technological capacities, governance structures and cooperation mechanisms in Southeast Asian maritime security, demonstrating how hybrid threats are constructed through practice-centered processes rather than speech acts. It expands theory on how hybrid threats redefine the gray zone between war and peace.

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Keywords: critical maritime infrastructure, hybrid threats,
regional security cooperation, resilience, Southeast Asia

I. Introduction

The sabotage of the Nord Stream pipelines in September 2022 marked a turning point in international perceptions of maritime infrastructure security. This incident in the Baltic Sea exposed the vulnerability of subsea systems and illustrated how such assets can serve as leverage in international conflicts.[1] In Southeast Asia, where maritime infrastructure forms the backbone of both regional and global economies, similar security concerns have developed. The Strait of Malacca is a global trade hub, and the dense networks of undersea cables and the region's exposed energy supply lines are increasingly the focus of hybrid threat scenarios.[2] Maritime infrastructure refers to five key areas: transport infrastructure (e.g., ports and shipping routes), energy infrastructure (offshore platforms and undersea pipelines and cables), fisheries infrastructure, and marine biodiversity systems.[3] Threats in the maritime domain highlight the limits of conventional protection mechanisms. The blurring of military and civilian threats, targeted exploitation of international law loopholes and increasing digitalization of maritime systems demonstrate that existing protection mechanisms for critical maritime infrastructure require reconsideration.[4]

Hybrid threats in the maritime domain refer to coordinated actions below the level of conventional warfare that combine military, political, economic, legal and informational means to exploit vulnerabilities in maritime systems.[5] Resilience describes the systematic ability of all social subsystems to ward off such threats through protection, adaptation and restoration measures, taking into account mutual dependencies, a pattern of responses to internal or external shocks that aims to preserve, slightly modify or fundamentally transform a reference object.[6]

This blurring also exemplifies what Balzacq[7] distinguishes as the challenge of differentiating between "institutional threats" and "brute threats." This theoretical distinction gains particular prominence when assessing how Southeast Asian states reconcile traditional security concerns with emerging hybrid challenges.

New forms of hybrid threats increasingly impact the security landscape. Cyberattacks on ship navigation systems, coordinated disinformation campaigns and targeted manipulation of regulatory processes make it difficult to draw a clear distinction between warlike and peaceful actions.[8] These gray-zone activities require a thorough reassessment of existing security concepts, as they not only make it difficult to clearly attribute incidents to their perpetrators, but also undermine the effectiveness of conventional deterrence strategies. Attacks on undersea cables or disruption of harbor operations can cause economic and social damage without open military confrontation.

Moreover, Southeast Asian security policy dynamics are characterized by strategic competition between major powers. The US–China rivalry is turning Southeast Asia into a theater of geopolitical conflict, where maritime infrastructure gains strategic importance.[9] This development is forcing ASEAN countries to make strategic considerations: while some members, such as the Philippines, are considering closer security ties with the US, others, such as Indonesia, are seeking to preserve their strategic autonomy in the competition between major powers through a policy of active non-alignment.

Given these overlapping challenges, a central puzzle emerges: Why do different security stakeholders in Southeast Asia pursue divergent technological and governance solutions to hybrid threats against maritime infrastructure, despite facing shared vulnerabilities? This divergence is particularly puzzling given that hybrid threats require coordinated, multilateral responses. If maritime security actors acknowledge the transnational character of these threats, what explains the persistence of fragmented, nationally oriented approaches? Moreover, how can coherent regional governance mechanisms be developed when states operate under different security cultures, technological capabilities, and strategic alignments with extra-regional powers?

Building on this puzzle, this study examines why divergent approaches persist and how Southeast Asian states can develop more coherent strategies to ensure the security of their critical maritime infrastructure through technological innovation and regional cooperation. It encompasses both technological innovation and regional cooperation. The study draws on Balzacq's[10] sociological account of securitization understood as a practice-centered process. Rather than privileging singular speech acts, the approach foregrounds how security problematizations are enacted through instruments and organizational arrangements (dispositifs) within specific contexts. The study therefore examines which referent objects are portrayed as being at risk, the contextual conditions that allow particular problematizations to gain traction, and how the documents articulate the linkage to technologies, procedures and rules.

The academic relevance of this study lies in the systematic analysis of a hitherto insufficiently integrated research field. The existing literature fragments maritime security into discrete analytical silos. An integrative framework linking these dimensions remains absent. This study attempts to close this gap through comprehensive analysis of official security documents from the region. From a policy perspective, the study examines how resilience concepts are designed and presented in Southeast Asian national defense strategies. The region is characterized by technological and institutional imbalances, making common security approaches difficult. The comparative analysis of the Defence White Papers reveals different approaches and potential impediments in strategies. The results can provide guidance for the development of harmonized regional security approaches and can also serve as a basis for decision-makers in shaping future defense concepts. Furthermore, insights into the interactions between technological capabilities, governance structures and regional cooperation mechanisms in response to hybrid threats provide new perspectives for international security research. Using qualitative content analysis after Krippendorff,[11] the paper examines national defense and maritime security documents from Singapore, Malaysia, Indonesia, the Philippines, Vietnam, and the *ASEAN Maritime Outlook* across four dimensions: threat concepts, technological approaches, governance, and regional cooperation. Across the empirical sections, recurrent storylines and their intertextual reproduction are highlighted where documents link problematizations to envisaged instruments or procedures.

Following this introduction, the literature review systematizes the current state of research on maritime critical infrastructure in Southeast Asia. The subsequent methods chapter explains the analytical procedure of the structured content analysis in detail. The empirical analysis presents the results along the four dimensions of the study, and the synthesis summarizes the findings and develops overall insights into the possibilities and limitations of technological and cooperative security strategies. The conclusion reflects on the theoretical and practical implications for maritime security in Southeast Asia and beyond. In resolving the puzzle of divergent security approaches, the study contributes to both securitization theory and practical policy coordination in the Indo-Pacific maritime domain.

II. Literature Review

The security of maritime critical infrastructure has become a central field of research. Modern societies are ever more dependent on networked systems, while hybrid threats are becoming increasingly complex. Southeast Asia holds a central position in this context. The region is geographically and geopolitically at the center of global maritime networks. This literature review examines the current state of research on how states in Southeast Asia can ensure the security of their critical maritime infrastructure through technological innovation and regional cooperation.

2.1 Conceptualizing Maritime Criticality

Academic and policy-oriented debates on maritime critical infrastructure face definitional challenges. Maritime security remains controversial as a concept because the actors involved pursue divergent priorities; for example, navies focus on strategic and defense considerations, whereas private and trading companies foreground commercial interests.[12]

This divergence raises a fundamental question: if the transnational nature of hybrid maritime threats necessitates coordinated responses, why do such fragmented approaches persist across the region? The conceptual challenge is exacerbated when maritime critical infrastructure is understood as a highly politically dependent concept. Bueger and Liebetrau[13] categorize maritime infrastructure into five main areas: transport, energy, communication, fisheries and marine biodiversity. This categorization shows the different dimensions of the object of investigation.

The Asian Development Bank[14] focuses on functional aspects when defining critical infrastructure in the Asia-Pacific context. Essential infrastructure systems are primarily assessed according to the extent to which their disruption can have a serious impact on the economy, public health and social stability. While the analysis covers system-wide and long-term risks, the technological specifics of individual infrastructures are hardly considered. Cannon[15] fills this gap with his detailed analysis of undersea cables. He identifies them as infrastructures that transport over 95 percent of global internet traffic and enable communication and financial transactions.

Wang et al.[16] classify the Strait of Malacca, together with Gibraltar, as the most strategically important sea choke points globally, emphasizing their central role in maritime transport. The Boston Consulting Group[17] also points out that around 30% of global trade and around two-thirds of Chinese trade, and therefore around 80% of its energy imports, pass through the Strait of Malacca. Moreover, Till[18] places this geographical conditionality in a larger analytical context. Maritime infrastructure in Southeast Asia has two main functions: it connects global shipping routes and supports the region's energy supply. This overlapping of different functions makes one-dimensional security approaches obsolete. Consequently, integrated protection frameworks must capture and accommodate the full spectrum of challenges inherent in this maritime domain.

2.2 From Traditional to Hybrid Threats

Since the annexation of Crimea by Russia in 2014, hybrid threats have increasingly become the focus of security policy research. Mitrescu and Sokolov[19] point out that the topic of *hybrid threats* has since become an independent discipline within security research. They define hybrid threats, also in the maritime domain, as coordinated activities below the threshold of conventional warfare that specifically combine different military, political, economic, legal and informational means. Fenton[20] uses a case study on the Strait of Malacca and Singapore to illustrate the growing hybrid risks posed by the increasing networking of marine IT and operational IT. The author notes that cyber security standards in the maritime sector lag behind those of other critical infrastructure sectors. Accordingly, this indicates that the likelihood of incidents, such as malware, ransomware or targeted manipulation of navigation systems, is increasing due to outdated systems and growing attacker expertise. Underwater cables vividly demonstrate the vulnerability of critical infrastructure and its practical implications. Submarine cables in the South China Sea region are increasingly becoming the center of hybrid threats in which targeted political influence, regulatory blockades and deliberate creation of dependencies are becoming a "weapon." Over the past decade, the distinction between unintentional failure and deliberate attack has become blurred, which in turn makes reliable attribution challenging. Dual-use technology, proxy infrastructure, and rising system complexity all create plausible alternative causes for incidents.[21] Also, as Scholvin and Wigell[22] predicted back in 2019, energy pipelines and maritime hubs are increasingly becoming the center of international competition. The sabotage of the Nord Stream pipelines in the Baltic Sea in 2022 illustrates the growing strategic importance of critical infrastructure in the context of geo-economic power politics. The concept of resilience has established itself as a central theoretical approach to cope with the identified threats. Gharehgozli et al.[23] develop a four-stage framework that specifically addresses the challenges to which seaports are exposed as a result of natural disasters and socio-political risks. Their approach emphasizes that resilience cannot be reduced to technical protection measures alone, but also encompasses organizational, economic and social dimensions. According to Gharehgozli et al., particularly in the context of Southeast Asia, where maritime infrastructure is simultaneously exposed to natural disasters and geopolitical challenges, it is evident that effective resilience strategies require the continuous analysis of risks, the involvement of various stakeholders and the ongoing adaptation and improvement of measures. The framework thus emphasizes the need to understand resilience holistically and as a dynamic, long-term process that goes far beyond traditional technical approaches.

2.3 Technological Responses and Limitations

The practical implementation of resilience concepts is increasingly being realized through technological innovations in the field of maritime domain awareness. Developments range from traditional surveillance systems such as radar and AIS to the increased use of satellites and the integration of advanced information and communication technologies, including artificial intelligence. This technological development is continuously improving monitoring capacities and the networking of relevant actors.[24] However, Bueger and Edmunds[25] emphasize that technological surveillance systems and innovative information platforms alone are not enough to effectively address maritime security problems. These technologies will only be effective if appropriate institutional capacities, coordination mechanisms and analytical capabilities are developed. This understanding is particularly relevant for Southeast Asia, where the technological capacities of different states vary considerably. Moreover, technological solutions alone cannot address the challenge of fragmented regulatory authority.

2.4 Governance Gaps and Sovereignty Challenges

The monitoring of underwater infrastructure also provides an example of the limits of purely technological solutions. Kraska[26] analyzes the restrictions under international law that stand in the way of effective monitoring in international waters. The installation of permanent sensor systems outside national jurisdiction remains legally controversial, but this creates significant gaps in the protection concept. Technological challenges exacerbate these legal limitations. Kajiwara[27] addresses the rapid proliferation of military AUV programs in the region. However, their applicability for the protection of civilian infrastructure remains unclear. The dual-use problem of these technologies also complicates regional security cooperation, as military and civilian applications are difficult to separate.

The governance of maritime critical infrastructure is characterized by an ambiguity of responsibilities. Their transnational significance contrasts with fragmented regulatory structures. Girardi and Ebrard[28] identify the unclear allocation of responsibility as a core problem. As most underwater infrastructure is privately owned, this creates a regulatory gray area. On the one hand, state responsibility for safety overlaps with private sector interests. On the other hand, national jurisdictions overlap in maritime areas, which further complicates the situation. This creates a regulatory vacuum. While Tan[29] argues for an increased involvement of private actors through public-private partnerships, the US and India, take a state-centered approach. Their establishment of government-led cable ship programs keeps critical repair and maintenance capabilities under direct government control. These divergent approaches reflect different political economies and security cultures. However, they make it difficult to develop coherent regional governance mechanisms.

2.5 Regional Cooperation: Ambitions Versus Implementation

Analyzing regional cooperation mechanisms reveals a paradoxical picture. The need for coordinated approaches in the face of cross-border threats is evident. However, the existing structures fall short of the requirements. Accordingly, Edwards[30] argues that within the numerous ASEAN arrangements on maritime security, there are discrepancies between ambitious declarations and their actual implementation, reflecting divergences of interest among member states, particularly with regard to maritime risks and their prioritization. Despite structural deficits, successful models of sub-regional cooperation exist. Poonnawatt[31] analyzes the Malacca Straits Patrol as an example of functioning maritime security cooperation. The Malacca Straits Patrol (MSP), which has been active since 2004, combines maritime and air surveillance with intelligence sharing between Indonesia, Malaysia, Singapore and Thailand. This has led to a decline in piracy incidents in the Strait of Malacca.[32] Similarly, the Trilateral Cooperative Arrangement in the Sulu and Celebes Sea areas enables coordinated sea/air patrols with information exchange against cross-border risks such as kidnappings and piracy.[33] The success of these minilateralism initiatives is based on the fact that they circumvent ASEAN's consensus-oriented decision-making process, which has been slowed down since the 1990s by enlargement and diverging national interests.[34] However, Davenport[35] argues that the MSP model is not easily transferable to the protection of underwater infrastructure. Sovereignty concerns, protection of technological information and different threat perceptions represent structural obstacles.

The security of maritime critical infrastructure in Southeast Asia is also closely linked to the overarching geopolitical dynamics of the region. Govella[36] analyzes how the securitization of the maritime domain through the US–China rivalry influences and constrains the policy space of regional actors. The security discourse varies considerably, not only from country to country but also within individual countries and sectors. This discursive fragmentation makes it difficult to develop common threat analyses and coherent regional protection strategies, as Govella[37] argues. The application of classic deterrence theories to the protection of maritime infrastructure proves to be problematic. As Platte[38] points out, the difficult attribution of attacks, uncertainties in the selection and calibration of appropriate responses and doubts about the credibility of threats of retaliation make effective deterrence particularly difficult. Physical factors exacerbate these challenges in the maritime context. For example, the inaccessibility of many infrastructures and the difficulty of forensic investigations underwater make clear attribution difficult, thus hampering a credible response.

III. Methodology

This study adopts a qualitative research design and draws on a systematic reading of official security documents and policy papers to trace how security concepts and cooperation mechanisms for maritime critical infrastructure are articulated in Southeast Asian states. A qualitative approach was chosen since it captures implicit security logics and discursive threat constructions that are not readily accessible through quantitative techniques.[39]

As for the corpus and case selection, the document sample covers the latest available national defense white papers and maritime security strategies from Singapore, Malaysia, Indonesia, the Philippines, and Vietnam. These cases were purposively selected because they sit astride strategic sea lanes yet embody diverse approaches to maritime security. As Singapore does not publish a defense white paper,[40] functionally equivalent official materials were used. To also capture a regional vantage point, the *ASEAN Maritime Security Outlook* is included. Selection followed simple, transparent criteria: (1) official government publications issued after 2020 to reflect current security conceptualizations; (2) top-level policy documents to ensure authoritative statements of national positions; and (3) availability in English for analytical consistency. The analysis combines a structured, focused reading with a compact codebook (see Table 1). Initial categories, *threats, technology, governance, and cooperation*, were informed by the maritime security literature. These also align with Balzacq's levels of securitization analysis, where threats relate to referent objects, technology to dispositifs, and cooperation to intersubjective processes.[41] The categories are operationalized as four dimensions for cross-case comparison. Specific guiding questions were then created inductively during preliminary reading. Before full analysis, these questions were fixed to preserve comparability across cases, consistent with Krippendorff's insistence on stability in the measurement procedure.[42]

The first dimension identifies and prioritizes specific threats to maritime critical infrastructure, distinguishing traditional from hybrid threats and specifying the actors attributed to them. It also attends to assessments of infrastructure vulnerability and the anticipated time horizons of threat scenarios. The second dimension evaluates proposed technological solutions, considering the balance between surveillance, resilience and physical protection, the explicit role of emerging technologies (especially artificial intelligence and autonomous systems), and issues of technological dependencies, sovereignty and capacity gaps. The third dimension assesses governance arrangements, particularly the allocation of responsibilities between state authorities and private infrastructure operators. The fourth dimension examines regional cooperation, identifying prioritized bilateral or multilateral formats and conceptions of ASEAN's role, and analyzing proposed information exchange, operational cooperation, and how sovereignty concerns are balanced with cooperative needs.

In line with Krippendorff's distinction between sampling, context and recording units, the respective document is the sampling unit; sections and chapters provide context; and the recording unit is a semantically coherent passage directly addressing maritime critical infrastructure.[43] For each subcode in Table 1, there is a note whether the text offers only a general gesture or a specific claim. A simple 0–2 scale is used for this purpose (0 = not mentioned; 1 = general/vague; 2 = specific-named measure/system/format/institution). Subcodes within a dimension are applied exclusively, and cross-dimension double coding is allowed where substantively warranted, in keeping with Krippendorff's emphasis on explicit decision rules and category separability.[44] The table notes beneath Table 1 summaries these conventions.

The four dimensions were applied systematically to each document. Relevant passages were coded, condensed, and summarized in a comparative matrix. This enables within-case coherence checks and cross-case contrasts. Guiding questions were lightly refined during initial readings for clarity and fit, after which they remained stable. Where a document omits a dimension, this is explicitly recorded as an informative silence rather than treated as missing data. As for the scope and potential limitations, the analysis concerns declared positions in official texts. However, it does not test causal mechanisms or implementation outcomes. The aim of this study was comparability of meaning across a focused set of cases, not statistical generalization.

Table 1: Condensed Codebook for Maritime Critical Infrastructure Analysis.

Dimension	Subcode	Definition	Key decision rule	Scale
Threats	Traditional	Physical/conventional maritime risks (e.g., piracy, armed attacks).	Only here if not framed as gray-zone/hybrid.	0/1/2
Threats	Hybrid/Gray-zone	Mix of non-kinetic means (cyber, information, economic) with/without limited kinetic elements.	Requires two domains or explicit "hybrid/gray-zone" framing.	0/1/2

Dimension	Subcode	Definition	Key decision rule	Scale
Threats	Actors/Attribution	Named state/non-state perpetrators or clear attribution.	Foreign actors = 1; named/type + context = 2.	0/1/2
Threats	Vulnerability/Time horizon	Concrete KMI weak points and temporal outlook.	Named assets/segments or timeframes = 2.	0/1/2
Technology	Surveillance/ISR/MDA	Sensors, C2/C4ISR, maritime domain awareness.	Specific platform/system or network named = 2.	0/1/2
Technology	Resilience/Hardening	Redundancy, backup, recovery time, critical node protection.	Standards/plans/metrics specified = 2.	0/1/2
Technology	Physical protection/Forces	Access control, patrols, infrastructure hardening, security forces.	Concrete forces/plans/assets = 2.	0/1/2
Technology	AI/Autonomous systems	Explicit AI analytics or unmanned/autonomous systems for MDA/protection/response.	Vague "smart tech" ≠ 2; named use-case/system = 2.	0/1/2
Technology	Sovereignty/Dependencies	Domestic capability vs. import/partner reliance.	Source/alternatives/industrial strategy specified = 2.	0/1/2
Technology	Capacity gaps/Plans	Stated capability gaps plus programmes/timelines to address them.	Budget/programme/timeline named = 2.	0/1/2
Governance	Lead agency/Roles	Clear allocation of responsibilities state/operator/authorities.	"Whole-of-government" only = 1; named lead + remit = 2.	0/1/2
Governance	Inter-agency coordination	Formal mechanisms across ministries/agencies.	Bodies/SOPs/joint centres/task forces specified = 2.	0/1/2
Governance	Law/Regulation/Standards	Laws, regulatory frameworks, audits, compliance.	Named law/regulation/standard + scope = 2.	0/1/2
Governance	Crisis management/Response	Contingency plans, exercises, alert/recovery processes.	Named exercise/plan/centre = 2.	0/1/2
Co-operation	Formats/Levels	Bilateral, minilateral, ASEAN frameworks; external partners.	Specific forum/arrangement/initiative named = 2.	0/1/2
Co-operation	Functions/Instruments	Info-sharing, exercises, combined ops, SOP harmonisation, capacity building.	Concrete mechanism/workstream = 2.	0/1/2
Co-operation	Sovereignty vs. Interoperability	Balance of national control with data/ops sharing needs.	Explicit red lines/data-sharing rules/EEZ references = 2.	0/1/2
Co-operation	External partners	Role of non-ASEAN partners in maritime security.	Partner/programme/TTX named = 2.	0/1/2

Recording unit: Semantically coherent passage on MCI security (≈ 1–5 sentences).
Scale (specificity): 0 = not mentioned; 1 = general/vague; 2 = specific (named measure/system/format/institution).
General decision rules: Subcodes within a dimension are mutually exclusive; cross-dimension double coding are allowed.

IV. Analysis of Maritime Security Concepts for Critical Infrastructure in Southeast Asia

This analysis examines the security concepts of selected countries in Southeast Asia regarding maritime critical infrastructure. The focus is on threat perceptions, technological approaches, institutional structures and cooperation forms. The central categories of threat concepts, technological security approaches, governance structures and regional cooperation mechanisms were formed inductively.

4.1 Dimension 1: Threat Concepts for Maritime Critical Infrastructure

This subsection identifies how documents problematize specific maritime threats, the context conditions invoked, and whether these framings are coupled to envisaged instruments, procedures, or rules. Southeast Asian defense documents reveal varying threat perceptions. These reflect Balzacq's "semantic repertoires of security."[45] Malaysia identifies US–China geopolitical rivalry as the primary structural challenge to regional security. Malaysia also identifies both Chinese militarization and American naval operations as transforming the South China Sea into a great power arena.[46] This assessment contrasts with Indonesia's assessment, which distinguishes between factual threats such as terrorism, separatism and piracy and non-factual threats, prioritizing the former.[47] The Philippines position the conflict in the West Philippine Sea as their top security challenge. Massive artificial island construction in Philippine waters by China is explicitly classified as a serious threat to national security.[48] Vietnam adopts a more abstract approach without direct attribution of actors. Instead, unilateral actions, power-based coercion and violations of international law are identified as primary threats.[49] Singapore perceives an increasingly dangerous security environment resulting from growing international tensions and its exposed position as a geostrategic hub in Southeast Asia's transport and trade network.[50]

Hybrid threats are conceptualized with varying definition precision in the documents analyzed. This variation illustrates Balzacq's argument that securitization employs different "heuristic artifacts," for example metaphors, stereotypes, and emotions, contextually mobilized by securitizing actors.[51] Indonesia explicitly defines hybrid threats as combining military and non-military elements.[52] Malaysia describes hybrid conflicts as occurring across multiple domains.[53] The Philippines demonstrates an implicit understanding of hybrid threats by linking territorial disputes with environmental degradation. For instance, the construction of artificial terrain has already inflicted irreversible ecological damage, decimating marine resources in traditional fishing grounds.[54] Vietnam avoids explicit terminology, but describes the combination of information warfare and cyber warfare by enemy forces as a particularly dangerous multidimensional threat.[55]

Indonesia's outermost islands, Malaysia's territorial divide, and Singapore's cable hub status create distinct yet interconnected vulnerabilities. These assessments reveal how states identify different "referent objects," things seen as existentially threatened with legitimate claims to survival, ranging from outermost islands to strategic waterways.[56] Indonesia emphasizes its vulnerability as an open archipelago with 92 outermost islands, 12 requiring priority protection.[57] Malaysia, by contrast, identifies the territorial divide created by the South China Sea as a major operational challenge. Both states nevertheless underscore the need to secure four strategic waterways: the Strait of Malacca, the South China Sea, the Sulu Sea and the Sulawesi Sea.[58] The Philippines emphasizes dependence on sea lanes, which must remain open to ensure freedom of trade and navigation.[59] And Vietnam recognizes its geostrategic position as a bridge linking East Asia and Southeast Asia, spanning vital sea lanes connecting the Pacific and Indian Oceans.[60]

The ASEAN Maritime Outlook presents a regional perspective focusing on transnational threats. Piracy and armed robbery against ships persist, with documented increases in incidents near the Straits of Malacca and Singapore in 2022.[61] Cyberattacks emerge as threats to the maritime sector, disrupting ship operations and maritime trade.[62] Illegal, unreported and unregulated fishing presents a multidimensional threat affecting marine environment and working conditions on fishing vessels.[63] These varied threat conceptualizations directly influence the technological approaches states adopt for maritime security.

4.2 Dimension 2: Technological Security Approaches

The technological security approaches demonstrate significant technological disparities. These technological tools function as what Balzacq[64] calls "dispositifs," material anchors of security problematizations that embody specific threat images.

Singapore presents the most advanced portfolio with the world's first Maritime Digital Twin. This system uses artificial intelligence and predictive analytics for port operations optimization, integrating real-time data for improved decision-making in maritime operations management.[65] The Maritime Cyber Assurance and Operations Centre provides real-time cybersecurity monitoring, disseminates threat information and offers system recovery advice.[66] Vietnam focuses primarily on conventional deterrence capabilities. The country deploys SSK Kilo-class submarines, Gepard 3.9 frigates, Project 12418 missile corvettes and Bastion mobile coastal defense systems.[67] This prioritization of conventional weapon systems reflects Vietnam's focus on territorial defense. In contrast, Malaysia, Indonesia and the Philippines are pursuing the same basic principle: C4I-supported ISTAR for a networked maritime situation awareness. Malaysia is increasing its maritime domain awareness with maritime reconnaissance aircraft and MALE drones.[68] Indonesia is linking satellite and UAV data in a planned C4IOR network to support its Global Maritime Fulcrum strategy,[69] and the Philippines is introducing a C4ISTAR system that connects all branches of the armed forces for synchronized joint operations.[70] These systems function as what Balzacq[71] categorizes as "capacity tools," instruments that enable agencies to make decisions and carry out activities with reasonable probability of success.

Also, the balance among surveillance, resilience and physical protection varies considerably across the countries analyzed. Singapore demonstrates the most integrated approach. The Maritime Digital Twin combines all three elements through risk assessments for incidents such as oil spills while optimizing energy efficiency and emissions reduction.[72] Malaysia pursues an integrated multi-layered air defense approach with concurrent development of Network Centric Operations for improved decision-making.[73] The Philippines emphasize acquiring equipment providing nationwide 24/7 domain awareness.[74] Moreover, Singapore leads in developing of AI-supported technological solutions for cyber defense. The MPA-TalTech collaboration explores substantial opportunities for cyber defenders through AI-enabled technologies.[75] Malaysia considers Autonomous Weapons Systems capable of independently selecting and attacking targets without human intervention.[76] The Philippines recognize cyberspace as the fourth dimension of warfare and priorities investment in cybersecurity facilities and personnel.[77]

The strategies for technological sovereignty range from autonomy to pragmatic cooperation. Indonesia pursues a strong and independent defense industry focusing on submarine construction, propulsion, missiles, radar, medium tanks and combat aircraft.[78] Malaysia seeks independence in selected niche areas. The country plans 10–15 per cent of the nominal offset value from Industrial Collaboration Programs for research and development.[79] The Philippines emphasizes its Self-Reliant Defence Posture Program for developing a robust defense industry maintaining AFP-developed capabilities.[80] Vietnam articulates developing self-controlled, high-tech and dual-use defense industry groups.[81] The technological choices and capabilities examined above require corresponding governance structures for effective implementation.

4.3 Dimension 3: Governance Structures and Responsibilities

The governance structures for maritime security show varying degrees of institutional integration and coordination. These structures represent what Balzacq[82] terms the "empowering audience," institutional bodies with direct causal connection to security issues and ability to enable securitizing actors. These institutional configurations translate threat perceptions into concrete organizational responses, yet their effectiveness varies significantly across the region. Singapore demonstrates a whole-of-government approach, exemplified by the coordinated multi-agency oil spill and leak responses.[83] The Digital and Intelligence Service, founded in 2022, collaborates closely with other national agencies. The joint Critical Infrastructure Defence Exercise involved about 200 front-line cyber defenders from 25 national agencies.[84] Indonesia structures coordination through the total defense system. For military threats, the Tentara Nasional Indonesia acts as the main component, supported by reserve and support components through mobilization. For non-military threats, non-defense ministries lead as main elements.[85] However, Indonesia's maritime security governance exemplifies coordination challenges through its coast guard agency, Bakamla. Despite Law No. 32/2014 granting Bakamla broad enforcement mandate and formally establishing it as the central maritime security authority, the agency encounters significant institutional resistance from other agencies and ministerial bodies, reflecting persistent *sector egos* and resource competition.[86]

Malaysia established the Joint Forces Headquarters in 2004 for coordinating joint operations among the three armed forces branches. The Ministry of Defence collaborates closely with the National Cyber Security Agency. The MAF Cyber Defence Operation Centre partners strategically with the National Cyber Coordination and Command Centre.[87] The Philippines utilizes the National Coast Watch Centre to consolidate cross-sector efforts. The Area Task Force North serves as an existing coordination mechanism for maritime security. The strategy emphasizes convergence among the AFP, PNP and local government units within the whole-of-government approach.[88] Vietnam displays a differentiated distribution with the navy as the core service for sovereignty protection. The Coast Guard acts as a specialized state force for law enforcement and maritime national security protection. The Border Guard manages national borders on land, sea and islands.[89]

The civil-military interfaces are defined and operationalized differently across the countries studied: Malaysia distinguishes clearly the Malaysian Maritime Enforcement Agency for maritime security threats from military forces for defense tasks. The military supports civilian authorities' law enforcement with clear escalation thresholds through differentiated primary and secondary armed forces roles.[90] Vietnam defines precise roles for its maritime forces. The Coast Guard conducts maritime safety, order and security control, and law enforcement activities.[91]

Public-private partnerships develop differently across the region. Singapore leads with the Maritime Cyber Assurance and Operations Centre, a joint MPA-industry cyber security operations center with 10 companies from various maritime sectors. The Maritime Cybersecurity Roundtable, initiated by the Singapore Shipping Association with MPA and industry participation, strengthens the industry's cybersecurity capabilities.[92] Malaysia plans incentive structures for private security investments through a Defence Investment Committee chaired by the prime minister.[93]

The legal frameworks rest on the UN Convention on the Law of the Sea of 1982 as the international foundation. National approaches vary considerably. Indonesia references Law No. 3 of 2002 on National Defence and aligns national legislation with international legal norms based on democratic and human rights principles.[94] The Philippines emphasize the 2016 Arbitration Award as the legal basis for Philippine sovereign rights over waters in the West Philippine Sea.[95] These government arrangements ultimately shape how states engage in regional cooperation mechanisms.

4.4 Dimension 4: Regional Cooperation Mechanisms

The regional cooperation preferences show a balanced picture combining bilateral and multilateral approaches. The *ASEAN Maritime Outlook* favors multilateral formats with numerous regional forums and mechanisms. Bilateral cooperation complements this, as shown by the trilateral maritime patrol between Indonesia, Malaysia and the Philippines in the Sulu Sea.[96] Indonesia maintains extensive bilateral cooperation with all ASEAN states, including the General Border Committee with Malaysia since 1972. ASEAN's centrality as a regional organization remains crucial for regional integration.[97] Malaysia articulates a balanced approach, noting that bilateralism and multilateralism operate together. The country maintains strategic partnerships with 16 countries and comprehensive partnerships with 11 countries. Concrete mechanisms such as the Malacca Straits Patrol and the Trilateral Cooperative Arrangement are mentioned as successful cooperation models.[98] The Philippines participates actively in the Trilateral Cooperation Agreement with Malaysia and Indonesia against extremist and terrorist border movements.[99] Malaysia and the Philippines affirm ASEAN centrality as foreign policy cornerstone, though the Philippines acknowledge limitations from economic disparities among members hindering a true ASEAN community.[100]

The balance of sovereignty and cooperation depth remains a key challenge for all participating states. Vietnam articulates the most restrictive position with its four-no policy: no military alliances, no taking sides for one country against another, no permission for foreign military bases or Vietnamese territorial use for military activities against neighboring states.[101] The Vietnamese position reflects the challenge of securitization as an "intersubjective process" requiring mutual recognition between actors while respecting distinct national contexts.[102] Indonesia emphasizes respect for national sovereignty, non-interference in internal affairs and mutual benefit as basic cooperation principles.[103] Malaysia shows greater flexibility through the Trilateral Cooperative Arrangement, allowing pursuit beyond maritime borders and establishing a transit corridor for ships.[104]

External partner involvement reflects regional great power competition. The Philippines highlight the USA as the only treaty ally through the 1951 RP-US Mutual Defence Treaty and the 2014 Enhanced Defense Cooperation Agreement (EDCA). EDCA priorities explicitly include maritime security and maritime domain awareness.[105] Indonesia describes the US as a strategic partner for developing institutional capacity, operational capability, human resource professionalism and weapon system modernization.[106] Malaysia warns of regional polarization risks from a rivalry among powerful nations.[107] China receives ambivalent assessment. The Philippines Defence White Paper characterizes China's ongoing activities in the South China Sea as a significant security threat.[108] Indonesia describes China as a strategic partner aligned with Indonesian national interests for defense capability building.[109] Vietnam notes sovereignty-related differences regarding the East Sea as historically rooted.[110] Singapore maintains careful balance, emphasizing national autonomy. The government, MINDEF and SAF operate without assuming dependence on external rescue.[111]

The preceding dimensional analysis reveals both convergent patterns and persistent divergences that shape the regional security landscape. These findings now require a synthesis to understand their collective implications for maritime infrastructure protection.

V. Synthesis: Maritime Security of Critical Infrastructure in Southeast Asia

The systematic analysis of national defense white papers from Southeast Asia reveals a heterogeneous picture of strategies for protecting critical maritime infrastructure.

5.1 Converging Threat Perceptions with Different Priorities

All analyzed states recognize great power competition as a structural challenge, demonstrating Balzacq's[112] concept of intersubjective securitization through mutually constituted threat understandings. However, this common assessment leads to different national priority-setting. The Philippines perceives the territorial conflict in the South China Sea as an immediate threat to their existence, while Malaysia voices concern about the transformation of the region into a geopolitical playing field. Vietnam and Indonesia choose more abstract formulations. These rhetorical differences reflect different degrees of direct concern and different foreign policy positions vis-à-vis the major powers, especially China. Indonesia explicitly characterizes hybrid threats as a fusion of military and non-military elements. The Philippines link territorial conflicts with environmental degradation. These conceptual differences have an impact on the development of national counterstrategies and make the regional coordination of protective measures more difficult.

5.2 Technological Asymmetries

The technological security approaches of the countries analyzed show asymmetries. Singapore plays a pioneering role with the world's first Maritime Digital Twin and AI-supported cyber security systems. The ReCAAP Information Sharing Centre exemplifies Singapore-based regional information sharing through its web-based reporting and analysis portal for piracy and robbery incidents.[113] Vietnam, on the other hand, is concentrating on conventional deterrence capacities through submarines and coastal defense systems. This technological divide reflects different economic capacities and clear differences in strategic orientation. While Singapore favors preventive protection through technology, Vietnam pursues an approach of reactive deterrence through military strength. Surveillance, resilience and physical protection vary according to technological capacities. Singapore's integrated approach combines all three elements in one digital system. Malaysia and Indonesia develop C4ISR systems incrementally.

The different strategies for technological sovereignty are particularly revealing. Indonesia is pursuing ambitious plans for an independent defense industry with a focus on submarine construction and missile technology. Malaysia specializes in niche areas. These different paths to technological autonomy reflect different assessments of balancing national independence against the benefits of international technology cooperation.

5.3 Governance Between Integration and Fragmentation

The institutional arrangements for protecting maritime infrastructure also demonstrate different models of governmental coordination. Singapore's whole-of-government approach seamlessly integrates civilian and military actors. This integrated governance extends to digital infrastructure management. Singapore's Maritime Single Window system, currently under implementation, aims to digitize all port call and security documentation processes, though mandatory cyber security requirements remain absent.[114] In contrast to Singapore, Vietnam maintains clear functional distinctions because the Navy, Coast Guard and Border Guard have clearly defined areas of responsibility. These structural differences significantly impact the ability of the respective states to respond to hybrid threats. Private sector involvement also proves to be a decisive factor for effective infrastructure protection. This exemplifies Balzacq's[115] concept of *functional actors* who significantly influence security dynamics without being the primary securitizing actors. Singapore's Maritime Cyber Assurance and Operations Centre functions as a joint industry-government operations center and demonstrates the benefits of close cooperation. All other analyzed countries remain reluctant, limiting their capacity to leverage private expertise and resources.

5.4 Regional Cooperation Versus National Interests

States prefer multilateral formats while maintaining bilateral special relations. All states affirm ASEAN centrality, but practical implementation falls short of stated ambitions. ASEAN's institutional architecture for maritime security reveals both structural limitations and opportunities for modular cooperation. The consensus principle significantly slows any course correction. The failed 2012 AMM communiqué on the Scarborough Shoal dispute demonstrates how internal disagreement can block institutional action.[116] Despite these limitations, ASEAN has created a structure through institutional diversification in which each forum has clearly defined functions for balancing, hedging and co-opting, which can be selected depending on the situation. The ADMM/ADMM-Plus functions, for example, as rule and capacity platforms, developing maritime behavioral codes through initiatives like CUES adoption and GAME guidelines, progressively extending these to partner states.[117] However, minilaterals show concrete successes. The Malacca Straits Patrol as well as the trilateral cooperation in the Sulu Sea function better as focused arrangements than comprehensive multilateral mechanisms.

5.5 Implications for the Research Question

Ensuring critical maritime infrastructure security in Southeast Asia remains theoretically possible through technological innovation and regional cooperation, but structural factors present significant obstacles. Technological asymmetries create unequal conditions for joint protection, reflecting Balzacq's[118] "co-dependency of agency and context in security performance." Different governance structures and understandings of sovereignty also limit the depth of possible cooperation. The analysis demonstrates that the prospects for protecting critical maritime infrastructures, as reflected in the documents, hinge on the pairing of problematizations with specified instruments and arrangements. Furthermore, great power rivalry permeates all maritime security dimensions and complicates genuinely regional solutions. The different positions of the ASEAN states vis-à-vis the major powers, from the Philippines' partnership with the US to Vietnam's equidistance, further fragment regional approaches. These conditions constrain both technological and cooperative security strategies.

VI. Conclusion

The study examined the question of how states in Southeast Asia can ensure the security of their critical maritime infrastructure in the face of hybrid threats and geopolitical challenges through a combination of technological innovation and regional cooperation. Divergent approaches persist due to technological asymmetries, competing sovereignty concepts, and strategic fragmentation, all factors that override functional pressures for coordination.

The analysis reveals that several factors are crucial. The findings indicate that outcomes are best understood through the material and organizational specification of security problematizations. In a practice-centered reading of securitization, dispositifs and procedural references explain variation in how programs are formulated across cases. Technological asymmetries demonstrate how securitization, as Balzacq[119] argues, consists of practices instantiated through different dispositifs and tools, varying according to the habitus inherited from different social fields. The technological gap therefore not only reflects the different economic resources of the respective countries but also differences in their strategic culture and security policy orientation. Governance fragmentation and limited private sector involvement constrain infrastructure protection. The documents analyzed show a spectrum from Vietnam's restrictive four-no policy to Malaysia's willingness to engage in cross-border operations. These different concepts of sovereignty represent a structural obstacle to the development of integrated regional protection systems that cannot be overcome by technological solutions alone.

Hybrid threats redefine Southeast Asian maritime security, necessitating technological innovation, institutional reforms, and sovereignty-sensitive regional cooperation. Future research should address the question of how technological interoperability can be achieved despite different levels of development and which innovative governance models could overcome the identified obstacles to cooperation. Resolving the puzzle of divergent security approaches, this study demonstrates that the security of critical maritime infrastructure in Southeast Asia ultimately depends on overcoming not only technological gaps but also sovereignty-sensitive governance barriers that currently fragment regional cooperation.

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Compulsory Jurisdiction Under UNCLOS: Obligations Applicable Pending Delimitation

Gülay Çağla Fıratlı

Structured Abstract

Article Type: Research Article

Purpose—The paper considers whether the scope of the optional exception to compulsory jurisdiction under article 298(1)(a)(i) of United Nations Convention on the Law of the Sea (UNCLOS) covers disputes arising pending delimitation and which relate to obligations of conduct under 74(3) and 83(3) of UNCLOS.

Design/Methodology/Approach—This paper interprets the relevant provisions of UNCLOS following the rules of interpretation under the Vienna Convention on Law of the Treaties. This paper also refers to the decisions and practices of international courts and tribunals as appropriate.

Findings—This paper finds that it is possible to argue, through a textual and contextual approach to interpretation, that disputes concerning the obligations of conduct should be within the scope of compulsory jurisdiction under Section 2 of Part XV.

Practical Implications—While disputes concerning sea boundary delimitations may be outside the purview of compulsory procedures where a declaration under article 298 is made, states may initiate proceedings based on disputes concerning the obligations of conduct. Importantly, this also opens the door for requesting provisional measures. The possibility of initiating proceedings also urges states to come together and negotiate in favor of a state-to-state solution to their dispute.

Value—This paper adds to the existing literature by arguing that a textual and contextual approach allows for the interpretation that obligations of conduct under paragraph

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3 of articles 74 and 83 of UNCLOS are not excluded by a declaration under Article 298 of UNCLOS. The arguments presented in this paper are valuable to those interested in understanding the scope of article 298(1)(a)(i) of UNCLOS; they may be states, scholars, and judges.

Keywords: compulsory dispute settlement,
disputed maritime areas, obligations pending delimitation

I. Introduction

Disputes concerning the delimitation of the exclusive economic zone (EEZ) and the continental shelf are some of the most high-profile issues of international law of the sea. The United Nations Convention on the Law of the Sea (UNCLOS)[1] provides that delimitation of these maritime zones "shall be effected by agreement on the basis of international law" as per Articles 74(1) and 83(1).[2] Such boundary agreements take time to reach agreement, as they touch upon various political, economic and historical factors.[3] Pending agreement on the delimitation of overlapping maritime zones ("disputed maritime areas"), States concerned have to manage a situation where two equal and potentially valid overlapping legal entitlements exist.

The lack of clarity regarding which State has exclusive rights and jurisdiction in the disputed maritime area is a significant challenge that complicates numerous activities, including those of private companies. Disputes can arise as to whether the States concerned are acting in accordance with their obligations of conduct. UNCLOS contains two distinct but interlinked obligations of conduct in this period.[4] Paragraph 3 provides that States shall make every effort to enter into provisional arrangements and not to jeopardize or hamper the final agreement.[5] The purpose of the first obligation is to get States to agree on the modalities of use of disputed maritime areas pending delimitation.[6] The second obligation in paragraph 3 aims to discourage conduct pending delimitation that has the effect of hampering the final agreement.[7] The aim here is the promotion of cooperative arrangements to ensure that the actions of the parties do not deteriorate the relationship between them in the period up to the conclusion of an agreement on the maritime boundary.

The focus of this article is not the substantive content of the obligations which have been covered elsewhere, but rather a jurisdictional question for an international court or tribunal. Due to the sensitivity of maritime delimitation of the EEZ and the continental shelf, the compulsory jurisdiction entailing binding settlement under Part XV of UNCLOS contains an optional exception. It is optional in the sense that it may be triggered by a State by issuing a declaration under Article 298(1)(a)(i) of UNCLOS rejecting the compulsory jurisdiction concerning certain limited categories of disputes, including "sea boundary delimitations."[8] The written declaration can be made when signing, ratifying, or acceding to UNCLOS and anytime thereafter. Many States have exercised this right to varying degrees (43 States have made declarations out of 170 parties to UNCLOS).[9] However, the text of Article 298(1)(a)(i) is complex, lacking clarity and judicial interpretation concerning its scope. Does the scope of the allowed exception include disputes concerning Articles 74(3) and 83(3) of UNCLOS?

This question has attracted diverging views in the relatively limited scholarship. The question is usually considered in passing by scholars as part of a broader discussion. The common view is that the text of Article 298(1)(a)(i) should cover the whole of Articles 74 and 83 of UNCLOS, arguing that obligations under paragraph 3 are excluded from compulsory procedures entailing binding decisions.[10] The two articles which consider the matter in some depth reach opposite conclusions. Liao concludes that separating disputes concerning obligations under paragraph 3 from maritime delimitation disputes would be artificial.[11] The author provides support for this conclusion by interpreting the words "concerning" and "relating to" as non-limiting and argues that the titles of Articles 74 and 83 suggest that all paragraphs are about maritime boundary delimitation.[12] On the other hand, Sim argues that a declaration under Article 298 should not exclude disputes concerning Articles 74(3) and 83(3) of UNCLOS from the purview of international courts and tribunals through a teleological interpretation based on the object and purpose of UNCLOS.[13] Both arguments have their merits and flaws.

Against this background, this article has two aims. One is to reassess some of the arguments in the literature on the interpretation of the scope of the optional exception. The other objective is to make further arguments by considering the purposes of the provisions under scrutiny. To this end, the article first addresses the meaning of the relevant provisions. Thereafter, the article moves to further examination of the provisions; in particular, the article explores whether disputes regarding obligations of conduct can be separated from disputes about "sea boundary delimitations" by looking at the contents of Articles 15, 74 and 83 and highlighting the distinct purposes within those articles. Then it discusses the possibility of an analogy that can be drawn with the decision in the *South China Sea Arbitration* to answer the question: what disputes relate to sea boundary delimitations?[14] The article then moves on to examine the use of the decision in the *Timor Sea Conciliation* in support of arguments made in the literature about the scope of the optional exception.[15]

II. Article 298(1)(a)(i): Concerning Articles 15, 74 and 83 Relating to Sea Boundary Delimitations

It has been pointed out that "the exact operation of Article 298 remains unclear."[16] The question is whether Articles 74 and 83, including common paragraphs 3 thereunder, fall within the scope of the exception under Article 298(1)(a)(i) of UNCLOS. If that is the case, disputes concerning activities in disputed maritime areas would be outside the scope of compulsory jurisdiction, where a State Party has made a declaration.

Before embarking on the analysis of the text, it is useful to consider the wording of Article 298(1)(a)(i) of UNCLOS titled "Optional exceptions to the applicability of section 2" which provides that:

> 1. When signing, ratifying, or acceding to this Convention or at any time thereafter, a State may … declare in writing that it does not accept any one or more of the procedures provided for in section 2…: (a)(i) disputes concerning the interpretation or application of articles 15, 74 and 83 relating to sea boundary delimitations…[17]

The general rule of interpretation requires that a treaty be interpreted "in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose."[18] First, it is necessary to determine the meaning of the language in the text, which reflects the intention of the States Parties according to the textual approach.[19] Two key words in the text are "concerning" the interpretation and application of Articles 15, 74 and 83 and "relating to" sea boundary delimitations.[20] Before considering the ordinary meaning, it is useful to have a brief discussion of the context of Article 298(1)(a)(i) of UNCLOS.[21]

2.1 The Context

Article 298 operates within Part XV of UNCLOS, which has as an underlying principle of compulsory jurisdiction for the settlement of disputes.[22] The records of the Third United Nations Conference on the Law of the Sea (Third UN Conference) clearly show that the dispute settlement system under Part XV underwent numerous revisions during the negotiating process.[23] The resulting text is a compromise among the drafters that allowed the inclusion of compulsory procedures into UNCLOS, embodying different ideas about the dispute settlement system. Records of the Third UN Conference show that exceptions were carefully determined to promote acceptance of compulsory jurisdiction under Part XV among States that would otherwise hesitate. The opt-outs from compulsory jurisdiction were devised to create a "workable" compulsory dispute settlement system.[24]

Where disputes are not settled by the means provided for under Section 1, the default rule is compulsory dispute settlement for all disputes concerning the interpretation and application of the Convention, while opt-outs from compulsory jurisdiction are exceptions.[25]

2.2 The Ordinary Meaning

The word "concerning" can be interpreted as meaning "on the subject of something" or "about something," while the term "relating to" can also be understood as "about something." According to the Cambridge Online Dictionary, both words are prepositions. The word "concerning" means "about" and "relating to" means "connected with something." Merriam-Webster Online Dictionary defines "concerning" as "relating to" and "relating to" as a phrasal verb "to connect (something) with (something else)." According to the Oxford English Dictionary, "concerning" means "to refer or relate to; to be about." The word "relating to" does not produce a search result in the Oxford English Dictionary. However, it defines "relating" as "with to, with. To bring (a thing) into relation with." When one searches for synonyms on Cambridge and Merriam-Webster Online Dictionaries for "concerning," the following words appear: "regarding; in/with regard to; and about" and for "relating to," synonyms include "about; in regard to; and concerning." Given the overlap in meanings and synonyms of both words, it is fair to conclude that one is not broader than the other. It is also reasonable to say that both words serve a similar purpose in a sentence, as they can be used interchangeably.

What is critical in this provision is sentence construction, i.e., the use of one preposition after the other, which delineates the scope of the exception. It is useful here to use another sentence to demonstrate the importance of sentence construction. For example, "the game show's round *concerning* famous quotes *relating to* marriage was fun." Taken in isolation, "concerning" and "relating to" serve similar purposes in this sentence—that is, connecting "something with something else." The sentence means the game show's next round is on famous quotes, but not all famous quotes, only those on marriage. As can be seen, the use of prepositions one after the other has the effect of narrowing down the scope of what is being referred to in this example sentence. The sentence structure of Article 298(1)(a)(i) of UNCLOS has the same effect: States Parties may exclude disputes regarding Articles 15, 74 and 83; however, not all disputes regarding 15, 74 and 83, only sea boundary delimitations.

The interpretation presented above regarding the meaning of the text can be bolstered by examining alternative formulations of the text. If Article 298(1)(a)(i) of UNCLOS were to solely contain the phrase "concerning the interpretation or application of Articles 15, 74 and 83" without any additional qualifiers, it would be inferred that the entirety of those provisions, including the paragraphs, would be covered. However, the addition of the "relating to sea boundary delimitations" immediately after referencing the relevant Articles further specifies the exception's scope. This is a reasonable interpretation for two connected reasons. First, it may be argued that, if the intention was to permit the exclusion of the entirety of Articles 15, 74 and 83, then a simple reference to "concerning Articles 15, 74 and 83" would have been enough to achieve that purpose. Two, if the entirety of Articles 74 and 83 were about "sea boundary delimitations" as their title suggests, it would have been unnecessary to include the phrase "relating to sea boundary delimitations" in Article 298(1)(a)(i) of UNCLOS. Is it not redundant to include "relating to sea boundary delimitations," if the whole of the provisions is about sea boundary delimitations only? The inclusion of the words *relating to sea boundary delimitations* must signify an intention. Otherwise, we would expect mention of disputes concerning the interpretation and application of Articles 15, 74, and 83 without any further qualifications.

Van Logchem and Liao raise a counterargument to the above textual interpretation. The authors consider that it would have been logical to expect the text to refer to paragraphs 1 and 2 of Articles 74 and 83 if the drafters only intended to permit the exclusion of sea boundary delimitations from the scope of jurisdiction.[26] One possible rebuttal to this argument is that the specific phrase "relating to sea boundary delimitations" included after the reference to Articles 15, 74 and 83 has the same effect as a reference to "paragraphs 1 and 2 of Articles 74 and 83." Another point is that the omission of specific references to paragraphs 1 and 2 does not necessarily or convincingly indicate an intention to exclude paragraph 3 from the scope of compulsory jurisdiction.

These textual interpretations, one advanced by this article and the opposite view by Van Logchem and Liao, run into the same problem. It is a misconception to assume that the drafters of the Convention held a common intention.[27] It is also unrealistic to think of the text as flawless and without drafting mistakes. In fact, the arbitral tribunal in the *Dispute Concerning Coastal State Rights* recognized that the interpretation of the terms "concerning" and "relating to" does not clarify whether the optional exception is triggered.[28] The result is that we must endeavor to understand and clarify whether the optional exception covers disputes under paragraph 3. This necessitates answering further questions. Does the substantive content of Articles 74 and 83 match their title? In other words, are they only about sea boundary delimitations?

III. What Disputes Relate to Sea Boundary Delimitations?

3.1 Mismatch of Titles and Contents in Articles 15, 74 and 83

From a textual viewpoint, the general reference to Articles 15, 74 and 83, as opposed to specific paragraphs, in Article 298(1)(a)(i) is the first indication of their exclusion as a whole. The titles of these provisions reinforce this viewpoint. However, taking only the titles into account glosses over the differences in substantive content between (i) Article 15 vs. Articles 74 and 83 of UNCLOS and (ii) within Articles 74 and 83.

Article 15 of UNCLOS concerns delimitation of the territorial sea and, unlike in paragraph 3 of Articles 74 and 83 of the Convention, it does not prescribe any obligation "pending delimitation." Where parties cannot agree on the territorial sea boundary, an automatic rule of delimitation applies, i.e., the boundary is the median line equidistant from the base points.[29] It is suggested that "this makes up for the fact that … there is no express provision here regarding the making of 'provisional arrangements' pending the settlement of disputes."[30] The automatic rule does not apply where a historic title or other special circumstances require a different delimitation method. In such cases, States must negotiate an agreement. However, there is no obligation of conduct pending agreement in this provision. Simply put, Article 15 of UNCLOS solely addresses delimitation.

Articles 74 and 83 of UNCLOS do not only address boundary delimitations but also issues connected to the overall process of delimitation (including dispute settlement by a third party under Part XV). Paragraphs 1, 2 and 4 of Articles 74 and 83 address boundary delimitation. Paragraphs 1 and 4 are, properly speaking, about maritime delimitation; they lay out applicable law to maritime delimitation.[31] The procedural rule in paragraph 2 can be seen as the restatement of the general obligation to settle disputes peacefully. If parties cannot agree on delimitation "within a reasonable time," the States shall refer the dispute to procedures provided for in Part XV of UNCLOS.[32] Paragraph 2 is not about delimitation per se, but about the connected obligation to resort to procedures under Part XV for the settlement of a delimitation dispute. Similarly, paragraph 3 prescribes obligations of restraint and cooperation in disputed maritime areas where parties have yet to agree on a boundary. These obligations are not about sea boundary delimitations per se, but rather about special obligations of conduct placed on coastal States pending agreement on the boundary.[33] Just taking the titles into account ignores such intricacies of the content found under them.

The issues under paragraphs 2 and 3 are not about delimitation per se, that is, the actual drawing of the delimitation line, but they still concern aspects that have some connection to maritime delimitation. For example, the obligations under paragraph 3 arise because the States concerned could not agree on a boundary and have overlapping entitlements. The argument can be made that, given the connection between delimitation and obligations, disputes about obligations can be characterized as concerning the interpretation of Articles 74 and 83 relating to sea boundary delimitations.

It is difficult to deny that there is some connection between these two classes of disputes. Yet, as it will be highlighted below, even disputes that are connected or where one is the precondition of another can be separated for the purposes of adjudication.[34] The question is, can disputes about obligations of conduct be separated from disputes about sea boundary delimitations? To this end, this article turns to the negotiation history of the provisions and looks at how the obligations serve a distinct purpose for the purpose of delimitation.

3.2 Distinguishing Obligations of Conduct from Delimitation

The view that the whole of Articles 74 and 83 of UNCLOS "relate to" sea boundary delimitations is supported in the literature by drawing attention to how these provisions were negotiated at the Third UN Conference.[35] According to Anderson and Van Logchem, "the question of the legal principles of delimitation and the issue of interim measures pending a final delimitation were interrelated."[36] However, the connection of these issues during negotiations does not follow that a dispute concerning paragraph 3 is a dispute related to sea boundary delimitations and therefore should be excluded from compulsory procedures. From a teleological perspective, the common paragraph 3 serves a distinct purpose from the rest of the paragraphs in Articles 74 and 83 of UNCLOS. Paragraphs 1, 2 and 4 of Articles 74 and 83 are concerned with promoting delimitation of overlapping maritime areas. While these paragraphs deal with maritime boundary delimitation either through agreement or resorting to compulsory procedures entailing binding decisions if no agreement can be reached in the case of paragraph 2, the obligations under paragraph 3 serve a different purpose.

The negotiating history confirms that there are two distinct but complementary obligations under paragraph 3, both of which serve a distinct purpose from the rest of the paragraphs in Articles 74 and 83 of UNCLOS. Numerous proposals on "interim solutions" were made at the Third UN Conference, but there was no consensus on the solutions proposed. For example, several proposals suggested a moratorium on economic activities,[37] and others suggested a provisional median line[38] for the exercise of rights and jurisdiction granted by UNCLOS, neither of which was accepted. The solution found was to grant States the discretion to decide how they would manage the disputed maritime area while obliging States not to jeopardize or hamper the final agreement. As such, paragraph 3 is concerned with promoting cooperative arrangements, or otherwise, and ensuring that the actions of the parties do not deteriorate the relationship between them in the period where there is no agreement on the maritime boundary.

Moreover, the case law also confirms that this paragraph is designed to "promote provisional utilisation of disputed maritime areas pending delimitation."[39] In this regard, the importance of not suspending economic activities pending delimitation has been underlined.[40] Overall, the purpose of paragraph 3 is to ensure that States can peacefully agree on how to use maritime space while at the same time discouraging actions that may damage any future agreement on the boundary. The paragraphs are intended to facilitate and offer a means of managing seas and oceans pending delimitation. These issues can be dealt with separately and independently from issues of maritime boundary delimitation. It is clarified in paragraph 3 of articles 74 and 83 that "[s]uch arrangements shall be without prejudice to the final delimitation."[41] In other words, States cannot rely on provisional arrangements or their activities in disputed maritime areas to influence maritime delimitation or its result. Hence, it is arguable that obligations of conduct do not relate to sea boundary delimitations.

Delimitation, on the other hand, aims toward permanent division of the disputed area, and it is for this reason that the optional opt-out exists under Article 298, i.e., to prevent States from being forced to permanently give up maritime space/entitlements. Paragraph 3 is not concerned at all with the permanent division of maritime entitlements as demonstrated above. Therefore, compulsory settlement of disputes over these obligations does not prejudice the long-term rights or interests of the States concerned. Arguably, compulsory settlement of disputes concerning obligations applicable pending delimitation ensures that those rights and interests are not permanently prejudiced.

Moreover, a dispute arising pending delimitation (whether they are about the obligations of conduct or how to manage overlapping/disputed maritime areas) is a distinct issue from that of delimitation, potentially implicating other provisions[42] and obligations provided for in the Convention.[43] For these reasons, disputes about the obligations of conduct that are not per se about delimitation exercise should not be excluded from the compulsory procedures under Article 298(1)(a)(i) of UNCLOS.

A court or tribunal considering a dispute about obligations pending delimitation would not need to consider anything regarding the sensitive issue of delimitation. In a case that involved no submissions related to the breach of Articles 74(3) and 83(3) of UNCLOS, the Arbitral Tribunal had to decide whether the dispute submitted by the Philippines was "related to sea boundary delimitations." This case is helpful for demonstrating that certain disputes that are connected to sea boundary delimitations can be separated from the actual boundary delimitation dispute for the purposes of adjudication.

3.3 Annex VII Tribunal: A Dispute About Entitlements, Not Sea Boundary Delimitation

In *South China Sea Arbitration*, the Annex VII Tribunal interpreted and applied Article 298 of UNCLOS to determine its jurisdiction.[44] The Philippines made several submissions to the Arbitral Tribunal, which were carefully drafted[45] to raise no issues concerning maritime delimitation given China's declaration according to Article 298(1)(a)(i) of UNCLOS.[46] While neither formally appearing nor participating in the proceedings before the Arbitral Tribunal, China published a "Position Paper" outlining China's argument on why the Tribunal lacked jurisdiction.[47] The Chinese objection to the Tribunal's jurisdiction rested on three arguments: (i) the real dispute concerns territorial sovereignty over maritime features, (ii) parties agreed to settle their relevant disputes through negotiation and, last, (iii) even if the tribunal considered that subject matter of the dispute concerned interpretation or application of UNCLOS, the subject matter falls within the scope of China's declaration excluding maritime delimitation from compulsory procedures under Article 298(1)(a)(i) of UNCLOS.[48]

As mentioned above, the Philippines made no submissions relating to Articles 74(3) and 83(3) of UNCLOS. Among other things, the submissions included disputes concerning maritime entitlements claimed by China based on certain maritime features. The Philippines argued that the Arbitral Tribunal had jurisdiction to decide the status of certain insular features, i.e., rocks that are entitled to a 12-nm territorial sea, low-tide elevations that are entitled to no territorial sea of their own, and islands that are entitled to a 200-nm exclusive economic zone. A maritime feature deemed as an island would be entitled to an extensive maritime area in comparison to a rock—an important distinction for China and the Philippines.

The Tribunal's reasoning on whether the submissions presented by the Philippines on the status of maritime features were excluded by China's declaration under Article 298 of UNCLOS is relevant for the discussion in this article. The submissions/disputes relating to the status of certain maritime features did not fall under China's declaration under Article 298 of UNCLOS.[49] According to the Tribunal:

> It does not follow, however, that a dispute over an issue that may be considered in the course of a maritime boundary delimitation constitutes a dispute over maritime boundary delimitation itself.[50]

After this general remark, the Tribunal considered that one of "the first matters" addressed in maritime delimitation is usually "fixing [of] the extent of parties' entitlements" to identify the area of overlap. However, the Tribunal considered that "a dispute concerning the existence of an entitlement to maritime zones is distinct from a dispute concerning the delimitation of those zones in an area where the entitlements of the parties overlap."[51] Put differently, this highlights that matters of entitlement do not relate to sea boundary delimitations. In the words of the Tribunal, "the Philippines has challenged the existence and extent of the maritime entitlements claimed by China in the South China Sea. This is not a dispute over maritime boundaries."[52] As such, the Tribunal went on to decide the issues raised by the Philippines without delimiting the maritime boundary.[53] One can make arguments by analogy from the logic of the Tribunal.

First, disputes about obligations of States pending delimitation are not issues considered in the course of the exercise of boundary delimitation. In fact, they are independent of the act of maritime boundary delimitation. This can be deduced from the practice of international courts and tribunals. In three cases where both issues of maritime delimitation and alleged breach of obligations pending delimitation were raised, courts and tribunals considered disputes over obligations independently of their maritime delimitation exercise. Such disputes were not considered during maritime delimitation but separately from the delimitation exercise, meaning in a separate part of the decision.[54] There can be delimitation without a court or tribunal considering the obligations of conduct if none of the parties to a case make submissions on this point. What is remarkable is that delimitation cannot take place without first determining the entitlements of each party. The Arbitral Tribunal found that a question that is separate but essential to delimitation falls outside the scope of Article 298(1)(a)(i). Arguably, a question that is never a precondition or part of the exercise of tackling maritime delimitation (such as disputes about the obligations) should also fall outside the scope of Article 298(1)(a)(i).

The difficulty that this argument runs into is the fact that the status and entitlements of features are dealt with in Articles 13 and 121, and not in Articles 74 and 83 of UNCLOS. Article 298(1)(a)(i) does not mention Articles 13 and 121. For this reason, though they may bear a strong connection to delimitation, Articles 13 and 121 do fall outside the scope of Article 298(1)(a)(i) so long as submissions carefully separate the issues of delimitation and entitlements. Notably, the latter argument also has its critics, given how closely the matter is tied to delimitation.

IV. Timor Sea Conciliation Commission on Article 298(1)(a)(i) of UNCLOS

While no international court or tribunal directly pronounced whether or not disputes concerning interpretation and application of Articles 74(3) and 83(3) of UNCLOS are within the scope of the exception in Article 298(1)(a)(i), the Timor Sea Conciliation Commission had to address this issue, albeit indirectly, because disagreements emerged between the parties regarding the scope of the Commission's competence.[55] Australia objected to Timor-Leste's request to the Commission regarding "transitional arrangements" on the basis that those issues do not fall under the Commission's competence because they do not concern matters in Article 298 of UNCLOS.[56] This view suggests that only matters removed from the compulsory jurisdiction under Part XV may be submitted to compulsory conciliation under Article 298(1)(a)(i) of UNCLOS. In other words, the matters that are within the compulsory jurisdiction cannot be conciliated. This view is examined below later. This was the essence of Australia's objection to the competence over some of Timor-Leste's submissions. It is useful to consider those submissions in more detail.

In the opening session held on 26 August 2016, Timor-Leste specified the issues for the Commission with which she requested assistance:

> First, we hope that the Commission can assist the Parties to reach an agreement on the delimitation of permanent maritime boundaries…
>
> ….
>
> [A] second task for the Commission is to assist Australia and Timor-Leste to agree on appropriate transitional arrangements in the disputed maritime areas, to bring the parties from their current temporary arrangements to the full implementation of their newly agreed permanent maritime boundary.
>
> Finally, a third task for the Commission, and one related to the issue of transitional arrangements, concerns the post–CMATS [Certain Maritime Arrangements in Timor Sea] arrangements. With the expected termination of CMATS, and with it the Timor Sea Treaty, the parties will benefit from the assistance of the Commission in finding the optimal way to come to a mutual position on dissolving the joint institutions and arrangements found in those provisional arrangements and moving on.[57]

In the same opening session, Australia objected that the second and third tasks "are not only outside the notification by Timor-Leste which commenced the proceedings, they are also on any view outside Article 298 of UNCLOS because they do not concern the matters in that article."[58]

The Commission ruled that it had competence to deal with Timor-Leste's second and third requests. Based on this decision, some literature on this topic suggests that the Commission's decision supports the argument that the whole of Articles 74 and 83 of UNCLOS are captured by the exemption.[59] However, there are two separate reasons why the Conciliation Commission's rejection of Australia's objection should not be interpreted to support the argument that paragraph 3 falls within the scope of the optional exception under Article 298(1)(a)(i) of UNCLOS.[60] The first reason is the distinction between "provisional arrangements" on the one hand, and "transitional arrangements" on the other.[61] Second, this exercise by the Conciliation Commission is better viewed as akin to an exercise to determine incidental competence once it is established that it has competence over the submission, which concerns delimitation of the maritime boundary.

First, the transitional arrangements that Timor-Leste requested the Commission's assistance with are being conflated with the provisional arrangements of a practical nature envisaged by Articles 74(3) and 83(3) of UNCLOS. The key difference between transitional arrangements and provisional arrangements is that the former is entered into to dissolve existing provisional arrangements and prepare for the application of the agreement on the maritime boundary. Provisional arrangements, on the other hand, tend to exist when there is no agreement on the maritime boundary, i.e., pending delimitation. Transitional arrangements are intended to facilitate implementation of the agreed maritime boundary "by bring[ing] the Parties from their current [provisional] arrangements to the full implementation of their newly agreed permanent maritime boundary," and also to bring the already existing provisional arrangements[62] between the parties to an end by "mutually agreed steps."[63]

The fact that there already existed provisional arrangements between the parties, which made direct reference to Articles 74(3) and 83(3) of UNCLOS,[64] makes it illogical to construe Timor-Leste's request for transitional arrangements as "provisional arrangements" within the meaning of paragraph 3. The arrangements that the Commission eventually assisted the parties with were not "provisional arrangements" pending delimitation pursuant to Articles 74(3) and 83(3) of UNCLOS. At best, the request was about existing provisional arrangements between the parties, but only in terms of how to end those arrangements. Therefore, the very general statement of the Commission in paragraph 97[65] needs to be read in light of the request and the actual findings.[66] Put simply, one should exercise caution in interpreting the extract cited above as confirming the exclusion of Articles 74(3) and 83(3) of UNCLOS from the purview of binding procedures.

Second, one must also note that the scope of a conciliation commission's competence is subtly different from the scope of the optional exception under Article 298(1)(a)(i) of UNCLOS. In its own words, the Commission's mandate was to "comprehensively engage with the Parties to address the issues necessary to achieve an amicable and durable settlement."[67] As such, when the Commission concluded that it had competence to deal with the dispute concerning maritime delimitation, the request regarding transitional arrangements came under its incidental competence because they would help assist in the resolution of the dispute relating to "sea boundary delimitations." The Commission's exercise, establishing the scope of issues that it could deal with, is an issue of incidental competence within the context of conciliation.[68] A conciliation commission's finding of competence cannot be determinative of whether such disputes are excluded from compulsory dispute settlement by an Article 298 declaration.

V. Conclusion

The scope of compulsory dispute settlement of UNCLOS is limited. A dispute must be within the limits of jurisdiction set in the Convention and the optional exceptions to jurisdiction that States may decide to avail themselves of. However, declarations made under

Article 298 are not taken at face value.[69] It is for the court or tribunal to examine the submissions and the scope of the relevant optional exception to decide whether the claimant State identified a question for the court or tribunal separate from boundary delimitation concerning the interpretation and application of the Convention. Such questions of subject matter jurisdiction are undoubtedly questions of law, *compétence de la compétence* for a court or tribunal to decide.

By considering the ordinary meaning of the text in Article 298(1)(a)(i) within its context in light of the object and purpose of the text, it is argued that the optional exception should not cover disputes concerning the obligations under paragraph 3 of Articles 74 and 83 of UNCLOS. This article also showed that disputes about obligations of conduct have been addressed separately from maritime delimitation by courts and tribunals, demonstrating the separability of the related disputes. The main hurdle to this interpretation is the fact that while obligations of conduct address an issue different to maritime delimitation, textually they fall under the heading of Articles 74 and 83 of UNCLOS. It is expressed in this article that this textual fact should not be taken at face value. One needs to acknowledge different functions served by different parts of the provisions and the differences between Article 15 on the one hand, and Articles 74 and 83 on the other.

It should be possible for a court or tribunal to address disputes about the interpretation and application of the obligations of conduct and related rights and obligations in the Convention, conscious of the limits on the submissions and without advancing or detracting from parties' claims of maritime boundaries. Indeed, the Annex VII Arbitral Tribunal in *Guyana v. Suriname* highlighted the role that courts and tribunals can play where a dispute arises concerning the obligations under Articles 74(3) and 83(3) of UNCLOS when parties are reluctant to consent to a third party settling the boundary dispute.[70]

Notes

1. United Nations Convention on Law of the Sea (adopted December 10, 1982, entry into force November 16, 1996) 1883 *UNTS* 397 (hereinafter UNCLOS).
2. UNCLOS, arts. 74(1) and 83(1).
3. Michael Byers and Andreas Østhagen, "Settling Maritime Boundaries: Why Some Countries Find It Easy, and Others Do Not," in Dirk Werle et al., eds., *The Future of Ocean Governance and Capacity Development: Essays in Honor of Elisabeth Mann Borgese* (Brill | Nijhoff 2018) pp. 162–168, https://doi.org/10.1163/9789004380271_028.
4. PCA, *Arbitral Tribunal Constituted Pursuant to Article 287, and in Accordance with Annex VII, of the LOSC in the Matter of an Arbitration Between Guyana and Suriname*, Award of September 17, 2007, available online at PCA website: https://pcacases.com/web/sendAttach/902 (hereinafter *Guyana v. Suriname*) para. 459; *Delimitation of the Maritime Boundary in the Atlantic Ocean (Ghana/Côte d'Ivoire),* Judgment, ITLOS Reports 2017, p. 4, para. 626 (hereinafter *Ghana v. Côte d'Ivoire*).
5. UNCLOS, arts. 74(3) and 83(3).
6. *Ghana v. Côte d'Ivoire,* para. 627.
7. *Guyana v. Suriname,* para. 465.
8. UNCLOS, art. 298(1)(a)(i).
9. The declarations made are available at: https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=_en, accessed October 31, 2025.
10. Natalie Klein, "Provisional Measures and Provisional Arrangements," in Elferink, Henriksen and Busch, eds., *Maritime Boundary Delimitation: The Case Law* (Cambridge University Press, 2018) pp. 124–125. This interpretation is regarded as "strong" by Youri Van Logchem, "The Scope for Unilateralism in Disputes Maritime Areas," in C. Schofield and M.S. Kwon, eds., *The Limits of Maritime Jurisdiction* (Brill Nijhoff, 2014), p. 195, https://doi.org/10.1163/9789004262591_010. Also advocating for

a broad interpretation of words "concerning" and "relating," see Keyuan Zou and Qiang Ye, "Interpretation and Application of Article 298 of the Law of the Sea Convention in Recent Annex VII Arbitrations: An Appraisal" *Ocean Development & International Law* 48 (2017), pp. 331, 335, https://doi.org/10.1080/00908320.2017.1320917; Xuexia Liao, "The Road Not Taken: Submission of Disputes Concerning Activities in Undelimited Maritime Areas to UNCLOS Compulsory Procedures," *Ocean Development & International Law* 52 (2021), pp. 297, 313, https://doi.org/10.1080/00908320.2021.1959772.

11. Liao (n 10), p. 310.

12. *Ibid.*

13. Christine Sim "Maritime Boundary Disputes and Article 298 of UNCLOS," *Asia-Pacific Journal of Ocean Law and Policy*3 (2018), p. 232, https://doi.org/10.1163/24519391-00302005. Also, Robert Beckman and Christine Sim, "Maritime Boundary Disputes and Compulsory Dispute Settlement: Recent Developments and Unresolved Issues," in Myron H Nordquist, John Norton Moore, and Ronan Long, eds., *Legal Order in the World's Oceans* (Brill Nijhoff, 2018), pp. 228, 248, https://doi.org/10.1163/9789004352544_013.

14. PCA, *In the Matter of Arbitration Between the Republic of the Philippines and the People's Republic of China, Jurisdiction and Admissibility, Decision of 29 October 2015* (hereinafter *South China Sea Arbitration Award on Jurisdiction and Admissibility*).

15. PCA, *In the Matter of the Marine Boundary Between Timor-Leste and Australia before a Conciliation Commission Constituted Under Annex V to the 1982 United Nations Convention on the Law of the Sea*, The Report and Recommendations of the Compulsory Conciliation Commission between Timor-Leste and Australia on the Timor Sea, 9 May 2018, available at https://pcacases.com/web/view/132 (hereinafter *TS Conciliation Report*).

16. Sim (n 13), p. 234.

17. UNCLOS, art. 298(1)(a)(i).

18. Vienna Convention on the Law of Treaties (adopted May 23, 1969, entered into force January 27, 1980), 1155 UNTS 331, Article 31(1) (hereinafter VCLT).

19. ILC, Draft Articles on the Law of Treaties with Commentaries, 1966, p. 221, para. 12.

20. UNCLOS, art. 298(1)(a)(i) [emphasis added].

21. VCLT, art. 31.

22. UNCLOS, art. 286.

23. Myron H. Nordquist, Shabtai Rosenne and Louis B. Sohn, *United Nations Convention on the Law of the Sea 1982: A Commentary, Volume V* (Martinus Nijhoff Publishers, 1989), pp. 5–15, [Xv.2–Xv.17].

24. Armand L.C. de Mestral, "Compulsory Dispute Settlement in the Third United Nations Convention on the Law of the Sea: A Canadian Perspective," in Thomas Buergenthal, ed., *Contemporary Issues in International Law: Essays in Honor of Louis B. Sohn* (Engel, 1984), p. 170.

25. Andreas Zimmermann and Jelena Bäumler, "Navigating Through Narrow Jurisdictional Straits: The Philippines-PRC South China Sea Dispute and UNCLOS," *The Law & Practice of International Courts & Tribunals* 12 (2013), pp. 431–461, 447, https://doi.org/10.1163/15718034-12341266.

26. Van Logchem (n 10), p. 195; Liao (n 10), p. 310.

27. Douglas Guilfoyle, "The South China Sea Award: How Should We Read the UN Convention on the Law of the Sea?" *Asian Journal of International Law* 8 (2018), pp. 51, 52, https://doi.org/10.1017/S2044251317000133.

28. PCA, *Dispute Concerning Coastal State Rights in the Black Sea, Sea of Azov, and Kerch Strait (Ukraine V Russian Federation)* (Award Concerning the Preliminary Objections of the Russian Federation) (February 21, 2020) para. 378.

29. UNCLOS, art. 15.

30. Symmons, art. 15, para. 22.

31. *Delimitation of the Maritime Boundary in the Indian Ocean (Mauritius/Maldives), Judgment*, ITLOS Reports 2022–2023, paras. 90 and 95 (hereinafter *Mauritius v. Maldives*).

32. UNCLOS, arts. 74(2) and 83(2).

33. Beckman and Sim (n 13), p. 247.

34. James Harrison, "Defining Disputes and Characterizing Claims: Subject-Matter Jurisdiction in Law of the Sea Convention Litigation," *Ocean Development & International Law* 48 (2017) pp., 269–283, https://doi.org/10.1080/00908320.2017.1328924.

35. For example, see Liao (n 10), p. 312.

36. David Anderson and Youri van Logchem, "Rights and Obligations in Areas of Overlapping

Maritime Claims," in Jayakumar, Koh, and Beckman, eds., *The South China Sea Disputes and Law of the Sea* (Edward Elgar, 2014), p. 200, https://doi.org/10.4337/9781783477272.00015.

37. For example, Ireland: *Draft Article on Delimitation of Areas of Continental Shelf Between Neighbouring States*, UN Doc. A/CONF.62/C.2/L.43 (August 6, 1974); also number of suggestions were made during the meetings of the Negotiating Group 7, i.e., an informal suggestion by Papua New Guinea, Conf Doc. NG7/15 (May 9, 1978).

38. Netherlands: *Draft Article on Delimitation Between States with Opposite or Adjacent Coasts*, UN Doc. A/CONF.62/C.2/L.14 (July 19, 1974); See similar proposal by Japan UN Doc. A/CONF.62/C.2/L.31 / Rev.l. (August 16, 1974).

39. *Guyana v. Suriname*, para. 460.

40. *Ibid.*

41. UNCLOS, arts. 74(3) and 83(3).

42. UNCLOS, arts. 56(2) and 58(3).

43. UNCLOS, art. 192 ("General Obligation to Protect and Preserve the Marine Environment").

44. See, for example, Ted L. McDorman, "The South China Sea Arbitration: Selected Legal Notes," *Asian Yearbook of International Law* 21 (2015), p. 3.

45. Emilia Justyna Powell and Krista E. Wiegand, *The Peaceful Resolution of Territorial and Maritime Disputes* (Oxford University Press, 2023), pp. 215–216.

46. *South China Sea Arbitration Award on Jurisdiction and Admissibility*, para. 101.

47. *Ibid.*, para. 14; "Position Paper of the Government of the People's Republic of China on the Matter of Jurisdiction in the South China Sea Arbitration Initiated by the Republic of the Philippines" (December 7, 2014), https://www.fmprc.gov.cn/mfa_eng/wjdt_665385/2649_665393/201412/t20141207_679387.html.

48. *Ibid.*

49. *South China Sea Arbitration Award on Jurisdiction and Admissibility*, paras. 155–7.

50. *Ibid.*, para. 155.

51. *South China Sea Arbitration Award on Jurisdiction and Admissibility*, para. 156.

52. *Ibid.*, para. 157.

53. This decision is not without criticism, see Zou and Ye (n 10); McDorman (n 44).

54. *Guyana v. Suriname*, para. 453; *Ghana v. Côte d'Ivoire,* para. 541; *Maritime Delimitation in the Indian Ocean (Somalia v. Kenya)* Judgment of October 12, 2021, ICJ Reports 2021, para. 198.

55. PCA, *A Conciliation Commission Constituted Under Annex V to the 1982 United Nations Convention on the Law of the Sea Between the Democratic Republic of Timor-Leste and the Commonwealth of Australia*, Decision on Australia's Objections to Competence (September 19, 2016) (hereinafter *Timor-Leste Australia Conciliation Decision on Competence*) para. 93, https://pcacases.com/web/sendAttach/10052.

56. *Timor-Leste Australia Conciliation Decision on Competence*, para. 94.

57. Opening Session in Timor Sea Australia Conciliation, August 29, 2016, pp. 48–49, https://pcacases.com/web/sendAttach/1889.

58. *Ibid.*, p. 70.

59. Indeed, the literature relies on this pronouncement in support of the exclusion of the whole of articles 74 and 83 of UNCLOS, see Zou and Ye (n 10), p. 336; Liao (n 10), pp. 311–312.

60. According to Sim, "It would be an error to interpret the…statements…as an exclusion of these disputes from compulsory dispute settlement. The commission's statements must be read in the context of a conciliation." Sim (n 13) p. 250.

61. Jianjun Gao, "The Timor Sea Conciliation (Timor-Leste v. Australia): A Note on the Commission's Decision on Competence," *Ocean Development & International Law* 49 (2018), pp. 208, 220, https://doi.org/10.1080/00908320.2018.1479370.

62. "TST" and "CMATS Treaty."

63. Opening Session in Timor Sea Australia Conciliation (n 57), p. 49.

64. The preamble to the CMATS Treaty reads: "TAKING INTO ACCOUNT the United Nations Convention on the Law of the Sea …, In particular, Articles 74 And 83 which provide that the delimitation of the Exclusive Economic Zone and continental shelf between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law in order to achieve an equitable solution; FURTHER TAKING INTO ACCOUNT, in the absence of delimitation, the obligation for States to make every effort in a spirit of understanding and cooperation to enter into provisional arrangements of a practical nature which are without prejudice to the final determination"; also the Preamble to

the Timor Sea Treaty is nearly identical, but Article 2(a) explicitly provides that "This treaty gives effect to international law as reflected in….under Article 83 Which requires States…to enter into provisional arrangements…This treaty is intended to adhere to such obligation."

65. Quoted Above, p. 17.

66. It is clear from the report and recommendations of the commission that the transitional arrangements the commission assisted parties with were intended to help move away or dissolve the existing "provisional arrangements."

67. TS Conciliation Report, para. 62.

68. Sim (n 13), p. 250.

69. UNCLOS, arts. 309 and 310.

70. *Guyana V Suriname,* paras. 446, 482 and 484.

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Strategic Convergences: Philippines' Emerging Ties Amid Power Rivalries in the Indo-Pacific Region

Ipsa Sahu

Structured Abstract

Article Type: Research Article

Purpose—To examine how the Philippines leverages relationships with the United States, China, and India, while engaging middle powers like Japan and South Korea, to ensure maritime security and promote national interests in the Indo-Pacific.

Methodology—This study employs discourse analysis of joint statements, defense agreements, and maritime dialogues, combined with thematic analysis of elite narratives, to situate Manila's decisions within the evolving security landscape of the Indo-Pacific.

Findings—The Philippines employs a layered approach—strengthening defense ties with the United States as its primary security partner, maintaining pragmatic economic relations with China despite maritime disputes, and cooperating with India to boost naval capacity and technological resilience. Engagements with Japan and South Korea diversify security and financial options, forming a broad support network.

Practical Implications—The study demonstrates how smaller states can mitigate vulnerability and maintain strategic autonomy by diversifying their alliances and institutionalizing multipolar engagements. These insights are valuable for policymakers exploring middle-power strategies amid great-power rivalry.

Originality/Value—This article adds to the Indo-Pacific security diplomacy literature by highlighting the Philippines' active role in balancing major and middle powers, offering insights into maritime security practices among smaller states.

Keywords: adaptive diplomacy, Indo-Pacific security, maritime security, Philippines, rules-based order

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I. Introduction

The Indo-Pacific has emerged as a contested region for maritime power struggles among major nations, affecting the stability and strategic objectives of both middle and secondary states. In this context, the Philippines, an archipelagic nation comprising more than 7,000 islands, occupies a pivotal position in the South China Sea disputes. Its security has been closely tied to the maritime stability and sustainable governance of marine resources, which has exposed the Philippines to vulnerabilities, such as the persistent and aggressive activities of China in the South China Sea. Over the years, it has become central to the Philippines' foreign and defense policy.

Obama's pivot to the Asia-Pacific further reinforced engagement with the Philippines for maritime security, alliance-making and naval positioning in the South China Sea, where large-scale Chinese reclamation projects threatened the status quo. The 2016 Permanent Court of Arbitration ruling was a pivotal moment. Still, it led to a strategic dilemma because China declined to alter its "nine-dash line" claims, exposing the limits of international law. Additionally, China intensified its gray-zone tactics—such as water cannon incidents, collision of fishing boats, and the militarization of artificial islands—underscoring the growing urgency to reach out to external powers other than the US and China. The Philippines opted for a dual-hedging strategy combining security assistance from the US and maximizing economic gain from China. Simultaneously, the evolving geopolitics of the Indo-Pacific region helped the Philippines diversify its relationships with its neighborhood, such as Japan and South Korea, through infrastructure financing, military assets and capacity-building training. These engagements complemented Manila's alliance with the US and served as safeguards against over-reliance.

At the same time, India seeks to enhance its influence as a maritime power in the Indian Ocean and beyond. The dynamic bilateral relationship between India and the Philippines is anchored in shared democratic, cultural, and historical values, as well as in a mutual vision of maintaining a free and open Indo-Pacific. The 75th anniversary of India–Philippines diplomatic ties in 2024 highlights a renewed interest in a partnership that has historically been constrained. In the early decades of their diplomatic relations, the relationship primarily consisted of diplomatic exchanges and occasional trade. Manila's security was based on its 1951 Mutual Defense Treaty with the United States, serving as a deterrent during the Cold War rivalry. Meanwhile, India focused more on its immediate neighborhood and maintained a non-aligned stance, dedicating minimal diplomatic effort to the Philippines. The Philippines experienced an asymmetrical alignment, with the US as its main security guarantor, while India remained marginal in Southeast Asia. Unlike the well-studied relationships between the Philippines and countries like the United States, China, Japan, South Korea, or India with Vietnam, Singapore, and Indonesia, the India–Philippines relationship remains relatively underexplored.[1]

India's Act East policy has strengthened the strategic partnership between India and the Philippines, creating new avenues for collaboration in the Indo-Pacific region. Maritime security challenges, such as China's increasing assertiveness in the South China Sea, have prompted India and the Philippines to strengthen their defense cooperation, reflecting shared threat perceptions and a desire for strategic autonomy. Both nations are dedicated to upholding an international order based on rules and respect for international law, especially the United Nations Convention on the Law of the Sea (UNCLOS). As they grow closer, India and the Philippines have shown a mutual interest in peace, stability, and sustainable development in the Indo-Pacific, working together to enhance their roles in regional and global affairs. The Philippines' external relations have become more nuanced: it relies on the US for military deterrence, collaborates with China for economic growth, and cautiously seeks India and middle powers such as Japan and South Korea for engagement in order to diversify options.

This research paper is divided into five sections, where the first section introduces the importance of learning about the Philippines' adaptive diplomacy in the Indo-Pacific region. The second section examines the policy engagement and evolution of India–Philippines institutional mechanisms, from maintaining a symbolic diplomatic relationship to a structured strategic cooperation and the centrality of maritime disputes with China that urged the Philippines to recalibrate its foreign policy. The third section examines the Philippines' relationship with China after the Permanent Court of Arbitration ruling, which initially showed friendliness but later led to a fallout. The fourth section is centered around the growing focus of the Philippines toward its immediate neighborhood, especially Japan and South Korea, whose developmental and security assistance have contributed to the strengthening of the Philippines' operational readiness in the turbulent waters of the South China Sea. The fifth section builds on the emerging partnership between India and the Philippines, grounded in a commitment to a rules-based order and alignment with each other's dynamic national interests in the Indo-Pacific. The paper concludes by placing these relationships within the broader Indo-Pacific power dynamics, emphasizing how the Philippines utilizes the three main poles—the US, China, and India—while engaging middle powers as force multipliers to strengthen its strategic independence.

II. Policy Engagement and Institutional Mechanisms

India and the Philippines established diplomatic relations in November 1949, but for years, it remained a cordial yet somewhat distant relationship. They occasionally engaged through multilateral settings such as the United Nations and the Non-Alignment Movement. The Philippines, the US, and India shared an asymmetrical strategic alignment. While Manila's security orientation was anchored and underpinned by the Mutual Defence Treaty, which guaranteed US support during external aggression,[2] India focused on its neighborhood under the Look East Policy. This approach kept bilateral engagement shallow and sporadic. India's Look East policy shifted its focus toward the Association of Southeast Asian Nations (ASEAN) countries, including Vietnam, Singapore, and the CML countries—Cambodia, Myanmar, and Laos—for trade expansion.[3] Parallel to this, the Obama administration's pivot to the Asia-Pacific renewed a "strategic reinstallment" in maritime engagement and naval repositioning through the deepening of alliances, which became security leverage for Manila. This encouraged Manila to pursue a "twin-hedges" strategy, where Manila balanced growing Chinese assertiveness through defensive posturing and strengthening ties with the US while sustaining economic interests through a functional relationship with Beijing.[4] Furthermore, Manila focused on selective balancing in the maritime region.

India's Act East Policy became the springboard for strengthening the bilateral ties from token diplomacy—limited to symbolic exchanges toward a functional diplomacy—to one embedded in institutional mechanisms, policy frameworks, and defense and maritime cooperation in the South China Sea.[5] Today, the Joint Commission on Bilateral Cooperation, which was established in 2007, has become a key platform for discussion on developmental sectors such as digital economy, health, agriculture, trade, tourism, and cooperation in security and defense of both democracies.[6] This institutional engagement has provided a solid foundation for expanding the scope of cooperation and fulfilling certain objectives of the New Delhi-Manila dynamism. Even the "Strategic Partnership Declaration 2025–2029" has reaffirmed that through sectoral coordination bodies and a mutual commitment to strengthen bilateral relations, the region can ensure continued stability, peace, and prosperity.

2.1 Maritime Disputes

Although institutional mechanisms set a basic framework for cooperation, the turning point in Manila's external relations was driven by growing maritime disputes with China. These conflicts transformed the Philippines' security outlook from general policy considerations to immediate strategic priorities. The South China Sea became more than just contested water, it became the central focus around which Manila adjusted its hedging strategies, defense alliances, and diplomatic policies. In this context, maritime tensions served as the main link connecting institutional frameworks to tangible security collaborations.

China grounds its claims in the South China Sea based on its Nine-Dash Line, a cartographic underlining with historical posing. In 2012, China took control of the disputed Scarborough Shoal from Manila, which lies among the Spratly and Paracel island groups. However, the 2016 Permanent Court of Arbitration in The Hague invalidated the Nine-Dash Line, first inscribed on a 1949 Chinese map, stating it has no legal basis. The Chinese government has called the Permanent Court of Arbitration Verdict null and void and has continued to claim 80 percent of the South China Sea, including critical trade routes, islands, and their relevant waters. The Chinese reclamation and revamp of the Spratly Islands, including Fiery Cross, Subi, and Mischief Reefs, led to the construction of airstrips, deep-water harbors, and reinforced hangars.[7] This incident entrenched the Philippines's dependence on external security partners amid the growing US–China trade war.

The absence of enforcement mechanisms limited the Permanent Court of Arbitration ruling, which aimed to bolster the UNCLOS further. However, Manila's legal standing in the regional discourse on maritime governance is still undermined. "Intentional" collision of Chinese coast guard ships with Filipino supply boats and coast guard ships has increased in recent years, indicating a risk of escalation in the South China Sea.[8] While Manila achieved a legal win at The Hague, it continues to face strategic vulnerabilities in the South China Sea, necessitating a balance between confrontational and cooperative economic strategies with China.

III. The Philippines' Approach to China Post-2016

The 2016 Permanent Court of Arbitration decision was a groundbreaking legal advancement reaffirming the boundaries of China's Nine-Dash Line claims. However, the lack of sanctions severely diminished its real-world significance. Even though the ruling bolstered the normative power of UNCLOS, Manila has struggled to implement it in reality due to China's persistent gray-zone behavior, including water cannon incidents and naval blockades. This disconnect between law and power suggests how weaker states usually only obtain symbolic, instead of material, influence through international arbitration. On the Philippine side, the decision framed did not conclude foreign policy decisions, which continued to be punctuated by a back-and-forth between accommodation and defiance toward Beijing.

The general elections in Southeast Asia's oldest democracy saw a record 80 percent voters' turnout and elected Rodrigo Duterte as president of the Republic of the Philippines, who promised change.[9] He signaled a pivotal approach to an independent foreign policy based on diplomacy and economic cooperation, rather than confrontation with China. Undoing his predecessor Benigno Aquino III's posturing of a closer tie with the US, President Duterte's first state visit to China marked a significant thaw in the diplomatic relations between Manila and Beijing. Hua Chunying, the then–Chinese Foreign Ministry spokesperson, described the encounter during the visit as having taken place in an "amicable and candid atmosphere," marking a diplomatic rapprochement.[10] The signing of bilateral cooperation documents signaled an extension beyond economic trade and infrastructure, offering Manila an immediate developmental gain. However, critics warned it risked entangling national security with financial dependence.

Furthermore, it became the hook for China's cornerstone project—the Belt and Road Initiative's ambitions for the inclusion of the Philippines. In 2018, the Philippines officially joined China's Belt and Road initiative. For the Philippines, BRI membership translates into greater access to the "Red Market" and positions Manila on the radar of Chinese investors and creditors as an expanded source of financial channels.[11] Beijing emerged as Manila's leading trading partner in 2018 with bilateral trade amounting to $14.08 billion or 16.6 percent of the total trade.[12] The boost to Manila's trade aligned with Beijing's economic outreach, providing an inlet to pursue the revisionist Chinese national interest.

3.1 Decentralization and Growth

Manila's BRI membership intersected with the *Build Build Build* (BBB) Program of the Duterte administration's spending plan for infrastructure modernization and economic growth, dubbed as the "Golden Age of Infrastructure" by 2022. The BBB program is a component of *Ambisyon Natin* 2040 (the Philippines' long-term vision) and the "Dutertenomics" objective of social inclusivity and decentralization of growth centers in the Philippines. It is also included in the Philippine Development Plan (2017–2022), which makes it crucial for the nation to take steps in this direction. Post-pandemic, Manila needed a rapid economic recovery, to which China contributed by securing two bridge link construction contracts for Davao City and a cargo railway in Luzon. This positions China as a critical partner in the Philippines' developmental trajectory. The further spate of infrastructure initiatives, such as the Subic-Clark railway project, a 71-km single-track cargo railway from Subic Bay Freeport Zone to Clark International Airport, and the connecting North Railway project, the Samal Island–Davao City bridge project, highlight how Manila's strategic drive for connectivity and decentralized development is deeply interconnected with China-backed infrastructure.[13] However, tapping into several external sources for funds has created a sense of "treat or threat" among the Filipinos, exposing the deeper vulnerabilities.

Soon, the post-pandemic support heightened concern over dependency on Chinese financing. The BBB program and BRI have, in the past few years, become more detached from Philippine society, with growing default rates on China's concessional loans worrying about debt entrapment. Suspicions and concerns have tainted the relationship.[14] China's failed bid to respond to the Philippines' funding appeal for two rail lines in Luzon and one in Mindanao, where it emphasized negotiations for a loan agreement, not a bilateral process, led to tensions.[15] Furthermore, delays in six other funding projects led Manila to seek better interest rates and a grace period for loan repayment from Japan, straining Manila–Beijing relations.[16] Such incidents weakened cooperation and fueled conflicts within the Philippines.

The political leadership under President Marcos Jr. also witnessed a growing anti–China stance. His visit to the headquarters of the US Indo-Pacific Command at the peak of disembarkation with China indicated a gradual reorientation towards the US. The alignment gesture through reaffirmation of the Mutual Defence Treaty, including joint patrols, increasing US access to Philippine bases, intelligence sharing, and maritime security cooperation, signaled an enhancement of bilateral defense cooperation.[17] This reinforcement, framed as capacity-building as part of the US outreach, ultimately led to Manila's withdrawal from BRI in 2023, while solidifying relations with the US. Manila's shift toward Washington is primarily viewed as a security-focused move, but its concurrent efforts to engage with other regional players, such as India, indicate a hedging strategy of diversification in both security and economic relations.

IV. Philippines Relations with its Neighborhood

When China's funding under the BRI slowed down, President Duterte diversified economic relations with other foreign partners, including Japan, South Korea, Australia, the US, and India, among others. Manila's *Build Build Build* infrastructure program benefited from the reassessment, which was financed by Japan and the Asian Development Bank. It was subsequently pushed forward with projects such as the Metro Manila Subway, the North–South Commuter Railway, and the Malolos-Clark Railway.[18] Japan's involvement went beyond just providing funding; it also included technology transfer and project management, establishing high standards in infrastructure development. South Korea also improved its engagement with the Philippines through its Korea Export-Import Bank, having signed agreements to finance projects such as the Panguil Bay Bridge and the New Cebu International Container Port enhancing connectivity.[19] Although Australia is not a major financer of the BBB program, it still contributed to Manila under its 2017 Partnership for Infrastructure initiative, focusing on sectors such as disaster-resilient infrastructure, transportation, and energy. Under Canberra's Aid Investment Plan (AIP 2015–2020), it supported Manila through the improvement of the local government's capacity and infrastructure for rural communities.[20] These efforts contributed to Manila's goal of reducing its dependence on China, thereby promoting sustainable investment in its growth trajectory.

Over the past few decades, Manila's relations with regional and international partners have shifted from strictly bilateral defense arrangements to institutionalized maritime dialogue institutions, which serve as critical tools for coordinating regional strategy. As such, these maritime dialogues—launched in 2011 between the Philippines and Japan—have established information sharing and coordination platforms for maritime domain awareness and Coast Guard training and development. Thereby, they have functioned as consultative frameworks to align national maritime priorities with collective security norms within the Indo-Pacific region. In addition, the Australia–Philippines Dialogue enhanced capacity-building for humanitarian assistance and disaster relief and strengthened maritime law enforcement and surveillance capabilities in the broader Indo-Pacific region. Furthermore, the South Korea–Philippines dialogue added to the defense industrial cooperation framework, utilizing maritime security as a catalyst. As a result, relationships between neighbors in the immediate neighborhood were explicitly stated. Consequently, to build a closer working relationship with the QUAD members, the Philippines engaged in trilateral dialogue with both the United States and Japan and also initiated parallel dialogue with India, thereby embedding the regional deterrence mechanism into rule-based partnership arrangements. Additionally, the Philippine government extended outreach efforts to the European community through the UK–Philippines dialogue, providing European interest in the Indo-Pacific, followed, shortly thereafter, by the France–Philippines dialogue, which provided additional support to defense modernization through the delivery of patrol vessels to the Philippine Coast Guard and initiated/stimulated discussions regarding a Status of Visiting Forces Agreement between France and the Philippines.[21] The inaugural maritime dialogue between New Zealand and the Philippines stemmed from Manila's expansion to its South Pacific partners, to work on climate resilience and maritime security.[22] In tandem, the Philippines' informal outreach to Taiwan within a politically sensitive maritime region articulates an extension of its adaptive maritime policies in the sectors of fisheries and humanitarian assistance as a way of functional cooperation. Thus, collectively, these maritime dialogues represent Manila's evolving maritime governance and reinforce the Philippine government's status as a critical linkage actor in the Indo-Pacific security architecture.

4.1 Intersection of National Security and Modernization

Besides connectivity projects, the Philippines sought to boost defense cooperation. South Korea and the Philippines have elevated ties to a strategic partnership amid growing security challenges, initially focused on modernizing their armed forces to counter regional threats. Earlier, South Korea had also delivered the final batch of FA-50 fighter jets, underlining the maturing defense industrial partnership. Both governments agreed to enhance coast guard collaboration, while considering the revival of the Bataan Nuclear Power Plant, as well as providing military support for the Philippines' second modernization plan.[23] The integration of energy collaboration and defense modernization indicates a comprehensive alignment, with Seoul positioning itself as a dependable partner that meets both Manila's economic and security needs. Additionally, the Philippines–South Korea strategic partnership resembles a hedging approach—securing defense equipment and training from Korea while maintaining economic ties with Japan and others. This shows Manila's recognition of interconnected vulnerabilities, such as maritime insecurity in the South China Sea and domestic energy shortage issues. Through institutionalized coast guard cooperation, Manila envisions to improve its maritime domain awareness in contested waters, supporting broader Indo-Pacific efforts, such as the US-led Indo-Pacific Strategy and Japan's Free and Open Indo-Pacific initiative.

Washington and Manila sought a stronger partnership, marking the 75th anniversary of the establishment of mutual diplomatic relations in 2021 through a joint statement to launch five initiatives, including a maritime security dialogue, support for phase two of military modernization, identifying additional Enhanced Defense Cooperation Agreements (EDCA) locations, infrastructure projects at EDCA sites, and General Security of Military Information Agreement.[24] The alliance between the US and the Philippines continues to be the key element of Manila's deterrence strategy, especially in the South China Sea, where American Freedom of Navigation Operations support international maritime rights law.

The alliance continues to modernize with the other regional countries within the security architecture. The signing of seven bilateral agreements, including those on defense cooperation and a commitment to equip and train for enhanced maritime surveillance in the broader Indo-Pacific, has deepened the Philippines-Japan Strategic Partnership.[25] The visit of Australian Prime Minister Anthony Albanese to Manila marked a first in 20 years, resulting in the upgrade of bilateral ties to a strategic partnership that reinforces the importance of the Indo-Pacific region. Only Canberra and Washington have bilateral Status of Visiting Forces Agreements with Manila, which enable the two countries to conduct joint exercises, high-level visits, dialogues, and interoperability training.[26] The emergence of a quadrilateral grouping among the US, the Philippines, Japan, and Australia, known as "SQUAD," further demonstrates Manila's centrality in the evolution of minilateralism in countering China's belligerence in the wider Indo-Pacific region. The Philippines relies on Indo-Pacific allies for security, while maintaining the status of free and open sea lanes of communication, and balances its economic interests with those of China, which drives its collective partnerships.

V. Philippines' Approach to India

While the US alliance remains central to Manila's security architecture, policymakers have recognized the strategic vulnerabilities of relying heavily on one partner, especially given the complex issues raised by South China Sea disputes. In this context, India's rise as a credible Indo-Pacific actor offers Manila an alternative and complementary partner to enhance defense capabilities and maritime security. India's support for ASEAN centrality and its expanding presence in regional infrastructure and security discussions in accordance with the rules-based order, make it an appealing partner for the Philippines. Additionally, India's ability to provide concrete defense solutions, rather than mere rhetorical backing, sets it apart from other middle powers. As a result, the Philippines–India relationship has strengthened, with strategic goals now translating into practical defense cooperation, technology transfer, and joint maritime projects.

Prime Minister Modi's first visit to Manila in 2017 to attend the 15th India-ASEAN Summit and the 12th East Asia Summit symbolized India's commitment to ASEAN centrality as part of the Act East Asia framework and the broader Indo-Pacific region.[27] In 2018, Shri Narendra Modi became the first Indian prime minister to visit Manila on a state visit in 36 years. The meeting saw the signing of four agreements, including defense cooperation. Following up, Filipino President Duterte gave the nod for the Horizon 2 Priority project under the Philippines' modernization program and sought the urgency of procuring BrahMos missiles from India in 2022.[28] The first batch of the shore-based supersonic cruise missile BrahMos was delivered to Manila in early 2024, marking a significant turning point in Manila's approach to maritime disputes. This delivery, amid ongoing tensions between Manila and Beijing for several months, enhanced Manila's defensive posture,[29] thus signaling a shift from declaratory commitment to actionable deterrence and reinforcing Manila's need for a credible maritime security partner in the Indo-Pacific region.

Within the context of an intensifying regional geopolitical landscape, the expansion of navy-to-navy partnerships became evident in the first-ever quadrilateral joint naval exercise. The drill featured a US guided missile destroyer, the USS *William P. Lawrence*; one Japanese large aircraft carrier, the *Izumo*; an Indian-deployed destroyer, the INS *Kolkata*; a tanker, the INS *Shakti*, and a Philippine patrol vessel.[30] This exercise was important not just for its operational aspects but also as a token of Manila's evolving willingness to move beyond a traditional US-focused defense stance. By collaborating with India and Japan alongside the US, the Philippines showed Manila's willingness to join an intra-security network in the Indo-Pacific. These partnerships improve interoperability and technical familiarity between forces, but more importantly, they position Manila as an active participant in regional maritime security frameworks. Amid growing disputes in the South China Sea, this multilateral cooperation carries substantive strategic implications. It indicates Manila's strategic hedge, boosts its deterrence capabilities and emphasizes its role for like-minded powers (rephrase) committed to a rules-based order in contested waters.

Manila has sought to strengthen naval cooperation with New Delhi on multiple occasions, such as after Cyclone Amphan, when the Indian Navy aided in the repair of the BRP Ramon Alcaraz.[31] Since August 2020, there has been a steady increase in joint naval exercises—such as PASSEX, between Manila and New Delhi—operating in the South China Sea to enhance interoperability and maritime cooperation. Manila was not only acknowledging India's role as a crisis responder but also broadening its partnerships beyond the US and Japan. Although these initiatives were small compared to major multilateral drills, they held significant symbolic value. They helped establish India as a trustworthy maritime partner.

5.1 Maritime Security Challenges

The Indian Coast Guard and Navy, with their Philippine counterparts, also recently signed a Memorandum of Understanding that specifically sought to enhance professional linkages between the two Coast Guards in the domains of maritime law enforcement, maritime search & rescue, and marine pollution response, along with joint exercises and training collaboration.[32] The deployment of the guided missile destroyer INS *Delhi*, fleet tanker INS *Shakti*, and anti-submarine warfare corvette to Manila, as part of India's general deployment in the South China Sea, has strengthened its maritime partnerships with friendly countries, thereby boosting its security. The first ASEAN–India Maritime Exercise held in 2023 operated in two phases, the harbor phase and the sea phase, reiterating India's strategic interests in upholding ASEAN centrality and fostering mutual understanding of regional security. For additional maritime security, India signed a Coast Guard Cooperation Agreement with Manila in 2023, which also supported the Philippines' decision to conduct "white hull to white hull diplomacy," referring to the extensive use of Coast Guard vessels to counter China, which has made the country reticent in deploying its naval forces.[33] Thus, what might seem like technical exercises and repair missions signal Manila's gradual recalibration of the security calculus in the South China Sea.

Even under India's Act East Policy, the launch of the "Vaccine Maitri" program readily helped the people of the Philippines, thus bolstering India's image as a global health leader. India's pharmaceutical capabilities helped the Philippines benefit from broader efforts to combat the COVID-19 heath crisis. India's contributions were viewed as both humanitarian and strategically significant, advancing India's vision of becoming the "Pharmacy of the World" and strengthening alliances in Southeast Asia. India–Philippines trade surpassed the $3 billion mark in the fiscal year 2022–23, underscoring their commitment to grow together in the region. Manila's economic abilities have enhanced, while its GDP remains stable at 5.4 percent growth, during the first quarter of 2025.[34] These numbers have presented a need to accelerate negotiations for the Preferential Trade Agreement.[35] The expansion across key sectors, including maritime security and AI, has opened new business opportunities and ways for cooperation.

5.2 Soft Power Diplomacy

The increase in people-to-people diplomacy between New Delhi and Manila has fostered cultural cooperation over the decades. Manila has its own rich legacy of epics and mythological tales. Notedly, the Philippines has its own indigenous epics and scripts, such as the "*Biag ni Lam-Ang*" belonging to the Ilocano community, the Hiligaynon people's "*Hinilawod*," and the "*Darangen*" from Maranao. These epics have a structure similar to the Ramayana, with heroes, gods, and moral precepts. For example, while the stories themselves are different, the UNESCO-recognized *Darangen* epic of the Maranao people has some thematic similarities with the Ramayana, including heroics, wars, and divine intervention. The vibrant Indian diaspora community also contributes to the social and economic fabric of the Philippines. In India, the Indian Council for Cultural Relations and the Embassy of the Republic of the Philippines tend to bring together youth and cultural exchanges with celebrations like hosting university students on the International Day of Yoga.

The development of Philippines–India relations reflects Manila's strategic shift in the Indo-Pacific, where symbolic acts have grown into dynamic partnerships. Prime Minister Modi's 2017 visit, the 2024 BrahMos missile agreement and an expanded naval cooperation show India's capacity to offer Manila tangible defense tools and a dependable crisis response partner.[36] Concurrently, India's support through Vaccine Maitri and increasing bilateral trade highlight the broader, multi-faceted nature of this relationship, blending security, economic, and societal aspects.[37] For Manila, India is not just a new partner but a crucial hedge—helping diversify security options beyond its traditional reliance on the United States and Japan. This diversification is layered: unlike India, which supplies hard security assets like missile systems and naval cooperation, Japan and South Korea focus on economic diplomacy, infrastructure funding, technological aid, and capacity-building in maritime security.[38] These complementary collaborations reflect Manila's targeted approach to integrating various security and development support networks. Therefore, the India–Philippines partnership is part of a larger strategy, with Japan and South Korea playing equally essential roles in Manila's Indo-Pacific hedging efforts.

VI. The Way Forward

As an archipelagic nation, the Philippines faces notable challenges in maritime governance, particularly in maritime domain awareness. The capacity of maritime authorities to gain a comprehensive and real-time understanding of the country's extensive marine areas is constrained by limited surveillance capabilities, insufficient assets like aircrafts and patrol ships, and weak information-sharing channels. Maritime governance suffers from overlapping mandates, inadequate budgets, policy incoherence, and reduced efficiency and responsiveness to waterborne threats.[39] The executive order dated 2024, initiated by President Ferdinand Marcos Jr., aimed to establish a "unified, coordinated, and effective" maritime security system.[40] This initiative sought to address and close the resource gap and facilitate the integration process. However, domestic reforms alone are insufficient to guarantee credible deterrence and effective maritime monitoring, highlighting the crucial role of external partnerships in Manila's strategy.

The United States remains the Philippines' most significant security partner. The bilateral partnership has been strengthened through the Enhanced Defense Cooperation Agreement, which, over the decade, has provided American forces with rotational access to recently added bases across Luzon and Palawan—areas strategically near the South China Sea. This takes the total to nine American bases in the Philippines. This collaboration supports the Philippines' Maritime Defense Architecture by enhancing surveillance capabilities, creating a safety net against gray-zone coercion, and facilitating joint patrols and intelligence access that Manila cannot achieve independently. Additionally, the US Coast Guard has expanded its presence in Philippine waters, conducting training and joint patrols to improve the country's monitoring abilities. Thus, domestic reforms focus on establishing consistent maritime governance, while US support helps put these plans into action by offering essential tools, data, and security guarantees. This interaction strengthens the Philippines' capacity to defend its maritime rights in disputed waters without provoking China, maintaining a necessary balance between deterrence and restraint.

The Philippines' relationship with China remains one of the most complex and contentious aspects of its engagement in the Indo-Pacific. Despite close geographic proximity and strong economic ties, Manila continues to contend with Beijing's assertive actions in the South China Sea. Incursions into waters claimed by the Philippines, particularly around the

Spratly Islands and Scarborough Shoal, highlight the power disparity between the two countries. Although the 2016 Permanent Court of Arbitration decision nullified Beijing's broad nine-dash line claims, China has declined to accept the ruling. Manila faces a delicate balancing act—serving as a major investor and trading partner while dealing with coercive tactics, such as water cannons and ramming fishing vessels—struggling to safeguard its sovereignty while reaping economic benefits. Nevertheless, geographic proximity makes complete disengagement impossible; instead, engagement must be managed. This pattern reflects the broader hedging strategy often adopted by middle powers in the Indo-Pacific.

The Philippines looked for support in its neighborhood, increasing bilateral talks with Japan and South Korea to strengthen its security posture. Japan's cooperation with Manila is framed under its FOIP strategy, emphasizing a rules-based order and freedom of navigation, aligning with Manila's priorities in the South China Sea. Their partnership is highlighted by recent Official Security Assistance and Official Development Assistance, enabling the transfer of advanced equipment to the Philippine Navy and Air Force. This reinforces Japan's posture of considering the Philippines as a crucial partner in Southeast Asia. Japan has provided coast guard patrol vessels, maritime radars, and disaster response equipment, and through the Japan International Cooperation Agency it has facilitated capacity-building programs, boosting the Philippines' institutional readiness and technical competence. Similarly, South Korea's Indo-Pacific strategy also highlighted Southeast Asia as a crucial region benefiting Manila's hedging strategy. Despite South Korea's normative role in the Philippines' deterrence strategy, the supply of FA-50 fighter jets and naval equipment, such as Miguel Malvar–class frigates and Offshore Patrol Vessels, contributed to the operational readiness of the Philippines. Thus, by leveraging Japan's rules-based policy combined with South Korea's military support, the Philippines is reinforcing its strategic legitimacy with a balancing act in the Indo-Pacific.

As India and the Philippines celebrated 75 years of diplomatic ties in November 2024, followed by President Marcos Jr.'s state visit in August 2025, they elevated their strategic partnership, moving beyond symbolic camaraderie. The trajectory has been one of considerable improvement and growing cooperation in defense and maritime security, indicating an institutional upgrade toward a structured and stable Indo-Pacific. Furthermore, the Philippines' modernization efforts could benefit from India's expertise in naval shipbuilding, offshore patrol vehicles, and surveillance and defense technology. This is relevant for enhancing the country's coast guard capabilities through dual-use platforms for humanitarian and other missions' surveillance. Beyond hardware cooperation, the partnership centers on maritime cooperation, including formal exchanges through the maritime dialogue and joint defense and industry mechanisms closely aligned with shared norms, thereby reaffirming their support for UNCLOS and a rules-based regional framework order. By incorporating this enhanced partnership into its strategic framework, Manila not only broadens its security alliances but also gains access to credible, complementary capabilities that strengthen its sovereignty and maritime resilience in a contested environment. Furthermore, India's image as a "Vishwa Bandhu" has enabled its proactive engagement in Southeast Asia, treating the region as its extended neighborhood. Vishwa Bandhu refers to India's identity as a multi-vector diplomatic actor and a reliable partner, while consistent with its national interests.[41] This marks a crucial turning point, as India now occupies a core partner status in the tapestry of Manila's security and development, and is no longer an actor on the periphery.

The Philippines has adeptly employed a strategic balancing act among the three central poles of the Indo-Pacific—the United States, China, and India—aligning its national interests with a nuanced approach that combines security, economic, and diplomatic considerations. At a time of contradictions and cooperations, hedging is the operative tone of statecraft.[42] By maintaining strong ties with these key players and engaging middle powers like Japan and South Korea, Manila has constructed a diverse, supportive architecture that reinforces its strategic autonomy. Moving forward, its success will hinge on institutionalizing this balancing strategy through mechanisms such as ASEAN centrality and targeted minilaterals, ensuring resilience in a shifting geopolitical landscape characterized by escalating great power competition. Ultimately, the Philippines exemplifies an emerging model of adaptive middle-power diplomacy in the complex and contested Indo-Pacific region.

Notes

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India–China Rivalry in the Indian Ocean: A Multi-Level Strategic Assessment

Tran Bach Hieu, *Le Hoang Kiet* and *Tran Xuan Hiep*

Structured Abstract

Article Type: Research Article

Purpose—This study examines why the Indian Ocean Region (IOR) has emerged as a critical arena of geopolitical competition between India and China in the 21st century, analyzing the complex dynamics that have transformed this maritime space into a "smokeless battlefield" characterized by economic diplomacy, infrastructure investment, and strategic partnerships rather than direct military confrontation.

Methodology—The study applies David Singer's three-level analysis framework—system, state, and individual levels—to systematically examine how factors at different analytical levels converge to drive Sino-Indian competition. The analysis integrates structural factors in the international system, state-level capabilities and historical disputes, and the leadership roles of Xi Jinping and Narendra Modi.

Finding—The competition results from the convergence of systemic power transitions and globalization processes, state-level border disputes and superpower ambitions, and the nationalist ideologies and assertive leadership styles of both nations' leaders. No single level adequately explains this phenomenon; rather, the interaction among these levels creates the observed competitive dynamics in the IOR.

Practical Implications—Understanding this multi-level interaction is essential for developing effective competition management strategies, avoiding unwanted escalation, and promoting regional stability in a strategically vital maritime region.

Originality—This study provides the first comprehensive multi-level analysis of Sino-Indian competition in the IOR, demonstrating how Singer's framework can illuminate

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complex geopolitical competitions and offering a replicable model for analyzing similar international phenomena.

Keywords: China, India, Indian Ocean Region,
international relations, level analysis

I. Introduction

The IOR, a vast maritime region stretching from Australia to Southeast Asia, South Asia, West Asia, East Africa and Southern Africa, home to 2.7 billion people, has long emerged as one of the most significant arenas of geopolitical competition in the 21st century.[1] This region is not only a concentration point for maritime trade routes passing through strategic chokepoints such as Malacca, Hormuz, and Bab el-Mandeb, transporting over one-third of global goods and 80% of seaborne oil,[2] but also serves as a stage for increasingly intense geopolitical competition between two rising Asian powers aspiring to become "superpowers": India and China. Unlike traditional military confrontations, this competition unfolds primarily through infrastructure investment, economic diplomacy, and the cultivation of strategic partnerships,[3] creating a distinctive "smokeless battlefield" characteristic of the globalization era. This competition holds profound significance not only for the two nations involved but also for regional and global order, as India and China are the two most powerful nations in South Asia and East Asia, playing increasingly important roles in global governance.[4]

Although Sino-Indian competition in the IOR has become increasingly pivotal, existing studies still have significant limitations in comprehensively explaining this complex phenomenon. Most research tends to focus on a single aspect of the competition—such as structural factors in the international system,[5] bilateral border disputes,[6] or the role of individual leaders[7]—without systematically examining the interaction between factors operating at different levels of analysis. Specifically, realism studies focus on global power structures—the distribution of power among states and the logic of competition in an international system without supreme authority. According to this perspective, "the power shift from West to East"[8] and "the anarchic nature of the international system inevitably"[9] create competitive dynamics among major powers. However, these structural theories, while valuable in explaining general trends of power competition, overlook important factors such as: (i) why does the competition between India and China in the IOR occur primarily through economic investment and soft diplomacy rather than direct violent confrontation, as in the disputed Himalayan border region? and (ii) why has the intensity of competition increased significantly over the past decade since Xi Jinping and Narendra Modi came to power compared to their predecessors' periods? These questions require examination of factors at other analytical levels beyond the systemic level.

Conversely, state-level studies typically emphasize territorial disputes, geopolitical ambitions, and economic interests. These studies provide valuable insights into bilateral dynamics, such as the historical legacy of Sino-Indian border disputes, the Tibet issue, and both nations' energy security needs.[10] However, they often fail to place these factors in the broader context of systemic transformations in international order, leading to the omission of structural conditions that created a favorable environment for this competition.

For example, while state-level studies can explain why India and China have conflicting interests, they pay less attention to why the post–Cold War power vacuum and globalization processes created specific opportunities and incentives for these two nations to expand their influence at this particular time.

Meanwhile, analyses emphasizing the individual leadership roles of Xi Jinping or Narendra Modi offer important perspectives on how leadership style and personal beliefs shape foreign policy.[11] However, these studies often fail to fully connect leadership decisions and styles with the structural pressures at the system level and national interests at the state level that these leaders must confront. Consequently, they tend to "overestimate" the role of individual factors without recognizing that leaders' choices are always constrained and shaped by structural conditions and national interests. Therefore, the lack of a comprehensive analytical framework has led to a fragmented understanding of the dynamics driving this competition and limited the ability to develop comprehensive policy recommendations.

This study aims to address this knowledge gap by applying David Singer's level of analysis framework to provide a comprehensive explanation of Sino-Indian competition in the IOR. First developed in 1961, Singer's level of analysis framework remains one of the most influential analytical tools in international relations scholarship, allowing scholars to systematically examine how factors at different levels—from the structure of the international system to the characteristics and interests of individual states and the beliefs and decisions of leaders—interact to produce international outcomes. Singer's analytical framework suggests that international political behavior can be understood through examining factors operating at three different levels of analysis. The system level focuses on the structure of the international system and how power distribution among states influences their behavior.[12] The state level examines domestic factors including national capabilities, economic resources, military strength, and internal political dynamics that govern foreign policy decisions.[13] The individual level analyzes how perceptions, beliefs, and decision-making styles of key leaders shape national strategies and international outcomes.[14]

By deploying this framework, the study will systematically analyze this strategic rivalry on these three levels of analysis: (i) the system level, examining how global power structures, globalization processes, and the IOR's strategic position in the world economic system create favorable conditions for great power competition; (ii) the state level, analyzing how historical border disputes, national development ambitions, and both India and China's pursuit of "superpower" status drive specific competitive strategies in the region; and (iii) the individual level, exploring how the ideologies, beliefs, and leadership styles of Chinese President Xi Jinping and Indian Prime Minister Narendra Modi shape the nature and intensity of this competition. This study will conclude with a discussion of the interaction and convergence among these three levels along, as well as an assessment of possible future trajectories of the relationship.

The significance of this study lies in its ability to provide a comprehensive and integrated understanding of one of the most important geopolitical dynamics of the 21st century. By demonstrating how factors at three analytical levels converge and mutually reinforce to create the characteristic competitive dynamics, this study not only contributes to international relations theory but also provides important practical insights for policymakers. Understanding this multi-level interaction is essential for developing effective competition management strategies, avoiding unwanted escalation, and promoting stability in a region of critical strategic importance to global security and prosperity. Moreover, this study's approach can be applied to other geopolitical competitions, providing a model for analyzing complex international phenomena comprehensively and systematically.

II. System Level: Global Power Structure and the Strategic Position of the IOR

At the system level, the competition between India and China in the IOR must be placed in the context of profound structural changes in the international system following the end of the Cold War. The collapse of the Soviet Union in 1991 fundamentally altered the global balance of power, opening a "unipolar" moment with absolute American dominance.[15] However, this structure proved temporary, as the 2008 financial crisis shook the foundations of American capitalism, and the world order witnessed the formation of a multipolar system with China's rapid rise challenging American "hegemony."[16] Meanwhile, India—the world's largest democracy—positioned itself as a rising power with "responsibility" for global security, particularly in the IOR, which is viewed by the Indian elite as their traditional "backyard." This argument aligns with Professor Donald Berlin's assessment:

> "New Delhi regards the IOR as its backyard and believes … India will ultimately function as the dominant power in this region. … According to the expansive view of many Indians, India's security sphere should extend from the Strait of Malacca to the Strait of Hormuz and from the African coast to Australia's western shores."[17]

Western powers' withdrawal from the IOR after the Cold War created a significant power vacuum, opening opportunities for rising powers like China and India to expand their competing influence. During the Cold War, the confrontation between the "superpowers" of the Soviet Union and the United States shaped international relations globally, including in the IOR, while significantly limiting the maneuverability of regional powers like India and China in pursuing independent geopolitical strategies.[18] The post–Cold War transition fundamentally changed these structural constraints. As traditional security threats diminished and Western colonialism declined, Western powers reduced their military presence in the IOR due to prohibitively high maintenance costs and the need for defense budget savings in the new era.[19] This relative withdrawal created strategic space that India and China sought to fill, transforming the IOR from a relatively stable region under Western maritime dominance into an arena of increasingly intense power competition.

Beyond power transitions, it is necessary to consider the profound impact of globalization on the nature of great power competition in the 21st century. From a traditional liberal perspective, rapid globalization has deepened interdependence between nations, leading to, for instance, the elevation of international law into an important barrier against "hegemonic" actions by great powers.[20] Indeed, this structural transformation has fundamentally changed the mechanisms that rising powers use to expand influence and achieve global status. Historically, Western powers' path to great power status typically included territorial conquest, colonial expansion, and political domination, with military strength playing the central determinant in geopolitics before the 1980s.[21] However, the contemporary international system operates under different structural constraints, as the emergence of globalization and the effective constraints of international law have significantly limited the actions of newly rising powers after this period.[22] Consequently, the means of achieving "superpower" status have changed to adapt to this new context, with today's powers primarily intervening in the behavior of smaller states through economic strength and soft power, while the reliance on military force has been reduced.[23] This transformation is crucial for understanding the competition between India and China in the IOR. Rather than engaging in direct military confrontation or territorial invasion, both powers pursue strategies focused on economic investment, infrastructure development, diplomatic cooperation, and cultivating relationships with smaller states in the region, creating a "smokeless battlefield."

The strategic importance of the IOR in the 21st-century geopolitical system stems from its position as a critical node in the global economic system, rapidly becoming a strategic competition hotspot between two Asian powers. This importance reflects broader systemic shifts in global economic geography and the critical role of maritime trade routes in sustaining national prosperity in the era of globalization. Currently, the IOR has become one of the busiest international maritime trade routes of the 21st century, serving as the hub for sea routes connecting the Middle East, Africa, East Asia, Europe, and the Americas. Annually, over 100,000 vessels and one-third of global goods pass through these waters.[24] This concentration of global trade flowing through a relatively limited maritime space creates systemic vulnerabilities and opportunities, shaping great power competition. Additionally, 40% of the world's offshore oil production comes from the IOR, with 80% of seaborne oil transported through this region.[25] In a global system where energy security remains paramount for sustainable economic growth, control over energy routes and supplies is a fundamental element of national power and systemic influence.

Naval strategist Alfred Mahan's assessment of the IOR's importance remains valid in the present era. He once asserted that "whoever controls the IOR will dominate Asia, and the IOR is the key to the seven oceans in the 21st century, where the world's destiny will be determined."[26] This assessment reflects an important systemic reality: in an era of globalized production and trade, maritime dominance in strategically important regions directly translates into broader influence and the ability to shape international outcomes. From another perspective, the competition between India and China in the IOR reflects broader power transfer dynamics in the international system. In the 21st century, the world has witnessed the rapid rise of dynamic economies in the Asia-Pacific region, profoundly impacting the global power structure shaped since the 15th century, with the center of power rapidly shifting from West to East, from Europe to Asia, from the Atlantic-Pacific to the IOR-Pacific.[27] This systemic power transfer creates structural pressures driving competitive behavior among rising powers. According to the traditional realism approach, the anarchic nature of the international system, characterized by the absence of a supreme authority capable of enforcing rules and protecting states, compels states to pursue self-help strategies to ensure survival and advance their interests.[28] Rising states tend to define their interests more broadly as their power increases, and major shifts in the balance of power often create opportunities while sometimes increasing incentives for preventive war.[29] This systemic requirement is clearly manifested in offensive realism theory, most prominently advanced by John Mearsheimer, who argued that "great powers recognize that the best way to ensure their security is to achieve hegemony immediately, to eliminate any possibility of being challenged by another great power, and only an unwise state would miss the opportunity to become hegemonic in the system."[30] This systemic logic helps explain why both India and China are intensifying competition in the IOR despite the enormous costs and risks they face.

In summary, system-level analysis shows that Sino-Indian competition in the IOR is not merely bilateral competition but reflects fundamental structural changes in global power distribution. The post–Cold War power vacuum, the transformation of power competition mechanisms in the context of globalization, the IOR's central strategic position in the global economic system, and the broader dynamics of power transfer from West to East all create systemic pressures driving both India and China to compete for influence in this important maritime region. Understanding these systemic impacts is essential for explaining why the IOR has emerged as a major stage of great power competition in the 21st century, while providing the foundation for analyzing state and individual-level dynamics to be explored in subsequent sections.

III. State Level: Border Disputes and "Superpower" Ambitions

At the state level, the competition between India and China in the IOR is profoundly influenced by historical border disputes and unresolved territorial conflicts, which have created deep suspicion and strategic concerns in both nations. The Tibet issue occupies a central position in this historical legacy, serving both as a crucial geographical buffer and as the source of persistent tension between the two Asian powers.[31] Since the 19th century, Tibet has been part of the geopolitical conflict between the British Empire and the Russian Empire in the "Great Game," when the British Empire annexed Tibet in 1903 to establish a buffer zone separating the Russian Empire and China from colonial India. This colonial-era arrangement transformed Tibet into a strategic buffer, mediating relations among regional powers. In 1914, the McMahon Line, delineated in the Simla Convention by the British Empire to demarcate the Tibet region's borders, was accepted by India but not signed by China as they considered it an "act of territorial aggression" and "without legal validity."[32] Consequently, after the establishment of the People's Republic of China in 1949, China under Mao Zedong's leadership conducted a campaign to incorporate Tibet under its control from 1951 through the "Peaceful Liberation of Tibet" campaign.

This fundamental change in territorial control eliminated the previous geographical separation between the two regional powers of South Asia and East Asia, bringing them into territorial proximity and creating new sources of strategic conflict. Tibet's strategic importance extends beyond territorial control to encompass broader aspects. For China, Tibet's strategic position plays a pivotal role in its East–West Corridor geopolitical ambitions, historically known as the "Silk Road" during China's Han dynasty, while also intimately connected to its security concerns at the border with South Asia.[33] From China's perspective, Tibet is an integral part of territorial integrity and the nation's strategic depth, serving as the western frontier that must be defended against external threats and separatist movements.[34] China's strategic vision of Tibet and the surrounding Himalayan region is encapsulated in Mao Zedong's "Palm and Five Fingers" strategy from the 1950s, whereby Tibet is likened to the palm, while Nepal, Sikkim, Bhutan, Ladakh, and Arunachal Pradesh in the Himalayan region are the five fingers.[35] This strategic doctrine reflects China's intent to consolidate control over Tibet while expanding influence to adjacent Himalayan territories, effectively implementing what Indian leadership believes to be a "strategy to encircle India."[36]

The 1962 Sino-Indian border war was a critical turning point that exacerbated territorial disputes and created patterns of suspicion lasting to this day. At that time, taking advantage of the opportunity when the two "superpowers" were focused on confronting each other during the Cuban Missile Crisis, China launched a bloody conflict at the India–China border,[37] terminating the Panchsheel Agreement and creating a knot in the contradictory relationship persisting to this day between the two Asian powers. The conflict caused significant casualties with 3,128 soldiers killed, over 3,100 captured, 1,400–1,600 wounded, and territorial losses for India.[38] This battle left a lasting psychological impact on India's strategic thinking and national security policy, with Defense Minister Krishna Menon forced to resign for "underestimating" China. Into the 21st century, border tensions have continued and escalated periodically with serious events, such as the Galwan Valley clash in December 2020, which resulted in at least 20 Indian soldiers and four Chinese soldiers killed.[39] In 2021, China began constructing military bases and passed a decision to build 624 border villages in the Himalayan region.[40] In May 2025, China announced a list of "standard names" for dozens of place names in the disputed territory currently controlled by India, including 15 mountains, five residential areas, four mountain passes, two rivers, and one lake.[41] Recent events show that border disputes remain a hot issue capable of causing violent confrontations and escalating bilateral tensions.

However, geographical factors impose significant constraints on the possibility of large-scale military conflict along the land border. International relations researchers have assessed that "the Himalayan range has become a natural barrier" separating the world's two oldest civilizations.[42] This assessment helps us understand that the treacherous terrain of the 8,849-meter-high Himalayan mountains creates natural obstacles for sustained military operations, effectively limiting the scope and intensity of border conflicts. These geographical constraints have important strategic significance, as geographical factors have become important deterrents to comprehensive conflict between India and China in the border region.[43] Although the border remains a source of frequent tension and violence, the impracticality of large-scale warfare in the Himalayan region has contributed to redirecting competitive energy to other strategic domains, most notably the IOR. The connection between border disputes and IOR competition is clearly manifested in contemporary strategic analysis, as the competition between India and China in the IOR partly aims to achieve power balance and create leverage to protect national interests in Tibet and the border region. Specifically, through activities in the IOR, China seeks to pressure India to accept the "status quo" regarding Tibet, while India hopes to leverage its strength in the IOR to assert its voice on border and Tibet issues.[44] This strategic logic shows that state-level factors, specifically unresolved territorial disputes and the search for strategic leverage, drive competition in seemingly distant maritime domains. Border conflicts and the Tibet issue are not merely historical grievances but active factors shaping contemporary strategic behavior. Unable to definitively resolve these issues through direct confrontation along the land border, both nations have sought alternative arenas where they can demonstrate strength, accumulate bargaining leverage, and potentially alter the overall balance of power in bilateral relations.

Beyond border disputes, state-level analysis must account for the developmental trajectories and "superpower" ambitions of both India and China as rising powers. The rise of these two powers has created energy, resource, and market deficits for their rapid economic growth, creating competitive pressures as both nations seek to access energy supplies, raw materials, and export markets necessary to sustain economic development and domestic political stability.[45] The IOR, with its role as a critical bridge for global trade and as a region rich in natural resources, naturally becomes the focal point of competition between these resource-hungry rising powers. The ambition to achieve "superpower" status is a fundamental driver of competitive behavior at the state level. Analysts assess that "India and China will become the new superpowers" of the 21st century,[46] creating a need for these two nations to expand their influence and leading to intense geopolitical competition in Sino-Indian relations in the IOR. The pursuit of great power status is not merely symbolic but reflects practical calculations about national security, economic prosperity, and the ability to shape international outcomes in ways favorable to national interests.

However, the path to achieving "superpower" status in the modern era differs significantly from historical precedents. In the 21st century, due to the emergence of globalization and the increasing influence of international law, traditional power expansion methods employed by rising powers in previous eras are no longer effective; instead, power expansion has shifted to methods more compatible with the contemporary global context, emphasizing the use of economic strength and soft power to intervene in the internal affairs of smaller states.[47] Despite their economic dynamism, both India and China face challenges in converting economic strength into comprehensive global influence. Lamont argues that the rise of India and China differs from the historical trajectory of previous "superpowers," as their rise is primarily driven by economic strength, while their military power remains relatively weak, especially in advanced military technology.[48] This capability gap creates incentives for both nations to enhance their military power projection capabilities, particularly in strategically important regions like the IOR, where maritime power represents a critical component of global influence.

The importance of maritime power in achieving "superpower" status has deep roots in strategic thinking, when Admiral Sir Walter Raleigh in the 17th century hypothesized that "whoever masters the sea will control trade, and whoever masters world trade will rule the world's wealth and thereby master the entire world."[49] In the 19th century, absorbing Raleigh's insights, Mahan reinterpreted that "whoever controls the chokepoints at sea will control maritime transport, and whoever controls maritime transport will control the world."[50] From this, his perspective laid the foundation for sea power theory and significantly influenced the successful rise of the United States in the 20th century, while continuing to influence the maritime strategies of contemporary powers, including India and China. This maritime strategic requirement is particularly important for China, a nation whose economic development model heavily depends on secure access to global markets and energy supplies. The miraculous development of the economy has created urgent requirements for energy security and maritime security in the IOR, where 80% of China's oil and 66% of LNG imports must pass through the Strait of Malacca.[51] Thus, it can be said that China's economic lifeline runs through maritime chokepoints in the IOR, creating an "Achilles' heel" that must be addressed through developing naval capabilities and cultivating friendly relations with coastal states.

China's strategic response to these vulnerabilities has manifested in various forms. China deployed its "offshore defense" strategy beginning in 1985 aimed at minimizing security risks and enhancing the ability to impact these critical maritime trade corridors.[52] As part of this strategy, India believes that "China has initiated the String of Pearls through the BRI and the China-Pakistan Economic Corridor, aimed at establishing a network of commercial, military bases, and ports throughout the IOR,"[53] although China has never acknowledged this. The BRI represents China's most ambitious effort to reshape the geopolitical landscape of the IOR and the wider world. The scale and scope of the BRI are unprecedented in world history, with 152 countries participating, signing more than 200 documents and cooperation agreements, directly affecting approximately two-thirds of the world's population and accounting for about 40% of global GDP.[54] This massive infrastructure investment program has significantly increased China's influence throughout the IOR and beyond, creating networks of economic dependence and strategic cooperation that advance China's interests. China's use of economic leverage through the BRI to secure strategic access is particularly evident in port development projects. China has achieved several important objectives in the IOR, including Hambantota Port (Sri Lanka), Kyaukpyu Port (Myanmar), Gwadar Port (Pakistan), Chittagong Port (Bangladesh), Colombo Port (Sri Lanka), and a naval base in Djibouti.[55] Currently controlling/having major influence at these ports provides China with a strategic foothold in the heart of the IOR, allowing both commercial operations and potential military applications, helping enhance China's power projection capabilities.

Strategic partnerships have further expanded China's influence in the region, as current geopolitical moves show Pakistan is considered by China as a strategic ally in the "strategy to encircle India."[56] In the 21st century, China and Pakistan have maintained a close strategic partnership, driven by China's support for Pakistan's nuclear development program in the previous century and the $46 billion China–Pakistan Economic Corridor project signed in 2013.[57] This project provides China with overland access to the Arabian Sea through Pakistan's Gwadar Port, bypassing the vulnerable Strait of Malacca and reducing China's strategic dependence on sea routes passing through areas under Indian influence. The strategic importance of the China–Pakistan relationship extends to energy security, as China's investment in Gwadar Port provides an alternative transport route to the Strait of Malacca, called the "Malacca Dilemma" by former Chinese leader Hu Jintao.[58]

China's increasingly expanding presence has caused significant strategic concerns in India, as the BRI challenge has severely impacted India's core interests, with projects including a series of overland-to-ocean transportation routes forming an arc surrounding Indian territory and affecting India's traditional position in the IOR.[59] From India's perspective, China's infrastructure investments and strategic partnerships in South Asia and the broader IOR represent an encirclement strategy designed to limit India's power and influence. India's strategic response has emphasized both regional engagement and extra-regional partnerships. In the 21st century, India's maritime and commercial security is closely linked to strategic straits in Southeast Asia—such as Lombok, Sunda, and especially the Strait of Malacca—through which roughly 92–95 percent of global seaborne trade passes, and of which India accounts for about 55 percent.[60] Consequently, Indian leadership has deployed the Look East Policy in 1991, later developed into the Act East Policy in 2014, aimed at consolidating India's economic and strategic relations with Southeast Asian countries, countering China's influence, and protecting India's interests in the East Sea region.[61]

India has also invested in developing naval capabilities and building a more assertive maritime strategy. This is reflected in India's 2004 Maritime Doctrine, the 2009 Maritime Doctrine, and the 2015 Indian Maritime Military Strategy, which all focus on effective strike capabilities and inflicting significant damage on potential adversaries, as well as enhancing naval combat capabilities and the scope of patrol and operations in the IOR. These doctrines reflect India's determination to assert its position as the leading maritime power in the IOR and to develop capabilities that can deter or defeat potential adversaries. In line with this strategic vision, Raasheed has noted that India has progressively modernized its naval arsenal, exemplified by India's achievement of consolidating its nuclear triad in 2016 when India commissioned the nuclear-powered ballistic missile submarine, the INS *Arihant*, into the Indian Navy. He further notes that as of 2025, "in addition to INS Arihant, New Delhi's sea-based nuclear deterrent also includes the INS Arighat which was inducted into the Indian Navy in 2024…"[62] However, in terms of overall naval strength, China currently has superior capabilities over India (see Table 1). The figures show a clear gap between the two navies. China, with 754 warships compared to India's 293, demonstrates that China's naval modernization has been both rapid and comprehensive, especially in main strike platforms: China's submarine fleet is 3.4 times greater than India's and its destroyer and frigate fleets are nearly four times greater. Particularly notable is China's heavy investment in anti-submarine warfare capabilities with 36 mine warfare vessels, while India completely lacks this. However, India maintains flexible combat capabilities with two aircraft carriers, reflecting its defensive orientation in the IOR. The fleet size disparity stems not only from defense budgets (China's is 3.6 times larger) but also from different strategies: China aims for global maritime dominance, while India focuses on protecting vital maritime zones.

Table 1: Comparison of India–China Naval Strength (2025)

Warship Type	India	China	Notes
Total fleet strength	293 (rank 6)	754 (rank 1)	China superior by 2.6 times
Aircraft carriers	2 (rank 3)	3 (rank 2)	China has 1 more ship
Helicopter carriers	0 (rank 145)	4 (rank 2)	India has no such vessels
Submarines	18 (rank 7)	61 (rank 3)	China 3.4 times greater
Destroyers	13 (rank 4)	50 (rank 2)	China 3.8 times greater
Frigates	14 (rank 4)	47 (rank 1)	China 3.4 times greater
Corvettes	18 (rank 5)	72 (rank 2)	China 4 times greater
Patrol vessels	135 (rank 8)	150 (rank 5)	China has 15 more ships
Mine warfare vessels	0 (rank 145)	36 (rank 2)	India has no such vessels

Sources: Authors compiled from Global Firepower[63]

Fortunately, the strategic geographical position of the IOR provides India with significant structural advantages, partially compensating for China's naval strength, economic investments, and diplomacy. The geopolitical competitive relationship between India and China in the 21st-century IOR stems from India's strategic geographical position, allowing the nation to control critical global maritime trade routes in this region. Chinese merchant vessels must pass through chokepoints in the Bay of Bengal and Andaman Sea, which are under India's control, before reaching the Strait of Malacca.[64] This geographical reality provides India with potential leverage over China's commercial interests, creating a form of strategic symmetry with China's control over Tibet. India has sought to leverage this geographical advantage through regional partnerships and extra-regional linkages. In this context, the Quadrilateral Security Dialogue, including India, the United States, Japan, and Australia, has emerged as a critical strategic initiative for India to counter China's growing influence in the Indo-Pacific.[65] This mechanism provides India with a crucial multilateral platform to enhance maritime capabilities, consolidate regional alliances, and cooperate on issues of common concern, strengthening India's relative position and providing diplomatic and potentially military support to balance China's influence.

In summary, state-level analysis shows that national capabilities, historical grievances, and developmental ambitions together drive Sino-Indian competition in the IOR. Border disputes create persistent suspicion and strategic concerns, while the pursuit of "superpower" status drives both nations to expand influence in strategically important regions. These state-level factors interact with systemic pressures to create the competitive dynamics observed in the IOR, where both rising powers seek to advance interests, enhance security, and accumulate the capabilities and influence necessary to achieve their global ambitions.

IV. Individual Level: The Leadership Roles of Xi Jinping and Narendra Modi

At the individual level of analysis, the vision, beliefs, and decision-making styles of key leaders play a pivotal role in shaping national strategies and driving competitive dynamics in the IOR. The leadership role of Chinese President Xi Jinping is a particularly important factor, as his personal vision of national rejuvenation and assertive approach to foreign policy have significantly enhanced China's engagement in the IOR and deepened competitive dynamics with India. Xi Jinping's strategic worldview is fundamentally shaped by a narrative of historical grievances and national restoration.[66] Upon assuming power in 2012, Xi Jinping introduced the concept of the Chinese Dream, envisioning the restoration of China's historical position as a leading "superpower." This vision clearly links contemporary Chinese foreign policy with the narrative of past humiliation during the Century of Humiliation, approximately from 1839 to 1949, when Western powers and Japan dominated China.[67] The Chinese Dream embodies Xi Jinping's personal commitment to restoring China's power, dignity, and influence on the international stage, an objective that inevitably includes expanding China's presence and influence in strategically important regions like the IOR.

Xi Jinping's approach to territorial and border issues reflects his firm stance on sovereignty and national integrity matters. Speaking about the goal of building Tibet into a western border fortress to realize the geopolitical ambitions of the Chinese Dream, President Xi Jinping emphasized at the National People's Congress meeting on May 22, 2020, that "China must build a modern, united, prosperous, culturally advanced, harmonious, and beautiful socialist society in Tibet, uniting ethnic groups and educating the masses in the struggle against separatism."[68] This statement shows Xi Jinping's personal belief that Tibet is not merely a territory but a strategic foundation of Chinese national security and a testing ground for the broader national rejuvenation project. Xi Jinping's assertiveness on territorial issues has led to more confrontational policies along the India-China border. Under his leadership, China has adopted a harder line stance in disputed border areas, evidenced by multiple incidents including the 2017 Doklam standoff and the deadly 2020 Galwan Valley clash.[69] These confrontations reflect Xi Jinping's willingness to accept escalating tensions and even limited military conflict to pursue strategic objectives, demonstrating a risk tolerance markedly different from his predecessors' more cautious approach to border management.

Chakma argues that Xi Jinping's personal commitments to the BRI are perhaps the clearest manifestation of his individual impact on China's IOR strategy.[70] Xi Jinping has elevated the BRI into a core pillar of Chinese foreign policy and clearly linked it with his personal legacy.[71] The BRI embodies Xi Jinping's vision of China-led regional integration, with China at the center of economic networks spanning from East Asia to Europe and Africa. The initiative's massive scale reflects Xi Jinping's ambitious vision and his willingness to invest over $150 billion from the BRI (with Pakistan accounting for the largest share) to reshape the geopolitical landscape of this region. Xi Jinping's approach to the BRI in the IOR demonstrates his strategic calculations toward India. Rather than accommodating India's sensitivities about China's encroachment into what India considers its sphere of influence, Xi Jinping has expanded China's political and economic influence in Pakistan, Sri Lanka, Myanmar, Bangladesh, and the Maldives—precisely the nations whose relationships with China cause maximum strategic concern in New Delhi.[72] This pattern suggests Xi Jinping's belief that China's growing strength allows it to expand influence despite Indian opposition, and that India must ultimately adapt to China's influence in the region.

The concept of "striving for achievement" has shaped Xi Jinping's overall approach to foreign policy, replacing Deng Xiaoping's more cautious doctrine of "hide your strength and bide your time." This shift reflects Xi Jinping's personal belief that China has accumulated sufficient strength to assert its interests more directly, and that the international strategic environment, particularly the relative decline of the United States and its preoccupation with other challenges, presents opportunities for China to expand influence that must be seized.[73] This worldview has contributed to China's more assertive behavior across multiple domains, including the IOR, where China has intensified naval deployments, infrastructure investments, and diplomatic cooperation. Xi Jinping's personal circumstances and political trajectory have shaped his nationalist beliefs and assertive leadership style. Having witnessed the chaos of the Cultural Revolution in his youth and subsequently risen through provincial leadership positions before assuming national leadership, Xi Jinping has built a worldview emphasizing strong centralized power, national unity, and the restoration of Chinese power.[74] These personal experiences during a period of Chinese weakness and internal instability appear to have reinforced his determination to prevent any recurrence of national humiliation or strategic weakness, objectives requiring the expansion of China's power and influence globally, including in the IOR.[75]

The concentration of decision-making power under Xi Jinping's leadership has amplified the impact of his personal views on Chinese policy. Unlike the more collective leadership model characteristic of earlier periods in post–Mao Chinese politics, Xi Jinping has concentrated power in his own hands to an unprecedented degree, abolishing term limits and asserting himself as China's most powerful leader since Mao Zedong.[76] This power concentration means that Xi Jinping's personal strategic vision, risk calculations, and policy priorities are more directly translated into actual policy outcomes, with fewer institutional constraints or checks from other power centers within the Chinese system. Xi Jinping's approach to maritime power reflects his personal belief in its importance for achieving great power status. His emphasis on "building China into a maritime power" and personal attention to naval modernization demonstrate his belief that control of sea routes and development of blue-water naval capabilities are essential prerequisites for China to rise to comprehensive "superpower" status.[77] This belief has driven massive investments in naval capabilities and maritime infrastructure in the IOR, as Xi Jinping seeks to establish the foundation for China's sustainable naval presence in distant waters.

Personal relationships, or the lack thereof, between Xi Jinping and Indian leadership also influence bilateral dynamics. Unlike some earlier periods when personal relationships between Chinese and Indian leaders helped manage tensions, the Xi Jinping era has been characterized by limited personal bonding and increasing mutual suspicion. Xi Jinping's periodic meetings with Indian Prime Minister Narendra Modi, despite being proclaimed "successful" by both nations' media, have actually produced very few breakthroughs on core disputes. Xi Jinping's apparent unwillingness to make significant concessions on border demarcation issues suggests he calculates that time and relative power trajectories favor China's position.[78] Xi Jinping's vision of China's role in global governance further shapes Beijing's approach to the IOR. He envisions China not merely as a participant in the existing international order but as a "shaper of new institutions and norms" reflecting Chinese interests and values.[79] Initiatives such as the Asian Infrastructure Investment Bank and the emphasis on win-win cooperation in the BRI reflect Xi Jinping's belief that "China should offer alternative development and governance models to those dominated by Western nations."[80] In the IOR, this is manifested through efforts to establish China as a leading economic partner and political influence, effectively replacing both Western powers and regional actors like India.

The leadership role of Indian Prime Minister Narendra Modi represents an equally important individual factor shaping the competition between India and China in the IOR. Modi's Hindu nationalist ideology, his assertive approach to national security, and his vision of India as a leading power have significantly influenced India's strategy in the region and intensified competitive dynamics with China. Modi's worldview is fundamentally shaped by his connection to Hindu nationalism and the Rashtriya Swayamsevak Sangh organization, the ideological parent organization of his Bharatiya Janata Party.[81] This ideological foundation shapes his understanding of Indian identity, national interests, and India's rightful place in regional and global order. Hindu nationalist ideology emphasizes "the greatness of Indian civilization," historical grievances against foreign domination, and the urgent need to "restore India to a position of power and influence commensurate with its ancient glory."[82] This narrative creates natural tensions with China, a nation that Hindu nationalists view as a hostile power seeking to contain and encircle India.

Modi's personal experience as chief minister of Gujarat before becoming prime minister has shaped his approach to governance and foreign policy. His reputation for decisive action, development-oriented governance, and willingness to make "bold decisions" has created his political brand and shaped his approach to national leadership. After becoming prime minister in 2014, Modi brought this assertive leadership style to India's foreign policy, pursuing more assertive strategies in the IOR and adopting a "tougher" stance toward China than some predecessors. Modi's transformation of India's Look East Policy into the Act East Policy reflects his personal belief that "India must move beyond cautious diplomatic engagement toward active strategic participation in Southeast Asia."[83] This terminological shift from Act East Policy is not merely semantic but reflects Modi's belief that India must convert potential power into actual influence through concrete actions, investments, and strategic partnerships.[84] Under Modi's leadership, India has significantly expanded relations with Southeast Asian nations, increased naval deployments, and deepened security cooperation with key regional actors, particularly Vietnam, Singapore, Malaysia, Myanmar, the Philippines, and Indonesia.

Modi's approach to China combines economic pragmatism with security assertiveness. While recognizing the importance of economic cooperation and supporting a multipolar order through BRICS with China, Modi has demonstrated a willingness to confront China on security issues and accept the economic and diplomatic costs of such confrontation. This balancing act reflects Modi's calculation that "India cannot appear weak in the face of Chinese pressure," even as India seeks to maintain economic relations beneficial to India's development.[85] Personal relationships or the lack thereof between Modi and Xi Jinping have influenced bilateral dynamics. Despite multiple summit meetings, including informal summits designed to build personal relationships, the Modi–Xi Jinping relationship has yet to achieve any significant progress on core disputes. The contrast between the warm atmosphere of some summit meetings and ongoing ground tensions, including deadly border clashes, suggests fundamental disagreements on strategic objectives or the powerlessness of personal diplomacy to overcome structural competitive pressures.

Modi's response to the 2020 Galwan Valley clash demonstrated his approach to managing tensions with China. Rather than seeking immediate de-escalation at any cost, Modi allowed India to respond firmly, including military reinforcement along the border and diplomatic condemnation of Chinese actions. His public statement that "For us, the unity and sovereignty of the nation are most important. India desires peace, but when provoked, we have the capability to respond appropriately"[86] shows how personal political imperatives and Modi's leadership style influence India's crisis management approach with China. Modi's support for QUAD is an important strategic choice formed based on his personal assessment of India's security needs and the effectiveness of multilateral balancing with China. Previous Indian governments had been cautious about mechanisms that could be seen as containing China, fearing Chinese retaliation, while Modi has made QUAD central to India's strategy, calculating that the benefits of enhanced cooperation with like-minded democracies outweigh the risks of antagonizing China.[87] This decision reflects Modi's personal belief that India's security requires active cooperation with other powers concerned about China's assertiveness.

The "Neighborhood First" policy emerged in 2008, but it was only driven by Modi in 2014, showing his attention to India's relationships with smaller nations in South Asia and the IOR, reflecting his understanding of China's encirclement strategy and determination to counter it.[88] Under Modi's leadership, India has intensified diplomatic cooperation, economic assistance, and security cooperation with nations such as the Maldives, Seychelles, Mauritius, and Sri Lanka—precisely the nations where China's influence has grown strongly through BRI investments. As noted by Shivamurthy, India has undertaken numerous connectivity and development projects in its neighborhood:

> "India has initiated over 100 projects with Nepal, Bangladesh, Sri Lanka, and Myanmar on port connectivity via road, rail, air, and sea routes. India has provided lines of credit worth $2.8 billion to Bangladesh, $1.3 billion to Nepal, $1.7 billion to Sri Lanka, and $80 million to the Maldives. By 2023, the value of these credit lines has increased to $7.9 billion for Bangladesh, $1.6 billion for Nepal, $2.7 billion for Sri Lanka, and $1.4 billion for the Maldives."[89]

Modi's personal engagement in cultivating relationships with leaders of these small nations, including state visits and aid packages, shows his awareness of the strategic benefits involved in the competition for influence with IOR coastal states. Particularly, Modi's emphasis on the 2015 SAGAR initiative and its development into MAHASAGAR in March 2025 as India's vision for the IOR reflects his effort to offer an alternative to China's BRI, one emphasizing India's leadership, regional cooperation, and respect for sovereignty.[90] This initiative demonstrates Modi's belief that India must not merely react to Chinese initiatives but must present its own vision of regional order and deliver practical benefits to smaller nations to effectively compete with China's economic incentives. Modi's vision of India's role in the global order shapes his approach to competition in the IOR. He envisions India not as a secondary power "accommodating" China's influence, but as "a leading power capable of shaping regional order and contributing to global governance."[91] This ambitious vision requires demonstrating India's power and influence in India's immediate periphery, precisely the IOR, where any perception of Chinese dominance would fundamentally undermine Modi's broader narrative about India's rise.

The domestic political aspect cannot be ignored in Modi's approach to China. As a leader with a political brand emphasizing strength, assertiveness, and nationalist spirit, Modi faces "domestic political pressure demanding a show of toughness toward China," especially after incidents like the 2020 Galwan clash that sparked outrage among the Indian people.[92] For example, Congress Party President Mallikarjun Kharge wrote on Twitter: "The Modi Government is responsible for failing to maintain the status quo at the Line of Actual Control. We have lost control of 26 out of 65 patrol points. We have tried to raise this issue multiple times in Parliament, but the Modi Government wants to hide information from the Indian people."[93] Kharge's criticism illustrates the intensity of domestic scrutiny and potentially constraining his flexibility in managing bilateral tensions.

In summary, the vision, beliefs, and leadership styles of Xi Jinping and Narendra Modi have driven Sino-Indian competition in the IOR. Both embrace nationalism, emphasize great power status, and implement more assertive foreign policies than their predecessors. Power concentration allows personal views to be directly translated into policy. This interaction creates competitive dynamics characterized by suspicion, limited compromise, and escalating tensions. Xi Jinping's belief in expanding Chinese influence over the

IOR confronts Modi's determination to maintain India's dominant position in its "natural sphere of influence." Additionally, Xi Jinping's infrastructure investments and strategic relations in South Asia challenge India's regional leadership role, while Modi's support for QUAD and US-India relations opposes Xi Jinping's vision of an Asia-centric order with China at the center.

V. Discussion

Applying David Singer's level of analysis framework demonstrates that the competition between India and China in the IOR is the result of complex interactions of factors operating at the system, state, and individual levels. No single level can fully explain this; rather, it is the convergence and mutual reinforcement of factors at all three levels that creates the competitive dynamics observed in the region. At the system level, the post–Cold War power vacuum in the IOR; the structural transformation of power competition mechanisms in the context of globalization; the region's central strategic position in the global economy; and the broader dynamics of power shift from West to East create favorable conditions and structural incentives driving great power competition. These systemic factors establish the structural context in which India and China operate, creating both opportunities and incentives to expand influence in the IOR. At the state level, historical border disputes and the Tibet issue, developmental requirements and resource needs, along with ambitions to achieve "superpower" status create specific national interests and strategic objectives driving competitive behavior. These state-level factors transform systemic pressures into concrete policy priorities and strategic initiatives, as both nations seek to advance interests, enhance security, and accumulate capabilities necessary for great power status. At the individual level, the nationalist ideologies, personal beliefs, and assertive leadership styles of Xi Jinping and Narendra Modi amplify competitive dynamics and reduce prospects for compromise or accommodation.[94] These individual-level factors determine how systemic pressures and national interests are interpreted, how strategies are constructed and implemented, and what level of risk and confrontation is considered "acceptable" in pursuing national objectives.

The interaction among levels creates emergent dynamics that cannot be reduced to any single level of analysis. For example, while systemic power transitions create general pressures for increasing power competition, the intensity and confrontational nature of the competition in the IOR cannot be explained without understanding state-level factors, including resource dependence and developmental needs, as well as individual leadership choices. Similarly, while border disputes create persistent tensions at the state level, whether these tensions lead to military conflict or diplomatic management depends on systemic constraints such as international law and global economic interdependence as well as individual leadership decisions about risk tolerance and crisis management. This framework also illuminates potential pathways for both escalation and de-escalation. Escalation risks emerge when factors at all three levels converge toward promoting confrontation, for instance when systemic power transitions create zero-sum competitive pressures, state-level disputes over vital interests resist compromise, and individual leaders pursue assertive strategies accepting high risks. De-escalation possibilities emerge when factors at different levels create countervailing pressures, such as when systemic economic interdependence creates costs for conflict, state recognition of mutual vulnerabilities encourages cooperation, and individual leaders prioritize stability over nationalist assertion.[95]

Understanding Sino-Indian competition through this multi-level framework has important implications for policy responses. Efforts to manage competition must address factors at all three levels. At the system level, strengthening international institutions and norms to constrain aggressive behavior can help redirect competition toward less dangerous forms. At the state level, developing mechanisms to manage specific disputes including border negotiations, water-sharing agreements, and confidence-building measures can reduce immediate sources of tension. As former Indian Foreign Secretary Shyam Saran emphasized, "although unable to resolve core disputes, these mechanisms have helped prevent escalation and maintain stability."[96] At the individual level, promoting dialogue among leaders, building personal relationships, and creating domestic political space for compromise can reduce the personal aspects of competition.

In summary, Sino-Indian competition in the IOR is likely to continue as a prominent feature of 21st-century geopolitics, as systemic power transitions will continue to create competitive pressures, territorial and resource disputes will resist resolution, and leaders facing external and domestic pressures will persist in pursuing assertive strategies to project strength and advance national interests. However, the multi-level framework also suggests competition need not necessarily escalate into armed conflict, as countervailing factors at multiple levels, including economic interdependence, geographical constraints on military operations, international legal constraints, and the catastrophic costs of war between nuclear-armed states, create powerful dynamics for managing competition below the threshold of direct military confrontation. The challenge for policymakers and scholars is to strengthen these constraining factors while addressing the fundamental sources of competition, recognizing that sustainable management of this competition requires attention to systemic structures, national interests, and individual leadership dynamics, toward a future where two Asian powers can coexist and develop without threatening regional and global peace and stability.

VI. Conclusion

This analysis has demonstrated the value of applying David Singer's level of analysis framework to understand the complex competition between India and China in the IOR. By systematically examining factors at the system, state, and individual levels, the study has achieved a comprehensive understanding of how structural forces, national interests, and leadership decisions converge to create the competitive dynamics characteristic of this critical geopolitical competition.

System-level analysis revealed that the post–Cold War power vacuum, the transformation of power competition mechanisms in the context of globalization, the IOR's central strategic position in the global economy, and the dynamics of power transfer from West to East created the structural context driving power competition in the region. State-level analysis illuminated how historical legacies including border disputes and the Tibet issue, developmental requirements and ambitions to achieve "superpower" status create specific national interests and strategic objectives driving competitive behavior. Individual-level analysis demonstrated that the nationalist ideologies, personal beliefs, and assertive leadership styles of Xi Jinping and Narendra Modi have amplified competitive dynamics and shaped the specific nature of the competition.

Most importantly, the analysis showed how factors at these three levels interact and mutually reinforce to create the observed competitive dynamics. Sino-Indian competition in the IOR cannot be fully understood by examining any single level in isolation; rather, it is the convergence of systemic power transitions, state-level disputes and ambitions, and individual leadership choices that together drive this geopolitical competition. For scholars, the study demonstrates the necessity of multi-level analysis to understand complex international phenomena. For policymakers, the analysis shows that effective management of competition requires strategies addressing factors at all three levels, including strengthening systemic constraints, developing state-level dispute management mechanisms, and promoting leadership dialogue.

Looking forward, Sino-Indian competition in the IOR will likely continue as a prominent feature of 21st-century international relations. Systemic power transitions remain ongoing, state-level disputes are unlikely to be easily resolved, and individual leaders will continue pursuing strategies that demonstrate strength and advance national interests. However, the multi-level framework also provides a basis for cautious optimism, as countervailing factors at multiple levels including economic interdependence, geographical constraints, international legal constraints, and the catastrophic costs of war between nuclear-armed powers create powerful dynamics for restraint. Ultimately, Sino-Indian competition in the IOR is a test of how rising powers in the 21st century will manage competitive relationships in an era of unprecedented interdependence. Understanding this competition through a comprehensive multi-level analytical framework is the essential first step toward developing strategies that can navigate these challenges and chart a path toward sustainable coexistence between two of the world's most influential rising powers.

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Toward a BBNJ-Model Implementation Agreement for Submarine Communications Cables Governance and Protection

Haidy Ahmed

Structured Abstract

Article Type: Viewpoint

Purpose—This paper provides a solution to enhance the governance and protection of submarine communications cables in maritime areas where only coastal States enjoy sovereign rights and no other rights.

Approach—The viewpoint in this paper is elaborated based on a reading and interpretation of the United Nations Convention on the Law of the Sea (UNCLOS), as well as scholarly articles on the subject and insights into the submarine communications cables industry.

Findings—While a reading of UNCLOS provisions could be interpreted to emphasize the freedom to lay submarine cables in the exclusive economic zone and the continental shelf of coastal States, the ambiguity of these provisions could also support an alternative interpretation that reflects the practice of coastal States.

Practical Implications—This paper shows that there is a possibility to strike the desired balance between the interests of coastal States, other States, and cable operators through the adoption of an implementation agreement in the image of the Convention on the Conservation and Sustainable Use of Marine Biological Diversity in Areas Beyond National Jurisdiction, known as the BBNJ Agreement.

Originality—This paper presents a novel perspective and a solution to a pressing problem.

Keywords: EEZ, continental shelf, submarine communications cables

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I. Introduction

Our oceans are the main host of the world's global internet traffic, with over 95% of our internet communications passing through fiber optics embedded inside submarine communications cables laid on the ocean floor.[1] The International Telecommunications Union, the leading United Nations specialized agency for digital technologies, and the International Cable Protection Committee, the leading organization advocating for the protection of submarine cables, launched the creation of an International Advisory Body for Submarine Cable Resilience in late 2024, following the large number of incidents damaging submarine cables, which occur regularly and annually, and in particular following the incident resulting in the severing of two submarine cables in the Baltic Sea in November 2024. On the occasion of the creation of this new body, the Deputy Secretary-General of the International Telecommunication Union stated that "anything we do today in the digital world depends on submarine cables, from our emails and text messages to financial transactions, critical government communications, cloud services, social media, our video streaming services and so on."[2]

With our increasing reliance on the internet, there is no doubt that submarine cables are a critical infrastructure[3] that requires protection. Several scholarly articles critical of the current legal regime regarding the protection of submarine cables under the United Nations Convention on the Law of the Sea (UNCLOS, or the Convention)[4] have highlighted that the protection of submarine cables is becoming increasingly crucial. While in the territorial sea, coastal States have complete sovereignty and can enact and enforce the laws and measures they deem necessary for the protection of submarine cables, the exclusive economic zone (EEZ) and the continental shelf have raised some challenges and difficulties with regards to the protection of submarine cables in these areas, where only coastal States enjoy sovereign rights and no other rights, balanced by the need to protect the freedom other States enjoy in these maritime areas as guaranteed by UNCLOS.

UNCLOS, known as the constitution of the ocean, has proven to be comprehensive, integral, and visionary. The latest advisory opinion by the International Tribunal for the Law of the Sea, in relation to the protection and preservation of the marine environment from climate change, is a testament. The way this Convention is drafted allows for interpretations that can adapt to developments in the ocean space, which result from multiple factors, including the evolving practice of States in the ocean and the ever-growing reliance on technology. The ambiguity in some provisions of UNCLOS allows for further clarifications and provides flexibility for States to agree on the content of the legal obligations subject of these provisions.

In this regard, implementation agreements to UNCLOS, which can be defined in general as a method "that enhances the effectiveness of a treaty,"[5] have been an instrumental tool to further explain some of UNCLOS provisions and to help implement them in a manner that aims to enhance sustainable governance of the ocean and its resources. We now count three implementation agreements, with two agreements in force.[6] The first one is the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea (1994), which was adopted to address some concerns in relation to the implementation of Part XI of UNCLOS in relation to the Area, to ensure "as wide a participation as possible"[7] to UNCLOS. The second is the Agreement on the Conservation and Management of Straddling Fish Stocks, which was adopted to help implement the provisions of UNCLOS more effectively in relation to straddling fish stocks while addressing some of the problems left unaddressed by UNCLOS.[8] The third implementation agreement was recently adopted by consensus at the United Nations in June 2023. This third and most recent implementation agreement is the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction, commonly referred to as the BBNJ Agreement.[9]

While there are provisions in UNCLOS that govern the Area[10] and the High Seas,[11] the BBNJ Agreement came to shed more light on some of these provisions and also to address "significant gaps [that] exist in the governance of BBNJ"[12] such as the use of marine genetic resources, the establishment of marine protected areas on the High Seas, capacity-building and transfer of marine technology in areas beyond national jurisdiction.[13] As the Area and its resources are considered a common heritage of humankind,[14] the BBNJ Agreement was built around this concept, with its provisions drafted in line with the provisions of UNCLOS. It provides more clarifications to UNCLOS to enhance the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction,[15] i.e., the High Seas and the Area,[16] while balancing the interests of developed and developing countries. The BBNJ Agreement establishes a legal regime that elaborates on the provisions of UNCLOS while also providing innovative solutions to existing problems in relation to the exploration and exploitation of BBNJ.

In the same spirit and following the same logic, a new implementation agreement addressing the legal regime governing submarine communications cables and their protection might seem to be the right solution to further elaborate on the provisions of UNCLOS and provide a legal basis for enhanced protection of submarine communications cables while balancing between the need for effective governance and protection of submarines cables, the aspirations of the submarine cables industry, and the national interests of States. While there are different types of submarine cables, this article focuses on submarine communications cables.[17]

This article begins with a brief overview of the submarine communications cables industry and cable operations. It then explains the current legal regime applicable to submarine cables and their protection, outlining why some of these provisions could be further interpreted to ensure enhanced governance and protection of submarine cables.

II. A Brief Overview of the Submarine Cables Industry and Cables Operations

The submarine communications cables industry involves multiple stakeholders. These stakeholders include cable owners (such as private or state-owned telecommunications companies, investment banks, and internet cable providers),[18] as well as suppliers (which can encompass cable manufacturers, cable installers, and companies specializing in cable repair and maintenance).[19] Due to the significant technical and financial investment required to construct, install, operate, and maintain submarine communications cables,[20] the stakeholders involved often form a consortium of companies.[21]

To lay submarine communications cables on the ocean floor, a cable route study is conducted covering the entire route of the submarine cable, from its landing station onshore.[22] It is followed by the laying of the cable, which also includes maintenance operations.[23] After laying a submarine communication cable on the sea floor, the cable would still require attention throughout its life span. This is reflected in the maintenance and repair operations of submarine cables laid on the sea floor throughout their operational time.[24]

Practice has shown that to lay submarine communications cables and ensure their operation, maintenance, and repair, cable operators (i.e., the submarine cables industry's stakeholders) would have to deal with coastal States for multiple reasons, including permitting requirements and other arrangements.[25] In this regard, it is opportune to highlight that the inception of a submarine communications cable is often the result of a demand for more capacity to an existing cable, or a political demand by States to connect multiple countries, or a connectivity demand,[26] and that States have every interest in facilitating a successful and speedy laying of submarine communications cables. However, practice again has proven contrary to these expectations, with several coastal States imposing regulations varying from the imposition of annual fees on cable operators laying submarine cables in their EEZ/continental shelf to the requirement of obtaining permits before laying submarine cables.[27]

Understanding the legal regime governing submarine communications cables is therefore essential to be able to define the limits of the powers given to coastal States in their EEZ/continental shelf with their rights and duties on the one hand, and the rights and duties of other States and, as a consequence, the cable operators on the other hand.

III. The Current Legal Regime Governing Submarine Communications Cables and the Practice of Coastal States

The international law governing submarine communications cables dates back to 1884 with the adoption of the Convention for the Protection of Submarine Telegraph Cables.[28] The 1958 Convention on the Continental Shelf[29] and the 1958 Geneva Convention on the High Seas[30] followed. Then the 1982 United Nations Convention on the Law of the Sea, or UNCLOS, was adopted, with a quasi-universal participation to it by States.[31] Non-States Parties usually also abide by the rules enshrined in UNCLOS, as some of its provisions are considered customary international law.[32]

UNCLOS is considered the legal regime governing submarine cables, particularly because some of its provisions on submarine cables incorporate the provisions of the 1958 Geneva Conventions, which in turn incorporate some of the provisions of the 1884 Convention.[33] UNCLOS can thus be considered the final outcome, encompassing the relevant rules governing submarine communications cables, which borrow from and build upon preceding agreements.

Under UNCLOS, the sea is divided into various maritime zones, each with distinct prerogatives for the coastal State. While coastal States enjoy sovereignty in their territorial sea, which also translates into their sovereignty in regulating submarine communications cables laid in their territorial sea or passing through it,[34] they only enjoy sovereign rights in their EEZ and their continental shelf.

This paper focuses on the EEZ and the continental shelf, where the exclusive and inclusive interests of coastal States and third parties or other States in these maritime zones pose a significant challenge, in particular with regard to the need to strike a balance between the freedom that States should be enjoying in these areas and the interests of coastal States.

The EEZ and the continental shelf are maritime zones that extend to 200 nautical miles beyond the baselines from which the breadth of the territorial sea is measured.[35] The EEZ includes the seabed, its subsoil, and superjacent water,[36] and the continental shelf consists of the seabed and subsoil (within the 200nm or beyond it, i.e., the extended continental shelf).[37]

While coastal States must claim their EEZ,[38] the rights coastal States exercise over the continental shelf are inherent.[39] In the words of the International Court of Justice (ICJ): "the rights of the coastal State in respect of the area of continental shelf that constitutes a natural prolongation of its land territory into and under the sea exist *ipso facto* and *ab intio*, by virtue of sovereign rights over the land, and as an extension of it in an exercise of sovereign rights for the purpose of exploring the seabed and exploiting its natural resources."[40]

In the EEZ, coastal States enjoy sovereign rights for the exploration and exploitation of natural resources.[41] On the continental shelf, they enjoy sovereign rights for the purpose of exploring and exploiting the continental shelf and its natural resources.[42] Pursuant to Article 56 paragraph 3 of UNCLOS, coastal States exercise their sovereign rights in relation to the seabed and its subsoil in the EEZ subject to the provisions governing the continental shelf,[43] which makes the regime governing the seabed and subsoil of both maritime zones the same as they overlap,[44] and points to the "integral nature of the overarching regime applicable to the 200-NM-zone."[45] As stated by the ICJ in the Libya/Malta Continental Shelf Case: "although the institutions of the continental shelf and the exclusive economic zone are different and distinct, the rights which the exclusive economic zone entails over the seabed of the zone are defined by reference to the regime laid down for the continental shelf. Although there can be a continental shelf where there is no exclusive economic zone, there cannot be an exclusive zone without a corresponding continental shelf."[46]

Regarding submarine cables, UNCLOS provides for the freedom to lay submarine cables in the EEZ, the continental shelf, and the high seas. Article 58 of UNCLOS (on the rights and duties of other States in the EEZ) makes reference to Article 87 of UNCLOS (on the freedom of the high seas), which in turn refers to Part VI of UNCLOS, i.e., the continental shelf, for the provisions governing the freedom to lay submarine cables.

Under Part VI of UNCLOS, paragraph 1 of Article 79 stipulates that "all States are entitled to lay submarine cables and pipelines."[47] However, paragraph 2 of Article 79 comes with caveats stipulating that while a "coastal State may not impede the laying or maintenance of [such] cables and pipelines," this is "subject to its right to take reasonable measures for the exploration of the continental shelf, the exploitation of its natural resources." And paragraph 3 of Article 58 (EEZ) stipulates, while referring to Article 87 of UNCLOS for the freedom of laying submarine cables that: "(…) States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this part."

In light of this, several scholarly articles attempted to clarify the extent of the rules and regulations that coastal States can impose in their EEZ or continental shelf with regard to submarine communications cables, while stressing the freedom to lay submarine cables in these maritime areas. It is argued, in this regard, that coastal States can only impose measures in relation to the exploitation and exploration of the natural resources on the seabed and its subsoil, and these measures need to be reasonable.[48] Coastal States shall also "have due regard to the rights and duties of other States and shall act in a manner compatible with the provisions of this Convention."[49] This argument is further enhanced with reference to Article 78 of UNCLOS, which stipulates that "the exercise of the rights of the coastal State over the continental shelf must not infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other States provided for in this Convention."[50]

Furthermore, it was advanced that this freedom, which includes "other internationally lawful uses of the sea related to these freedoms, such as those associated with (…) submarine cables and pipelines, and compatible with the other provisions of this Convention"[51] as stipulated under Article 87 of the Convention, means and includes the repair and maintenance of submarine cables.[52] This interpretation can also be found in the reading of paragraph 2 of Article 79,[53] which stipulates that coastal States "may not impede the laying or maintenance of such cables and pipelines." Proponents of a minimal interference by coastal States suggest that cable route surveying should also be considered an internationally lawful use of the sea related to submarine cables.[54]

Given this reading of UNCLOS, it is expected that States would have the same interpretation of the relevant UNCLOS provisions, and would only have regulations in their EEZ and continental shelf that are within the confines of this interpretation, and that do not go beyond "reasonable measures" for the exploration and exploitation of the seabed and subsoil, even when there is no definition of what constitutes a reasonable measure under UNCLOS.

However, the practice has been contrary to these expectations and falls out of the line drawn with respect to the rights and duties of coastal States in their EEZ/continental shelf, with coastal States imposing regulations requiring their consent for the delineation of cable routes, permits for laying or repairing submarine cables, and States creating marine protected areas in their EEZ as a means to control cable routing in the area.[55] It is argued that these measures are contrary to the letter of UNCLOS and impede the freedom to lay submarine cables, and that the ambiguity of the provisions of UNCLOS in relation to submarine cables allows coastal States to push their interests further.[56]

IV. A Possible Interpretation of UNCLOS That Considers the Practice of Coastal States

Although the position outlined above aligns with the freedom to lay submarine cables in the EEZ/continental shelf to a great extent, to facilitate submarine communications cables' operations and, as a consequence, guarantee the laying, repairing and maintaining of submarine cables for the global good, it is essential to have a closer look at the relevant provisions of UNCLOS which seem to put certain limitations on this freedom in favor of coastal States.

While it is of primordial importance to ensure that cable operators do not face unnecessary hindrance to their submarine cables operations in the EEZ and the continental shelf, it is equally essential to allow for an interpretation of UNCLOS that takes into consideration the practice of coastal States to be able to achieve the right balance between the interests of coastal States, other States and the cable industry.

The ambiguity of UNCLOS provisions thus becomes an advantage that should be leveraged to permit a regulation of the submarine cables regime in a way that adapts to the evolving practice of States and new challenges that arise. This same ambiguity also permits putting a limit to claims by coastal States that might seem excessive without depriving them of the possibility to impose certain limitations that may be legally justified. It also addresses the concerns raised by coastal States while taking into consideration the demands of the cable industry and operators. Finally, this approach paves the way to regulating the current actions of coastal States under the provisions stipulated in UNCLOS instead of an approach insisting that the current practice of some coastal States constitutes a violation of the provisions of UNCLOS in relation to submarine communications cables, without exploring how we, as the international community, can further clarify the provisions of UNCLOS and adjust any "excessive" behavior by coastal States accordingly.

This paper proposes the adoption of an implementation agreement which would enhance the rights of coastal States based on a different interpretation given to the relevant provisions of UNCLOS, as follows:

First of all, a reading of paragraph 3 of Article 56 of UNCLOS (which refers to Part VI on the continental shelf), together with paragraph 1 of Article 58 (which refers to Article 87 of UNCLOS on the freedom of the high seas, namely the freedom to lay submarine cables), and paragraph 1 of Article 87 (which refers to Part VI for the rules governing the freedom to lay submarine cables), leads to concluding that Part VI is the reference and "constitutes the relevant provision"[57] when it comes to the rights of the coastal State in relation to the seabed and subsoil in the EEZ/continental shelf. While paragraph 2 of Article 56 requires coastal States to have due regard to the rights and duties of other States in the EEZ, the provisions of Part VI do not contain any similar language. On the contrary, they seem to emphasize the obligation of other States to have due regard to already existing cables. This is further shown in the way Article 56 of UNCLOS is drafted, with paragraph 2 of this Article (due regard by the coastal State) preceding paragraph 3 of the same Article, which refers to Part VI for the rights of the coastal States with respect to the seabed and subsoil, in addition to paragraph 3 of Article 58 which stresses again on the obligation of States to have due regard to the rights and duties of the coastal State when exercising their rights and performing their duties in the EEZ. This paragraph comes after a provision that provides States with the freedom to lay submarine cables in the EEZ.

The only provision in Part VI that stipulates clearly that the coastal State must respect the freedoms provided for in UNCLOS in this regard, comes as a paragraph 2 to Article 78 of UNCLOS on the "(L)egal status of the superjacent waters and airspace and the rights and freedoms of other States," with an emphasis, on particular, on the freedom of navigation, to ensure that these waters are not affected by the rights of the coastal State in the continental shelf which only include the seabed and subsoil.[58] While the use of "other rights and freedoms of other States" in paragraph 2 of Article 78 of UNCLOS surely includes the freedom to lay submarine cables, the paragraph puts certain limitations on the obligation of non-interference by coastal States with navigation and other rights and freedoms of other States, with the term "unjustifiable." Meaning that a reading *a contrario* allows coastal

States to interfere with these freedoms if their interference is "justifiable."[59] This is further supported by Article 79 of UNCLOS on submarine communications cables and pipelines, which subjects the interference by coastal States in the laying or maintenance of submarine cables to their right to take reasonable measures for the exploration and exploitation of their continental shelf.

In addition to the above, Article 87 of UNCLOS, which speaks of the freedom to lay submarine cables and which Article 58 of UNCLOS refers to, adds a caveat to this freedom by the use of "subject to Part VI," and the use in Article 58 of UNCLOS of "subject to the relevant provisions of this Convention" in the exercise of the freedoms indicated under UNCLOS,[60] means again that the freedom to lay submarine cables always comes with caveats and limitations.

This position is further substantiated by the view which considers that "a closer analysis of the history and ratio of the regime of the EEZ arguably militates in favour of accepting a shift of emphasis in favour of the coastal State,"[61] which is in line with the interpretation given above in relation to the rights of the coastal State exercised on the seabed and subsoil of its EEZ and continental shelf. It is also in line with the view that States are entitled to undertake marine spatial planning in their EEZ,[62] despite the extent of "the functional allocation of competence"[63] it provides to the coastal State in the EEZ and the challenges that accompany the establishment of marine spatial areas that other States may face, and which limit their freedoms in their EEZ and continental shelf.

Further, this interpretation aligns with the view that supports or attempts to find a legal justification in UNCLOS for the establishment of submarine communications cable protection areas in the EEZ, under the umbrella of measures taken in the exercise of sovereign rights by the coastal State in its EEZ, namely exploration and exploitation of the living and non-living resources.[64]

Second, paragraph 1 of Article 58 of UNCLOS prescribes that States enjoy the freedom of laying submarine cables in the EEZ and other internationally lawful uses of the sea related to this freedom. While it was argued that cable route surveys, maintenance, and repair are to be considered internationally lawful uses of the sea related to the freedom of laying submarine communications cables, UNCLOS does not contain any definition of what constitutes an internationally lawful use of the sea related to the freedom in question.[65] It is nonetheless reasonable to consider that repairing and maintaining submarine cables is naturally a lawful use of the sea related to the freedom of laying submarine cables. However, the fact remains that there is no definition of this term. This could potentially allow the inclusion of all relevant activities, if a definition is to be given to this term, and determine the conditions necessary for an activity to be considered related to the exercise of the freedom in question, such as it being "regular, common, and a necessary requirement for the exercise" of this freedom.[66] This can include cable route surveying, which is nevertheless a subject of debate.

At this juncture, it is opportune to note that cable route surveying encompasses the collection of seabed soil data, seismic data, and oceanographic data.[67] It is a geophysical survey conducted on the seabed and subsoil and "a form of marine data collection."[68] Some States consider that this activity amounts to marine scientific research, which forms part of the sovereign rights exercised by the coastal State in its EEZ,[69] and therefore is subject to its consent. While an opposite argument suggests that marine scientific research and surveys are two different activities, particularly in light of the distinct objectives both activities aim to achieve. It is nevertheless legitimate for a coastal State to consider that surveys evidently lead to collecting marine information similar to that collected in the course of marine scientific research. That being said, UNCLOS does not define marine scientific research or provide a definition for hydrographic surveys. This should, therefore, provide room for a provision in a future implementation agreement that addresses the concerns of all stakeholders. Again, the ambiguity of UNCLOS can be leveraged as an advantage, allowing States to agree on and determine the content of the ambiguous legal provisions in a manner that takes into consideration the interests of all relevant stakeholders.

Third, as indicated above, paragraph 3 of Article 58 of UNCLOS obligates States to have due regard to the rights and duties of the coastal State in the EEZ. This due regard obligation is reiterated in paragraph 5 of Article 79 of UNCLOS, an article solely dedicated to submarine communications cables.

The content of this obligation of due regard has not been identified in UNCLOS. It is therefore possible and plausible for coastal States to want to determine the content of this due regard obligation in their EEZ and continental shelf in light of the sovereign rights they exercise in these maritime areas. This has been the case with coastal States requiring permits for laying, repairing, or maintaining submarine cables. In particular, the due regard obligation in Article 79 imposed on States *vis-à-vis* existing cables in the continental shelf might be a valid ground for coastal States to require permits for laying submarine cables or repairing existing ones, because, simply put, why would the content of this due regard obligation be only left to other States without including the perspective of the coastal State in whose EEZ or continental shelf the submarine cable is to be laid, or is already laid on the seabed.

In this regard and in light of the above, the ICJ had the chance to pronounce on this duty of due regard in the Fisheries Jurisdiction case (United Kingdom v. Iceland), where it stated that "both States have an obligation to take full account of each other's rights"[70] and that "the most appropriate method for the solution of the dispute is clearly that of negotiation. Its objective should be the delimitation of the rights and interests of the Parties, the preferential rights of the coastal State on the one hand and the rights of the Applicant on the other, to balance and regulate equitably questions…."[71] The declaration made by Judge Singh to this judgment reiterates that "there has always been the need for accepting clearly in maritime matters the existence of the duty to 'have reasonable regard to the interests of other States.'"[72]

The Arbitral Tribunal in the Chagos Marine Protected Area Arbitration (Mauritius v. United Kingdom) stated that: "the extent of the regard required by the Convention will depend on the nature of the rights held by Mauritius, their importance, the extent of the anticipated impairment, the nature and importance of the activities contemplated by the United Kingdom, and the availability of alternative approaches."[73] The Tribunal further stated that "in the majority of cases, this assessment will necessarily involve at least some consultation with the rights-holding State."[74] The Tribunal further asserted that the obligation of due regard "entails (…) both consultation and a balancing exercise with (the) rights and interests" of States.[75]

This again leaves room for a solution that takes into consideration the interests of coastal States as well as cable operators through their respective States, particularly if they are part of or are being represented in cable operations in their governmental/ public capacity.

Fourth, Article 79 of UNCLOS permits coastal States to take reasonable measures for the exploration and exploitation of their continental shelf and puts a limitation on the freedom to lay submarine cables, as it is subject to the right of coastal States to take these reasonable measures. UNCLOS does not elaborate on what constitutes "reasonable" measures.[76] As such, it was, for instance, argued that "it would seem reasonable for a coastal State to impose restrictions on the laying of cables in its richest fishing grounds or coral reefs areas in its EEZ and to put restrictions on the laying of cables in areas designated for off-shore exploration for oil and gas."[77] Another view considers unreasonable a "measure of discriminatory character."[78] This, as reiterated above, allows States and the cable industry to define what constitutes a reasonable measure in light of best practices.

In conclusion of this part and in addressing the challenges raised in relation to submarine communications cables, it is understandable that the interpretation given above to the provisions of UNCLOS might seem to provide legal ground for what has been labeled by scholarly articles as a "creeping jurisdiction"[79] of coastal States in their EEZ or continental shelf. This brings us to ask an important question: "will [the territorial temptation] continue to restructure the law of the sea? If so, will it do so within the current conventional framework or occasion its collapse?"[80]

The answer to this question lies in the need to embrace a practical solution to the challenges raised by the competing uses and activities in the maritime space. Regarding submarine communications cables, several challenges have been identified, which could be potentially addressed by adopting an interpretation of UNCLOS that considers the reality on the ground and the current state of affairs with respect to coastal States and the cable industry. This approach, although it allows for more enhanced rights of coastal States in the EEZ and continental shelf, does so with limits, thus resisting attempts to "territorializing the EEZ,"[81] and regulates a situation that seems to have grown out of the desired legal framework.

V. Why An Implementation Agreement, and Why the BBNJ as a Model?

The choice of an implementation agreement as a solution to this problem is a result of the range of possibilities that an implementation agreement provides, offering a legally binding solution through a consultative and consensual process that involves the participation of various stakeholders. An implementation agreement may provide additional clarification to the original treaty[82] or help regulate a situation that evolves,[83] thereby "filling the gap in implementing"[84] the original treaty.

The three implementation agreements of UNCLOS serve specific purposes. The agreement relating to the implementation of Part XI of UNCLOS in relation to the Area (1994) aimed to ensure universal participation in UNCLOS, particularly from industrialized countries.[85] This agreement primarily contains procedural articles, as well as articles related to the operationalization of the International Seabed Authority.[86] The agreement relating to the Conservation and Management of Straddling Fish Stocks (1995) was adopted to address the issue of straddling stocks and highly migratory fish stocks in both the EEZ and the high seas.[87] This agreement stipulates that the conservation and management of straddling fish stocks and highly migratory fish stocks must be based on the precautionary approach[88] (not specified under UNCLOS). It clarifies fundamental principles enshrined in UNCLOS, such as the duty to cooperate.[89]

The BBNJ Agreement, the third implementation agreement to UNCLOS and the most recent (2023), is considered a "historic achievement" and "a veritable triumph for international multilateralism."[90] It put in place innovative solutions, provided systemized architecture for ocean governance,[91] allowed States to agree on a legal definition for marine protected areas, and established a mechanism for benefit sharing associated with marine genetic resources, which was absent from UNCLOS. The BBNJ Agreement successfully addressed four main cross-cutting issues: marine genetic resources and benefit sharing, area-based management tools, environmental impact assessments, and capacity-building.[92]

Drawing parallels with the BBNJ Agreement, which succeeded in striking a balance between the demands of developed and developing countries[93] and based on the principle of the Common Heritage of Humankind for activities in the area,[94] an implementation agreement for submarine communications cables can achieve the same balance between the competing interests of coastal States and other States, and as a consequence, the cable industry.

An implementation agreement, similar to the BBNJ, could serve this purpose. This paper proposes that a new implementation agreement should be based on an interpretation of the relevant provisions of UNCLOS that reflects the practices of both coastal States, other States, and the cable industry, as explained above. This aims to regulate the extent of the power given to coastal States in the exercise of their sovereign rights in the EEZ/continental shelf, thus preventing any abuse of these rights by a coastal State to the detriment of other States and cable operators.[95] It allows for addressing the security interests of States while enabling the creation of clearly regulated submarine communications cable operations in the EEZ/continental shelf, thus ensuring a stable and predictable legal regime.

VI. The Correlation Between the Extent of States' Jurisdiction Over Submarine Communication Cables and the Protection of Submarine Cables

The issue of protecting submarine communications cables directly relates to the extent of jurisdiction that States—whether coastal States, the cable owner's State, or other concerned States—have or might have over these cables[96] passing through their EEZs or continental shelves, owned by them, or connecting them to the internet. Today, protecting submarine communications cables is increasingly important. The United Nations Secretary-General's report on the Oceans and Law of the Sea (2015) stated that "submarine cables are critical communications infrastructure, being used for more than 98 percent of international Internet, data, and telephone traffic."[97] The same report also asserts that submarine cables "function as the backbone of the international telecommunications system," and "are a fundamental component of the critical global infrastructure."[98] Another report by the UN Secretary-General (2020) indicated that during COVID-19, "reliance on submarine cables, which carry approximately 99 percent of the world's Internet traffic, intensified by approximately 25–50 percent, as usage for communication, commerce, teleworking, telemedicine, and tele-education expanded."[99]

The General Assembly Resolution on Oceans and the Law of the Sea (2023) included a paragraph that states as follows: "recognizing that submarine cables and pipelines are vitally important to the global economy and the national security of all States."[100]

It is without doubt that the importance of submarine communications cables is of primordial importance for national and global connectivity. With virtually all States relying on submarine communications cables for a range of purposes,[101] from accessing social media to conducting global financial service transactions to military and defense,[102] their protection has become a necessity.[103]

The provisions of UNCLOS on the protection of submarine cables are listed under Part VII (High Seas), which paragraph 2 of Article 58 (EEZ) of UNCLOS refers to. These provisions also apply to the continental shelf.[104] Three main provisions of UNCLOS, namely articles 113, 114, and 115, address the protection of submarine communications cables.

Article 113 of UNCLOS requires States to adopt laws and regulations that hold liable ships flying their flag or persons subject to their jurisdiction if they break or injure a submarine cable, whether willfully or through culpable negligence.[105] Article 114 requires States to adopt laws and regulations that make owners of submarine cables, nationals of these States, who are responsible for breaking or injuring other cables in the operation of laying or repairing the cable they own, to pay the repairing costs of the break or injury they cause to other cables.[106] Article 115 requires States to adopt laws and regulations to ensure that cable owners indemnify ships that sacrifice a fishing gear or an anchor to avoid injuring submarine cables.[107]

It is estimated that 80 percent of cable damage is the result of human activity in the sea, particularly fishing, which accounts for 60 percent of the activities causing damage to submarine cables.[108] Additionally, an average of 150 to 200 faults in submarine communications cables occur globally each year.[109]

With the number of incidents causing damage to submarine communications cables on the rise, and in light of the importance given to submarine communications cables as critical infrastructure, it is considered that the provisions of UNCLOS on the protection of submarine communications cables are insufficient and do not ensure effective protection of submarine communications cables for multiple reasons:

1. First, these provisions limit any action to be taken in response to the breaking or injury of a submarine cable to the flag State or the State of nationality of the ship or the persons responsible for the breakage.
2. Second, these provisions seem to neglect intentional damage caused to submarine cables. Despite the use of the word "willfully" in Article 113, which can potentially cover all sorts of intentional damage—the use of the word "willfully" without further clarification or elaboration in UNCLOS (which again can allow for a broad and flexible interpretation—including terrorist acts and theft),[110] the limitation of jurisdiction in relation to these crimes to flag States do not match the seriousness of the offense committed, namely terrorist acts or theft of cables.[111]
3. Third, the limitation of the jurisdiction to the flag State, or otherwise the principle of exclusive flag jurisdiction, seems to ignore States affected by the intentional damage to

a submarine cable on which these States rely for their connectivity and communication network.[112]

4. Fourth, these provisions only entail legislative jurisdiction, not enforcement jurisdiction.[113]

5. Fifth, a limited number of States have actually adopted laws and regulations to this effect as prescribed under articles 113 to 115 of UNCLOS, and some of these laws are outdated.[114]

6. Sixth, damage can occur in a part of the sea that is distant from the flag State, and the injured State would not be, legally, in a position to take any measure, hence the flag State would not be "in the best position to ensure compliance or to prosecute,"[115] in addition to the injured State not in a position to take any measures.

7. Seventh, these provisions do not provide any protection for cable ships undertaking cable operations.[116]

Considering the above, a situation has unfolded that encompasses conflicting views and positions regarding the regime governing submarine communications cables and their protection. While some coastal States are considered to have imposed measures contrary to the provisions of UNCLOS with regards to the laying, repairing and maintaining of submarine cables under an interpretation of UNCLOS provisions that advocate for the freedom to lay submarine cables with no to minimal limitations, there are calls for stronger regulations for the protection of submarine communication cables, which invest coastal States with extended rights. Some of these calls consider measures taken by States such as New Zealand and Australia, which have established cable protection zones within their EEZ/continental shelf and have prohibited fishing, anchoring and other activities in these areas,[117] as a solution to an adequate protection of submarine communications cable, and welcome these measures and consider them "as examples of an integrated approach to the management of competing ocean uses through zoning,"[118] despite the uncertainty surrounding the legality of these measures and their compliance with the provisions of UNCLOS.[119]

The need for enhanced protection of submarine communications cables has led to attempts to find legal ground for measures taken by States such as New Zealand and Australia with regards to the establishment of cable protection zones, by arguing, " a protection zone for a submarine cable outside the territorial sea could be validly asserted by a State, provided the basis of jurisdiction was tied to one that could be claimed under the regime for the EEZ or continental shelf. That is to say, protection over a cable could be achieved by restricting activities that could be validly regulated in the EEZ or continental shelf."[120]

In other words, and to enhance the protection of submarine communications cables, taking a measure such as establishing a cable protection zone in the EEZ or continental shelf, which prohibits activities such as fishing, could be allowed if it eventually restricts or regulates in these zones activities that are usually regulated by the coastal State in its EEZ or continental shelf. While noting that in fact these restrictions are undertaken not for the purpose of exercising a State's sovereign rights for the purpose of exploring and exploiting resources, or any other activity listed under Article 56 (EEZ) or under Article 77 (continental shelf), these cable protection zones could not be considered other than a circumvention of the provisions of UNCLOS, driven by the need to protect submarine communications cables, but that impede on the rights and freedoms of other States in the EEZ or continental shelf, namely the freedom to laying submarine communications cables.

In this regard, it is worth noting that the International Law Commission in 1956 rejected the idea of establishing cable protection zones, citing an impediment to the freedom of navigation, even though the proposal concerned only suggested a scaled-down version of this protective zone with a proposal prohibiting "anchoring near cables."[121]

In light of the above, a solution may be inspired from the provisions of UNCLOS itself which allow for exceptions to the exclusive flag State jurisdiction in a balanced manner, namely through adjusting the provisions of Article 100 (on the duty to cooperate in the repression of piracy), Article 108 (on the illicit traffic in narcotic drugs or psychotropic substances), Article 109 (on the unauthorized broadcasting from the high seas), and Article 110 (on the right of visit) to the protection of submarine communication cables.

The new implementation agreement could, as was done under the BBNJ Agreement, explore innovative ways to address the issue of protecting submarine communications cables. This could be done through the creation of a system, at the conception of a submarine communications cable, which includes all States' EEZs and continental shelves through which the submarine communications cable passes and which provides for a list of legal actions that could be taken in case of breakage or damage to the submarine communications cable under certain conditions agreed upon by the stakeholders involved.

The new implementation agreement could also create a mechanism that allows coastal States to act in case a submarine cable is injured in their EEZ or continental shelf after obtaining the consent of the flag State. The mechanism would include conditions pertaining to indicate a time limit for receiving a response from the flag State, which should depend on the circumstances of the incident and define the extent of the action that the coastal State could take in agreement with the flag State.

On the other hand, the new implementation agreement could borrow some of the provisions of the 1884 Convention on the protection of Submarine Telegraph Cables, namely articles V and VI, which require vessels to keep a distance of one nautical mile from ships engaged in repairing cables and a distance of one-quarter of a nautical mile at least from buoys indicating the location of a cable being laid.[122]

In elaborating the rules of the new implementation agreement, the recommendations issued by the International Cable Protection Committee (ICPC) should serve as a guideline. The ICPC is a professional organization with a mission to promote the protection of submarine cables.[123] Its membership includes governmental administrations, companies owning cables, and companies operating submarine telecommunications.[124] The ICPC issues recommendations on the protection of submarine communications cables, and works with interested parties (i.e., governments, cable owners, and suppliers) to promote the protection of submarine communications cables and ensure compliance with UNCLOS.[125]

According to the recommendations issued by the ICPC on "Government Best Practices for Protecting and Promoting Resilience of Submarine Telecommunications Cables,"[126] and to reduce damage to submarine cables, States are advised to implement measures "directed at fishing and anchoring risks."[127] This includes, for instance, prohibiting fishing close to submarine cables. The recommendations also include a proposal to undertake the spatial separation of submarine cables from other activities in the sea, a measure already adopted by several states.[128] This could surely inform coastal States and other States of the measures they can undertake to protect submarine communications cables.

States can also, and as recommended by the ICPC, "establish clear timeframes that are as short as possible" for permits for the installation and repair of submarine cables.[129] Furthermore, States could adopt a permitting regime that differs from that applied to pipelines or oil and gas activities, which are known to be polluting activities, in contrast to submarine communications cables.[130]

Given also the nature of submarine communications cables as a "transnational infrastructure,"[131] which can be owned by multiple stakeholders from different jurisdictions,[132] the need for collective protection is justified on practical grounds. This is further enhanced by the critical importance of submarine communications cables and the plausibility of their protection be elevated to the level of a protection of a global public good,[133] depending in particular on the importance of the submarine communications cable in question and the number of States it serves to provide communication to and help connect, or, in the case of a group of cables bundled together and which can result in considerable damage if the bundle is severed, further complicates the situation leading to "responders having little to no chance of restoring the connection by rerouting the traffic to mitigate the effects of the cut."[134]

This need for a collective protection of submarine communications cables is further reiterated by the General Assembly Resolution on Oceans and the Law of the Sea (2023) which recognized "the crucial role of international cooperation at the global, regional, subregional and bilateral levels in combatting, in accordance with international law, threats to maritime security, including (…) terrorist acts against shipping, offshore installations, submarine cables (…) and other critical infrastructure and maritime interests, through bilateral and multilateral instruments and mechanisms aimed at monitoring, preventing and responding to such threats, the enhanced sharing of information among States relevant to the detection, prevention and suppression of such threats, and the prosecution of offenders with due regard to national legislation."[135]

VII. Conclusion

The regime governing submarine communications cables, as well as their protection, has been under considerable pressure. Practice by some States in their EEZ/continental shelf with regard to submarine communications cables, as well as their protection, has proven to be in contradiction with the needs and aspirations of the cable industry.

While the provisions of UNCLOS protect the freedom to lay submarine cables, this right is not without limitations or caveats. The ambiguity of UNCLOS provisions has allowed for different interpretations, which could well accommodate current developments in ocean space.

Implementation agreements to UNCLOS have played a significant role in elaborating on its provisions, in providing more clarity, but also in creating solutions to challenges that are not addressed under UNCLOS.

The regime governing submarine communications cables under UNCLOS could utilize an implementation agreement to provide legal clarifications for some of its ambiguous provisions, in light of an approach that seeks to strike a balance between the interests of coastal States, other States, and submarine cable operators. This approach would be based on the provisions of UNCLOS itself. Any limitations placed on the freedom to lay submarine communications cables, or any rights accorded to coastal States, would have to find a legal basis in the provisions of UNCLOS, following an interpretation of these provisions that favors coastal States, while regulating any abuse of rights and limiting excessive claims. As rightly put, "if those favored by the old law court catastrophe if they merely sit on ancient rights, coastal states are hardly likely to make the law that is needed by unilateral assertion. The issue is not, in fact, between *laissez-faire* for shippers and *laissez-faire* for coastal states. The seas—all the seas—cry for regulation as a veritable *res communis omnium*."[136]

In the same vein, the regime governing the protection of submarine communications cables, which has proved to be insufficient and inadequate, could be enhanced through the adoption of new provisions under the implementation agreement that builds on the exceptions made to the principle of the flag State jurisdiction, but also incorporates into a legally binding agreement (i.e., the implementation agreement) best practices and recommendations, while enhancing the collective protection of submarine communications cable. An implementation agreement of the sort would be the solution to finding "an equilibrium between opposing pressures."[137]

Notes

1. Carter L., Burnett D., Drew S., Marle G., Hagadorn L., Bartlett-McNeil D., and Irvine N. (2009). *Submarine Cables and the Oceans—Connecting the World*. UNEP-WCMC Biodiversity Series No. 31. ICPC/UNEP/UNEP-WCMC.
2. The United Nations Office at Geneva, Multimedia Newsroom, "International Panel Set Up to Help Protect Undersea Cables," November 29, 2024, https://www.unognewsroom.org/story/en/2441/-submarine-cable-resilience-itu-29-november-2024, accessed April 20, 2025.
3. Report of the Secretary-General on Oceans and the Law of the Sea (2015), A/70/74, [hereinafter A/70/74], https://www.un.org/depts/los/general_assembly/general_assembly_reports.htm.
4. United Nations Convention on the Law of the Sea, adopted in Montego Bay, December 10, 1982 [hereinafter UNCLOS], https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI6&chapter=21&Temp=mtdsg3&clang=_en.
5. Chie Kojima, Vladlen S. Vereshchetin, "Implementation Agreements," *Oxford Public International Law, Oxford University Press*, 2023, para. 1.
6. The two implementing agreements are the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea, July 28, 1994, and the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, Aug. 4, 1995.
7. Kojima and Vladen 2023, para. 4.
8. *Idem*., paras. 7–8.
9. The BBNJ Agreement shall enter into force on January 17, 2026, see more: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXI-10&chapter=21&clang=_en.
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Lebanon–Israel 2022 Maritime Boundary Equity: Equal-Breadth Perpendicular Line

Maxim Shoshany

Structured Abstract

Article Type: Viewpoint

Purpose—Claims about political illegitimacy and unfairness of the indirect Maritime boundary negotiations between Lebanon and Israel motivate intensions to neutralize their agreement (October 27, 2022). The objective of this article concerns assessment of the equitability of the agreed delineation in view of earlier delineations and the application of an objective delineation method.

Design, Methodology, Approach—Review of the sequence of delineations by both parties and by a US mediator would identify the key elements of the territorial dispute. Employment of a new Equal-Breadth Perpendicular Line (EBPL) delineation due to the straightness of Lebanon and Israel's joint coastline configuration facilitates assessment of the equitability of the agreed line.

Findings—Examination of Israel's unilateral delineations from 2009 until 2017 show that they closely fit the equitable EBPL configuration and are similar to the early (2010) Lebanese delineation that informs the agreed delimitation.

Practical Implications—While the political circumstances around the agreement can be criticized, the agreed delimitation was found equitable.

Originality, Value—This commentary provides a new collection of official evidence regarding the two countries' dispute and a new perpendicular line analysis which proves the equitability of the agreed delimitation and provides support for ensuring its sustainability.

Keywords: equidistance, equitable solution,
maritime boundary dispute, perpendicular line

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I. Introduction

The discovery of deep-sea petroleum and gas resources and the emergence of the maritime territorial conflict between Turkey and Greece in the early 2000s led several eastern Mediterranean countries to strive to reach agreements with neighboring countries regarding their economic exclusive zones (EEZs). The dispute between Lebanon and Israel began following Israel's withdrawal from southern Lebanon in 2000 and the discovery and exploitation of Noa and Mary B (1999) and Tamar and Livyatan (2009) gas fields by Israel. The arrival of a drilling rig to the disputed Karish gas field in June 2022, and Israel's plan to start operating it south of the Lebanese delimitation of 2010 (outside the disputed territory) initiated threats by Hezbollah to attack the Israeli maritime gas and oil installations. The situation motivated the US to push for a peaceful settlement of the dispute before it erupted into an armed conflict. In October 2022, Lebanon and Israel reached an agreement (see agreed line in Figure 1) and submitted identical letters to the UN Secretary General[1] stating that: "The parties agree that this agreement … establishes a permanent and equitable resolution of their maritime dispute." However, while the Lebanese side obtained its early delimitation (from 2010), claims were voiced on the Israeli side that the interim minority government was in fact coerced by the US to agree to the Lebanese delimitation under war threats by Hezbollah. For boundaries to hold, they must be perceived as fair by both sides, and fairness is, according to a ruling by the International Court of Justice, a "guiding principle for maritime dispute resolution."[2] With claims regarding illegitimacy and unfairness of the agreement and the disregarding of the earlier acceptance by Israel of a US compromise delineation, the current Israeli government is searching for ways to cancel the agreement. This article will start by discussing the political circumstances that supposedly undermine the legitimacy of the agreement, followed by a presentation of the timeline of events and delimitations suggested by Lebanon, Israel, and the US during the 12-year dispute. Finally, a new equal-breadth perpendicular line method will be presented and then implemented to assess the equitability of these delimitations.

II. Claims of Illegitimacy and Unfairness of the Maritime Agreement

Since the First Lebanon War in 1982, a state of war has existed between Israel and Hezbollah, the leading political and military organization/power in Lebanon. During the maritime border negotiations, Hezbollah promoted the territorial interests of Lebanon using coercive diplomacy: "Between June and October, the organization conveyed overt and covert threats, and it pursued actions that were unprecedented in the Israel-Hezbollah conflict: openly threatening to target Israel's entire gas production and risk all-out war if Israel proceeded with its plan to unilaterally extract gas from the contested Karish gas field. A textbook case of coercive diplomacy, Hezbollah's maneuver was calculated and deliberate, which reflects the group's strategic expertise."[3] Under Hezbollah's threats, the US government pressured Lapid's weak interim government to reach an agreement with Lebanon. According to the statutory law in Israel, this government was entitled to negotiate, but earlier High Court rulings require approval of such agreements by the Knesset (the Israeli parliament) under such political circumstances.

The objection to the tailored agreement emerged immediately following indications regarding a compromise that had been reached between the two countries during meetings conducted just after the UN General Assembly meeting on September 22, 2022. From this date until the controversial decision made by the interim government on October 12, 2022, the opposition leaders made clear claims regarding the illegitimacy of the agreement. On October 2, 2022, then-opposition leader Netanyahu uploaded a Facebook post saying that "Lapid has no mandate to hand over to an enemy state sovereign territories and sovereign assets that belong to all of us … If this illegal grab goes through, we will not be bound by it…"[4] Immediately afterward, a leader of the Religious Zionist party stated that "I believe that we must tell everyone, in an official announcement, including those international actors who are involved, that our position is that any such agreement lacks all validity and will not be either recognized or respected by us when we … form the next government, following the elections."[5] On October 7, 2022, Netanyahu said that he will "Quash the Gas Deal—and the Country and World Can Burn."[6] Following the approval of the agreement by the government on October 12, 2022, several Knesset members demanded that the agreement be put to vote. Prime Minister Lapid refused, disregarding the advice of the Attorney General to seek approval by the Knesset. The weight of urgent security and defense considerations in the High Court approval of the interim government authority to sign the agreement is clearly expressed by the High Court decision.[7] The Hezbollah threats were certainly among the main security and defense issues considered by the High Court. On October 31, 2022 (one day before the elections and four days after the agreement was finalized), Netanyahu expressed his intention to "neutralize" the agreement.[8]

Considering the fact that the gas agreement was one of the issues raised during the election campaigning period, and that the parties opposing the agreement won the elections, it may be suggested that the majority of Israeli citizens opposed the agreement and doubted its legitimacy. The perception among broad sectors of Israeli society was that an unfair agreement was forced on Israel by the US, pressured by war threats by Hezbollah. It is, therefore, not surprising that the current coalition and government are taking steps to neutralize or cancel the agreement. Last October, the Israeli Minister of Energy described the agreement as a mistake and stated that "Israel is looking for a loophole in order to cancel the scandalous gas agreement with Lebanon."[9] At almost the same time, two Knesset members from the coalition demanded that Prime Minister Netanyahu cancel the maritime border agreement "following the daily attacks coming from Lebanese soil since October 7."[10] These intentions to cancel the agreement alarmed maritime law specialist Prof. Aref Fakhry, who presented an in-depth analysis of the agreement and its binding nature according to "the Vienna Convention on the Law of Treaties, the international law of the sea, customary international law, and Lebanese and Israeli law."[11] However, Prof. Fakhry did not refer in his analysis to the fact that the Hezbollah threats created the urgency which is a conditional criteria in the High Court assessment of decisions made by interim governments.[12] The fact that the majority of the Israeli public, as represented by the Knesset coalition, perceives the agreement as unfair was also ignored, when fairness is, according to the International Court of Justice, a "guiding principle for maritime dispute resolution."[13] The political and public frustration in this matter endangers the sustainability of the agreement despite certain economic benefits gained by Israel, which are nevertheless small relative to Israel's expectations following its territorial demands. This article suggests to examine the fairness or equitability of the agreed-upon line: it is possible that the political "envelope" of the agreement is unfair, but the agreed-upon line is nonetheless fair. Furthermore, Netanyahu was Israel's prime minister between 2009 and 2021, during most of the territorial conflict between the two countries, and so the delineations presented by his governments during those years are of special interest in assessing the agreed delimitation.

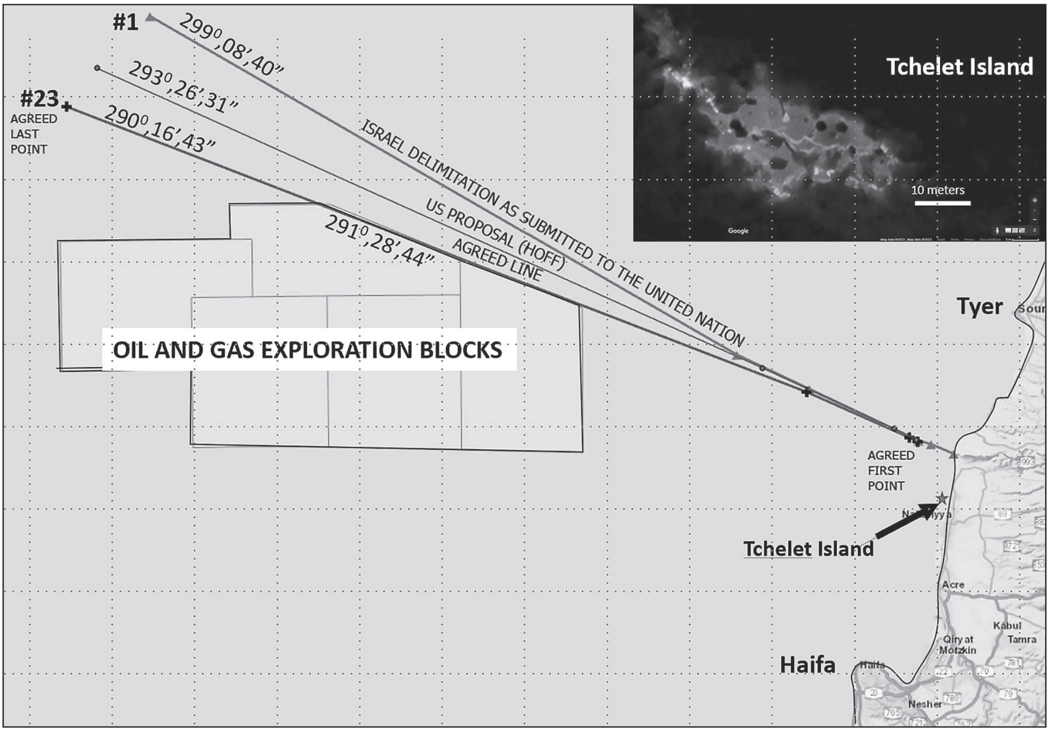


Figure 1: A map of the main official delineations for the maritime boundary between Lebanon and Israel and their azimuth orientation (Including Tchelet Island). Base map was modified from Google Maps ©. Oil and Gas exploration blocks were digitized manually by us from an official map.

Table 1: Timeline of events

Year	Context	Explanation
2000	Land "Blue Line" demarcation	Unilateral Israeli implementation of a perpendicular line at azimuth 291° (Eiland, 2018[14]; and Eiland, 2022[15])
1999–2009	Early gas and oil discoveries	Noa and Mary B (1999) and Tamar and Livyatan (2009) exploration projects revealed the potential of deep-water gas & oil production in the eastern Mediterranean.[16]
2003	Egypt–Cyprus EEZ agreement	Signed in 2003 and finally ratified in 2004.
2007	Lebanon–Cyprus EEZ agreement	Signed in 2007, ratified by Cyprus in 2009, but not ratified by Lebanon.
Prior to 2009	Israel Exploration Rights Map	Publication and granting of exploration rights for Alon D block (Fig. 2).

Year	Context	Explanation
2010 (14/7)	Lebanon's submission to the UN	Coordinates of Lebanon's southern median line (Fig. 3).
2010 (19/10)	Lebanon's submission to the UN	Coordinates of the southern part of the median line between Lebanon and Cyprus (Fig. 3).
2010 (17/12)	Israel–Cyprus agreement	Coordinates of the median line between the two states, extending from Point #1 southward, in part overlapping Lebanon's southwest delineation (Fig. 3).
2011–2012	Hof mediation	Equidistance delineation by Raymond Milefsky: Hof Line.[17]
2011 (20/6)	Lebanon's submission to the UN	Lebanon objects to the Israel–Cyprus Median Line agreement and emphasizes Point #23 as the southernmost point of its western boundary
2011 (12/7)	Israel's submission to the UN	Israel's northern EEZ boundary delimitation extending from Nakura to Point #1 in Lebanon–Cyprus agreement (Figure 1).
2012 (May)	Israel's conditional acceptance of Hof Line	Letter from Israel's Foreign Minister to the US Secretary of State (Hof, 2020).[18]
2016–2019	Mutual letters of dispute to the UN	Letters concerning the Exploration Rights Maps: Lebanese Blocks 8 & 9 and new Israeli Blocks 1, 2 & 3.
2020	Lebanon–Israel negotiations	Lebanon presents its demand for the line ending in Point #29 (not officially submitted to the UN)—Negotiations halted.
2021	Negotiations resumed	Amos Hochstein appointment as US mediator.
2022	Israel—Hezbollah confrontation	A drilling rig planned to operate in Karish gas field arrived to Israel and Hezbollah threatens it will attack Israel Maritime Gas installations if the rig will operate in Karish.
2022	Maritime boundary agreement	Both countries submitted letters to the UN with identical delimitation.[19]

III. Historic Timeline

The eastern Mediterranean Basin maritime conflicts concerning its sub-division between the states bordering its shores began in the mid–1970s with the Turkish–Greek dispute regarding their mutual maritime boundary in the Aegean Sea. This conflict was then further expanded to the maritime territory around Cyprus and the Turkish Republic of Northern Cyprus. Turkey claimed that the determination of the outer limits of their "continental shelf … shall be … based on equitable principles, taking into account all relevant or special circumstances" and "whereby no particular delimitation method, including equidistance, has an *a priori* status because equity can only be defined in the light of the specific circumstances of the area to be delimited."[20] Geographic implementation of these claims resulted in major overlaps with Cyprus' EEZ delimitations[21] based on employing the median line principle with Egypt, Israel, and Lebanon. Beyond the official protest, Turkey started to explore seabed oil and gas resources within Greece's and Cyprus' claimed maritime territories and disrupted drilling activities of companies that were granted permits by Cyprus.[22] With its political, economic and military power, Turkey's actions inflicted uncertainty regarding the EEZ boundaries delineated across the eastern Mediterranean in general, and the Lebanon–Israel EEZ negotiations in particular. The timeline presented here is focused on the sequence of alternative delineations within the broad historical context of the conflict, but it is not aimed at providing a comprehensive review the maritime boundary dispute between the two countries.[23]

Israel is active in exploring and exploiting of its oil and gas fields since the late 1990s,[24] with gas production in Noa and Mary B fields in 1999 and in Tamar and Livyatan fields in 2009. In 2009 (March 1), there were approved exploration rights for the Alon blocks bordering Lebanon maritime territories (Fig. 2). The magnitude of the territorial dispute between the two countries was first revealed officially by the overlapping of a section between the two countries' agreements with Cyprus. The areal conflict was then explicitly determined by their submissions to the UN (Fig. 1 and Fig. 3): Lebanon's submission of its southern maritime border during July 2010 and Israel's submission of its northern maritime boundary configuration in 2011. Fredrick Hof, who was appointed as mediator by the US, tried to bridge the gap between the two delineations by presenting a compromise line representing an equidistant delineation based on the Lebanese baseline north of Ras-A-Nakura and the Israeli baseline south of Ras-A-Nakura (Fig. 1). Lebanon, however, rejected the proposed compromise on the ground that the Israeli baseline included Tchelet Island, a small, uninhabited rocky island 1000 meters offshore (Fig. 1).

Under those circumstances and considering the regional security implications, international law experts suggested that "existing international law frameworks provide workable

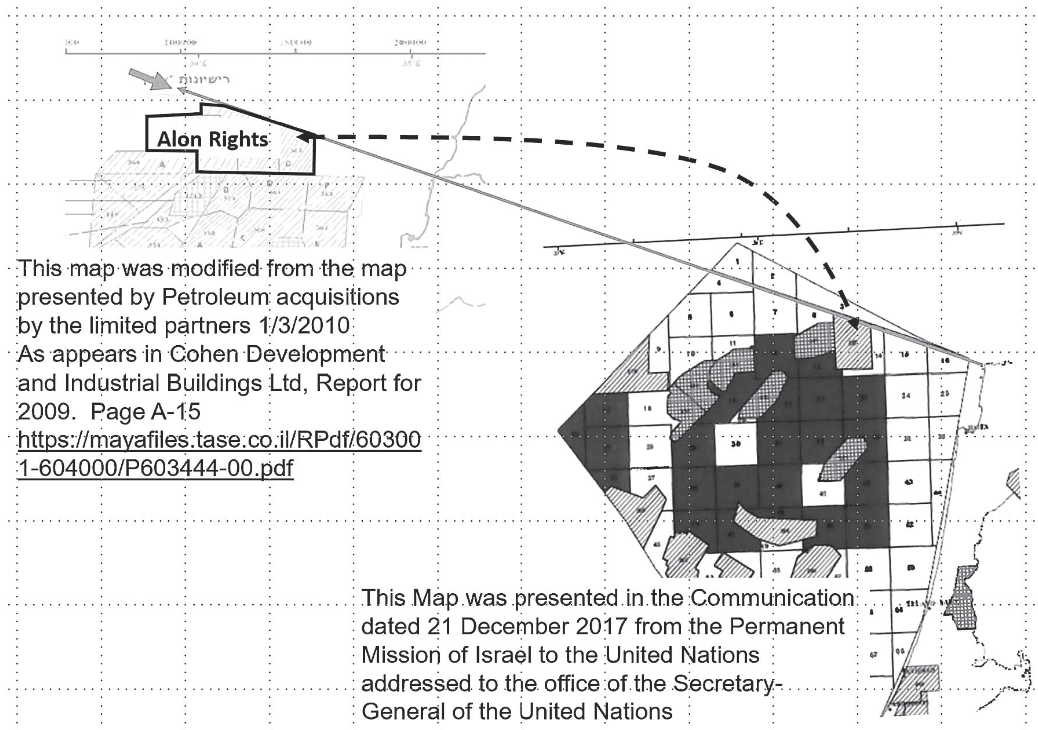


Figure 2: Oil and gas exploration maps representing the oil and gas block delineation prior to 2011 and after 2011: the line adjusted manually to the northern border of Alon blocks in the two maps show almost identical azimuthal orientation.

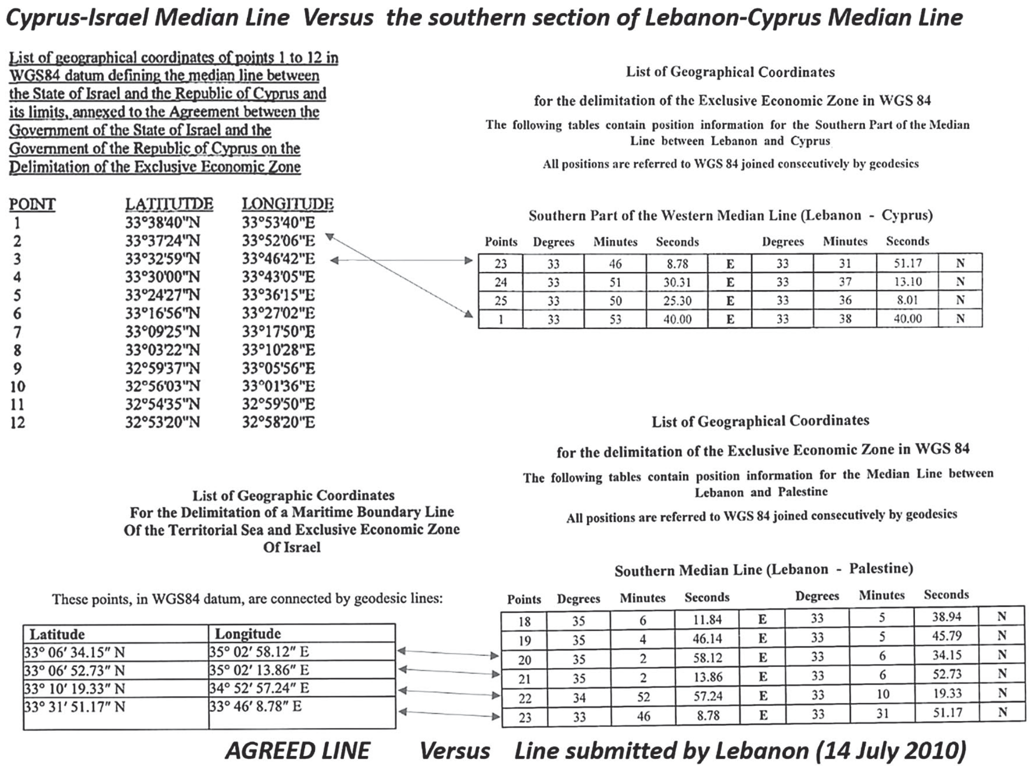
options to resolve this border dispute,"[25] and that "Israel and Lebanon should submit their maritime border dispute to an arbitral tribunal under the United Nations Convention on the Law of the Sea."[26] These suggestions were not adopted by the two sides. In 2017 Israel submitted to the UN a map which returns to its delimitation of 2011. Only in 2020 were the two countries brought to the negotiations table under the auspices of the UN. But while the Israeli side expected to reach a compromise based on Hof's equidistance line, the Lebanese side had submitted a new demand with a delineation reaching even further south of their 2010 submission to the UN. This round of negotiations broke down immediately. In 2021, Amos Hochstein, senior adviser to the US Secretary of State, was appointed as negotiator by the US. Internal political instability in both countries resulted in difficulties and progress was slow. Israel's intent to start drilling in Karish gas field south of Lebanon's delimitation of its southern EEZ border, with the arrival of a new oil rig from China in June 2022, were retaliated by Hezbollah's threats to attack Israeli maritime installations if Israel continued with its plans for Karish. The US was firm in its call for a quick settlement of this long dispute before it erupted into an armed conflict. An agreement was reached in October 2022 whereby both countries submitted an identical delineation of their shared EEZ boundary to the UN. An additional agreement dealt with the exploitation of the oil and gas resources in the EEZ boundary zone, backed by US guarantees.

IV. Pre-2011 Conflict

Since Lebanon shares EEZ borders with both Israel and Cyprus, its early delineation with Cyprus from 2007 defined the initial geographic settings for the Israel–Lebanon negotiations. Figure 3 presents the coordinates of the different maritime border sections as submitted to the UN by the three parties. The unintentional presentation of Point #1 as the southernmost point of the Lebanon–Cyprus agreed-upon boundary impacted the subsequent sequence of events. On July 14th, 2010, Lebanon submitted to the UN its southern median line, as calculated based on equidistance principles relative to a baseline retrieved from the Admiralty Map of Beiruth, Gaza section.[27] Point #23 was defined as the westernmost maritime boundary point and the tri-equidistant point between the three countries. The segment between Point #1 and Point #23, which was missing in the unratified Cyprus–Lebanon agreement, was submitted by Lebanon to the UN on October 19, 2010, establishing it as the only segment of Lebanon's EEZ with Cyprus that gained formal international status, although it was not officially recognized by Cyprus at that time. On December 17, 2010, a parallel delineation of this segment was included in the Israel–Cyprus agreement and submitted to the UN with no explicit reference to Point #23. A trilateral conflict then emerged, as Israel objected to Lebanon's southern median line in general and to Point #23 in particular.

V. Pre-2011 Delineations by Israel: Perpendicular Line Configurations

Israel did not officially adopt the perpendicular line configuration, but the following three references suggest that it practically implemented this configuration for bounding the northern extents of its security zones and maritime resources:



Cyprus-Israel Median Line Versus the southern section of Lebanon-Cyprus Median Line

List of geographical coordinates of points 1 to 12 in WGS84 datum defining the median line between the State of Israel and the Republic of Cyprus and its limits, annexed to the Agreement between the Government of the State of Israel and the Government of the Republic of Cyprus on the Delimitation of the Exclusive Economic Zone

POINT	LATITUTDE	LONGITUDE
1	33°38'40"N	33°53'40"E
2	33°37'24"N	33°52'06"E
3	33°32'59"N	33°46'42"E
4	33°30'00"N	33°43'05"E
5	33°24'27"N	33°36'15"E
6	33°16'56"N	33°27'02"E
7	33°09'25"N	33°17'50"E
8	33°03'22"N	33°10'28"E
9	32°59'37"N	33°05'56"E
10	32°56'03"N	33°01'36"E
11	32°54'35"N	32°59'50"E
12	32°53'20"N	32°58'20"E

List of Geographical Coordinates

for the delimitation of the Exclusive Economic Zone in WGS 84

The following tables contain position information for the Southern Part of the Median Line between Lebanon and Cyprus

All positions are referred to WGS 84 joined consecutively by geodesics

Southern Part of the Western Median Line (Lebanon - Cyprus)

Points	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds	
23	33	46	8.78	E	33	31	51.17	N
24	33	51	30.31	E	33	37	13.10	N
25	33	50	25.30	E	33	36	8.01	N
1	33	53	40.00	E	33	38	40.00	N

List of Geographical Coordinates

for the delimitation of the Exclusive Economic Zone in WGS 84

The following tables contain position information for the Median Line between Lebanon and Palestine

All positions are referred to WGS 84 joined consecutively by geodesics

List of Geographic Coordinates
For the Delimitation of a Maritime Boundary Line
Of the Territorial Sea and Exclusive Economic Zone
Of Israel

These points, in WGS84 datum, are connected by geodesic lines:

Latitude	Longitude
33° 06′ 34.15″ N	35° 02′ 58.12″ E
33° 06′ 52.73″ N	35° 02′ 13.86″ E
33° 10′ 19.33″ N	34° 52′ 57.24″ E
33° 31′ 51.17″ N	33° 46′ 8.78″ E

Southern Median Line (Lebanon - Palestine)

Points	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds	
18	35	6	11.84	E	33	5	38.94	N
19	35	4	46.14	E	33	5	45.79	N
20	35	2	58.12	E	33	6	34.15	N
21	35	2	13.86	E	33	6	52.73	N
22	34	52	57.24	E	33	10	19.33	N
23	33	46	8.78	E	33	31	51.17	N

AGREED LINE Versus Line submitted by Lebanon (14 July 2010)

Figure 3: Comparison between coordinates submitted to the UN by Israel and Lebanon.

- Explicit reference to a perpendicular line at an azimuth of 291° used during Israel's 2000 withdrawal from southern Lebanon, as provided by Major General Giora Eiland, the senior officer in charge of the IDF withdrawal.[28]
- Reference to a ~290° azimuth used in 2000 by the Israeli Navy according to the IDF International Legal Division. This reference is included in the Israeli Attorney General Deputies' opinion document submitted to the Attorney General on October 11th, 2022:

> "As delivered by the Navy through the International Legal Unit at the IDF's Military Law Division, the situation in the territorial waters is as follows:
>
> Since the withdrawal of the IDF from Lebanon in 2000, the Navy's main routine security activity in the area of the maritime boundary with Lebanon consists of preventing unauthorized entry of vessels or swimmers from the territorial waters of Lebanon into the territorial waters of Israel and vice versa. This is done, among other ways, by enforcing the ban on entering the areas closed by the Maritime Zones Closure Order (#100). These areas were closed following the IDF's withdrawal from Lebanon in 2000, and their northern delineation along an azimuth of 290 ~ reflects a perception according to which up to that line, it is certainly the territorial waters of Israel."[29]

- The direction (which we estimate as forming an 291.47° azimuth) of the northern boundary of the Alon (D) block, the northernmost block in the Petroleum and

Gas Rights Map as published in March 2009 by the Oil and Gas Division at the Israeli Ministry of National Infrastructure (Fig. 2),[30] and which reappeared as the northern boundary of Alon D block, which extends up to Point #23 in the Petroleum and Gas Rights Map submitted by Israel to the UN in 2017 (Fig. 2). The affinity between these two delineations is stated in the above-mentioned Attorney General's opinion document (p. 20).

Formally, these early delineations were introduced while explicitly stating that they do not represent Israel's delimitation of its northern maritime border but rather an administrative allocation of areas that undoubtedly belong to Israel's territorial waters. In other words, these delineations were made in an attempt to avoid infringing upon Lebanon's maritime territories prior to the conclusion of the two countries' shared EEZ boundary negotiations. As mentioned in the Attorney General's document, these early delineations also defined a line of certainty: Israel was confident regarding its territorial waters south of the line, yet uncertain regarding areas to its north.

Experience gathered worldwide suggest that "many of the world's new boundaries are drawn based on previous administrative frontiers."[31] Delineations appearing on official governmental maps, such as those published in exploration rights maps, may thus certainly serve as evidence in determining the maritime boundary between Israel and Lebanon despite the fact that they are only "administrative."

VI. Implementation of the Equal Breath Perpendicular Line Method

Equidistance is the most frequently used technique in maritime boundary delimitation (e.g., Nagasaka, 2016[32]; Madagwa, 2024[33]) but it does not necessarily imply a fair and equitable solution (e.g., Evans, 2006[34]; Langeraar, 1986[35]; Østhagen, 2020[36]). As Beazley and Frics (1982)[37] discussed over 40 years ago, the problem is not with the method but rather with the agreement (or lack thereof) on the baselines used. One of the main sources of the dispute between Lebanon and Israel concerns the inclusion of Tchelet Island in Israel's baseline. This island consists of an uninhabited, rocky exposure (22 × 45 meters in size) located 1 km offshore (Fig. 1). United States Ambassador Frederic Hof suggested an equidistance line calculated for a baseline that included Tchelet Island, but Lebanon firmly rejected this suggestion. Similar cases in which small natural or artificial features had distinctive influence on equidistance delineations that certain negotiation parties perceived as unfair led to the examination of alternative methods. Charney (1994),[38] Oxman (1995),[39] and Carleton and Schofield (2002),[40] among others, suggested that where baselines can be generalized by straight lines, perpendicular lines may yield an equitable division of adjacent EEZs. These generalized lines are less affected by local features and represent the "general direction of the coast" (Carleton and Schofield, 2001).[41] However, there are no guidelines for the implementation of this method. In order to achieve equitable delimitation using perpendicular line approach the author suggests the following principles of the equal-breadth perpendicular line method:

- Equal-breadth: employing the method on sections of the same width on both sides.
- Ensuring sufficient total width of these sections: assessment of the effect of the width on the direction of the baseline.
- Employing statistical measures for the coastline linearity along the joint sections.

In addition to the apparent implementation of the technique in 2000 as reported earlier, the potential applicability of using a perpendicular line for the Israeli–Lebanese case was already discussed by Henderson (2021)[42] and others. Physiographical features, such as the fault lines defining the Levant Basin[43] and the 1000-m bathymetric contour,[44] express the underlying structures that form the relative straightness of the joint shoreline of Lebanon and Israel (Fig. 4). This straightness and the ensuing perpendicularity have been the subject of only limited analysis. Here we employed the equal-breadth perpendicular method as follows[45]:

1. A normal baseline is digitized from a Google Earth satellite image (Fig. 5) and transferred to UTM coordinates. Equitable implementation of this method implies including equal shoreline sections on both sides of the terminal land boundary point between the two countries.
2. A linear regression technique between the UTM latitude and longitude coordinates was used to determine the generalized linear orientation of the joint shoreline sections and its goodness of fit (R^2 and significance).
3. The direction of the perpendicular line is then determined from the regression equation coefficients.

Four ranges of segments were selected considering the spatial variation of the joint shoreline (Fig. 5). Table 2 presents the information retrieved for these four segments following the implementation of the linear regression analysis.

Table 2: Assessment of perpendicular lines

	Equation	Coefficient of determination: R^2	Length of shoreline section (Distance from Ras A-Nakura × 2)	Azimuth of Perpendicular line
Beirut–Netanya	Y=2.7691*X+ 1,726,095	0.9836	96 × 2 = 192 km	289.856°
Sidon–Atlit	Y=2.6045*X+ 1,843,937	0.9586	54 × 2 = 108 km	291.004°
Sarafand–Haifa	Y=2.6689*X+ 1,798,311	0.9253	40 × 2 = 80 km	290.540°
Tyre–Acre	Y=2.3855*X+ 1,996,047	0.862	20 × 2 = 40 km	292.743°

Y: Latitude UTM Coordinates; X: Longitude UTM Coordinates.

High regression R^2 values were obtained for all configurations, with values increasing with the increase in segment length. The azimuth of the perpendicular varies between 289.856° for the longest segment (Beirut–Netanya) and 292.743° for the shortest segment (Tyre–Acre). These azimuthal differences are not insignificant at all; they form a common methodological basis for reaching a mutually compromised solution by simply averaging or by weighting the strength of each configuration by the length of the base line and by the strength of the statistical correlation.

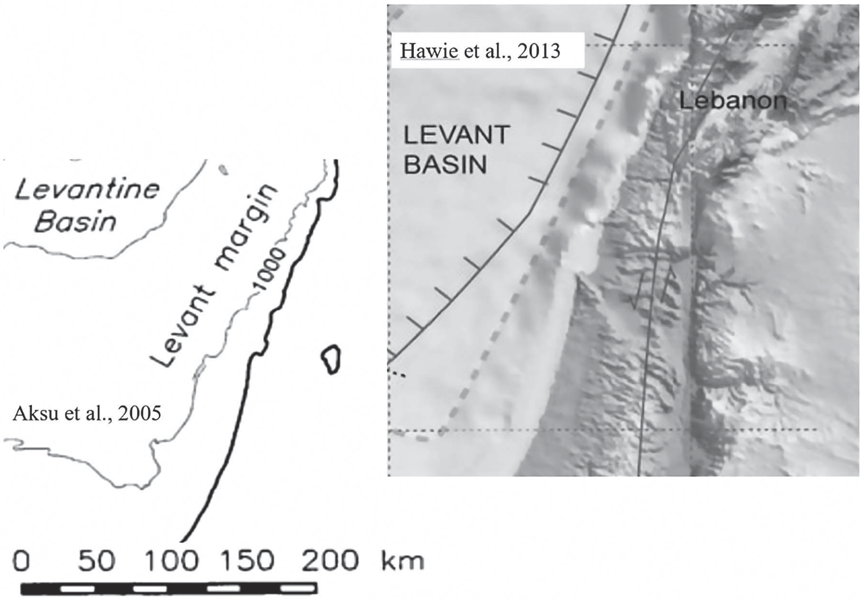


Figure 4: Physiographical features responsible for the relative straightness of the joint Lebanon–Israel shoreline as presented in Aksu et al. (2005) (left) and Hawie et al. (2013) (right).

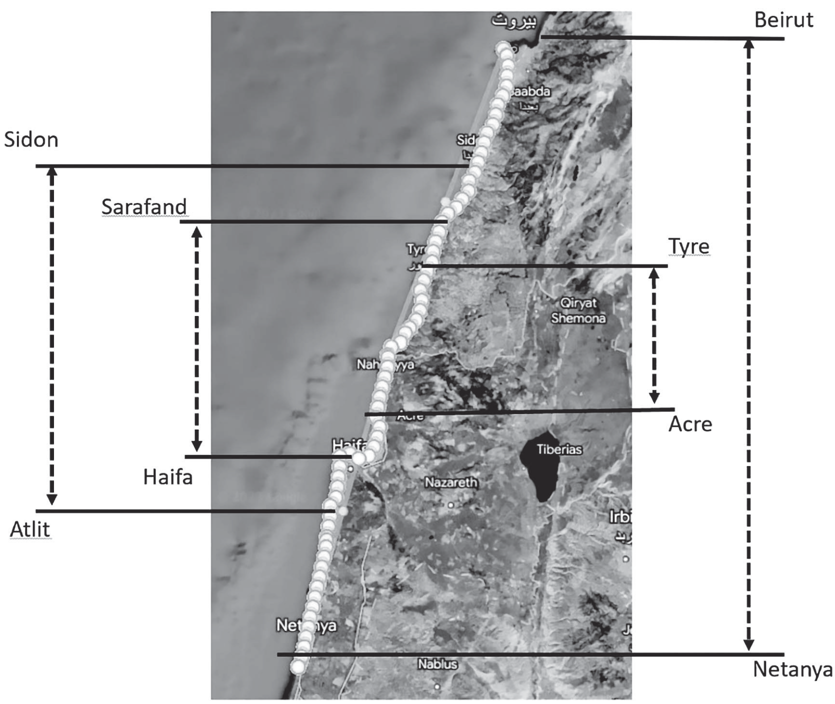


Figure 5: The baseline manually digitized from Google Earth © with the extents of four sections selected for generalizing the shoreline direction by linear regression.

VII. Discussion and Conclusions

The agreed-upon boundary, which is identical to the median line submitted to the UN by Lebanon in 2010, highly fits an azimuth of 291° from Ras A-Nakura. One may suggest that the azimuth of 289.856° for the longest section (Beirut—Netanya) which has a determination coefficient (R^2) of 0.9865 represents the most equitable solution. Another suggestion could relate to the average azimuth of 291.035°. Both versions are close enough to the equidistance delimitation and *thus suggest that it represents an equitable solution for the conflict*. There are multiple evidences that Israel used the perpendicular line configuration: the azimuth used by the Israeli Navy since 2000, as approved by the International Legal Division of the IDF, the azimuth formed by the northern boundary of early (March 1, 2009) Israeli Petroleum and Gas Exploration Blocks, and a line included in Israel's submission to the UN in 2017[46] (Figure 2).

Israel's High Court who reviewed the case assessed the differences between the Israeli configuration toward point # and the agreed line toward point #23 (items 52 to 56, pages 30 to 32)[47] and concluded that the territory between these lines was delineated for negotiation purposes, without making any impact on the situation in the field. The territory south of the line stretched toward point #23, was on the other hand, treated by the government as Israeli EEZ since the withdrawal from Lebanon (during 2000). Suggestions that the close fit between Israel's de facto delimitation based on perpendicular line configuration and the Lebanese delimitation of 2010 was not noticed and its implications regarding the possibility of early agreement were overlooked are hard to believe. The main question is, in my opinion, more about why it had taken 10 years to agree on an equitable delimitation, which was on the table already in 2012.

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Cultural Influences on the Law of the Sea: History, Legacy, and Future Prospects

Kraska, James (ed.) and Hayoun Ryou-Ellison (ed.) (2025). Oxford University Press. 352 pages. ISBN: 978-0-19-894413-3, hardcover, $130; ISBN: 978-0-19-894415-7, e-book, $130.

The book, "*Cultural Influences on the Law of the Sea: History, Legacy, and Future Prospects,*" edited by James Kraska and Hayoun Ryou-Ellison, debuts at a time when maritime disputes, seabed mining, and ocean governance dominate global headlines. Amid these challenges, the law of the sea becomes crucial to resolve geopolitical weight and existential urgency. Contemporary scholarship has explored the law of the sea through legal, geopolitical, and institutional approaches. This book argues that values, histories, and norms are equally influential in shaping maritime law. The book investigates how maritime law at any given point in time, particularly UNCLOS, is deeply colored by regional and national culture.

The editors assemble a diverse range of voices from eight regions of the world and one country. Together, they present a comprehensive global analysis of how diverse cultural traditions and historical legacies have impacted negotiations, interpretation, and application of the law of the sea. The book has eleven chapters. The opening chapter establishes that culture serves as a lens for interpreting human behavior and global interactions. However, the authors warn that the inherent contrasts and contradictions among cultures, such as East vs. West and North vs. South, complicate attempts for a unified international law.

From the second chapter onwards, the book explores regional perspectives. The second chapter examines the influence of Western European countries in shaping the law of the sea. It argues that Roman law, Greek philosophy, the Enlightenment, science, capitalism, and language influenced the codification of law, navigation, and scientific reasoning through technological advances across the globe. The third chapter, on Eastern Europe, explores the influence of the Vikings, Christianization, Cold War divisions, and reliance on Baltic trade routes, leading landlocked countries to defend their freedom of navigation and access to high-seas resources. Thus, Europe's influence on the freedom of navigation holds a firm grip and a lasting imprint on global law, shaped by cultural, capitalist, and historical traditions.

The book then turns to Russia. Its maritime culture, initially rooted in Orthodox Christianity and Viking-Byzantine traditions, stressed collective justice and universal norms. Western European influence in the 18th-century introduced naval modernization and codification. The 20th-century Soviet rule added an ideological and political interpretation of the sea. It maintained its "healthy pragmatism" policy with the West at UNCLOS and argued for strait access and sovereignty protection. The Soviet breakdown led to "anti-culture lawmaking" and "dependent independence" of Russia, with it becoming assertive and pragmatic only after 2010.

From the fifth chapter onwards, the book focuses on colonized countries. These chapters reveal how colonial impositions reshaped, silenced, and marginalized indigenous traditions of ocean governance. They explore their struggles negotiating between their cultural visions of the sea and the European legal frameworks imposed upon them. The fifth chapter examines East Asia, where cultural roots in Confucian, Buddhist, and imperial traditions shape approaches to international law. While China views it as an oppression of the West, Japan mirrors the Western attributes and laws in all aspects. China challenged Western dominance at UNCLOS discussions, while Japan seconded the Western proposal on the three-mile limit. Highlighted was the stark difference in approach to maritime dispute resolution: East Asians prefer mediation to the West's formalized judicial process. As a result, the author rightly describes the "Asian approach is multifaceted rather than unified in nature" and distinct from the European understanding (p. 125).

The seventh and tenth chapters on South Asia and Oceania explore how the colonizers' arrival changed indigenous peoples' relationship with the ocean. What was once an open sea now had territorial imaginaries ingrained in it, alienating the indigenous practices of the ocean. India's ruin of its shipbuilding empire and ignorance of the Pacific islander's indigenous rights in the UNCLOS reflects how the colonial empire restricts their culture and traditions. Colonialism is responsible for depriving them of old connections, and the maritime geography became scrambled, territorialized, and monopolized, converting the oceanic visioned countries into a continental turn. Both regions had an interesting way of accommodating their interests in UNCLOS. While India's leadership and collaborations with the developing world helped push for EEZs up to 200 nautical miles and for the recognition of the deep seabed as the "common heritage of mankind," the Pacific Islands pursued regional collaboration, forming the Oceania Group to defend island interests. New Zealand, too, supported the notion that even the most minor islands deserved full EEZs. The eighth chapter explores Africa's Ubuntu philosophy, which shaped their discussions at UNCLOS, calling for interdependence, collective welfare, and equity. Their efforts helped bring the deep seabed regime as "common heritage of mankind," championed the inclusion of landlocked states in maritime rights, etc.

The chapter on South America reflects how its colonial experiences led to sovereignty and control. They drew global attention to illegal fishing and conservation, linking environmental protection with sovereignty, and advanced concepts of EEZs and contiguous zones. The ninth chapter on North America presents an interesting case. Despite being a former colony of a European power, it did not resist European law but instead reworked and embraced it. Rooted in Greek philosophy, Roman law, Enlightenment ideals, Christian ethics, and liberalism, the movement promoted freedom of navigation, free trade, and exclusive flag-state control, while later advocating coastal control and continental self-protection to serve national interests. The eleventh and final chapter synthesizes the book's core findings, highlighting the ongoing tension between mare liberum and mare clausum, and between individual rights and collective interests.

The book succeeds in providing an almost global canvas. However, it ignores Central Asia and the Middle East. Including Russia instead of the USSR limits understanding of the interests of the Central Asian region. As both regions played a vital role in the Spice and Silk Routes linking their oceanic connections, not incorporating them leaves a critical gap in understanding how inland and intermediary regions shaped ocean governance. Additionally, the book narrowly focuses on the role of culture in forming the territorial and resource-centric dimensions of maritime governance. It overlooks the role of cultural traditions in codifying provisions on humanitarian rescue, cooperative norms of seafaring communities, etc., which are prominent among the Indian and the Pacific Island communities. This omission narrows understanding of culture to a state-centric, exploitative lens and marginalizes the other existing maritime traditions as well as ecological and cooperative dimensions of maritime law. Another limitation is the uneven treatment of regions. Asia, Russia, and Western Europe are explored with significant historical grounding. However, the maritime history of South America, North America, and Africa remains underexplored, especially that of indigenous peoples pre-colonization. Furthermore, the book flattens North America's distinct trajectory by aligning it with Western Europe through a shared colonial legacy, thereby risking the overlooking of nuanced differences in law, strategy, and maritime thought.

The thoughts of Mahan [maritime theorist Alfred Thayer Mahan] remain remarkably underexplored, creating an imbalance in the comparative depth of the analysis. Another underexplored area is how lived experiences, customary practices, and community-based norms have influenced maritime law. The book primarily focuses on state legislation and emphasizes the Westphalian concept of statehood, only examining evidence from regions recognized as states. Overlooked is the role of communities, indigenous groups, and non-state actors who have historically played a vital role in shaping maritime practices.

Rescue-at-sea operations, for one, have more to do with coastal communities' religious and customary values than with directives from rulers or state directives.

The book provides a deep historical analysis, tracing the roles of diverse civilizations and epochs in shaping maritime law, revealing how cultural traditions, ancient practices, colonial legacies, and postcolonial struggles shape maritime law, making it a space of continuity and change. It serves as a reservoir of historical and cultural knowledge and helps debunk the myth that international maritime law is a unilateral Western invention. The book shows that maritime law has been shaped by centuries of negotiation among competing cultural logics and is not a static, monolithic Western construct. The editors have successfully demonstrated that the law of the sea is the outcome of centuries of contestation, accommodation, and synthesis. The book also highlights how the geopolitics of navigation and geoeconomics of trade have played a key role in maritime law since ancient times. It has also traced the colonial legacy influencing maritime law in colonized states and colonizers, as elaborately highlighted in the chapter on South Asia, where the idea of freedom of the seas is rooted in the colonizers' vision, driven by their fear that restrictions would hinder the free flow of trade. Moreover, the colonized states' push for sovereign rights, EEZs, etc., is driven by their struggle to reclaim control over resources and resist exploitation. The book also exemplifies how colonial impositions restructured indigenous maritime practices and how the UNCLOS failed to integrate indigenous rights. It also traces how it reshapes people's relationship with the sea, which in turn shapes culture. Moreover, the book successfully sheds light on the agency of colonized countries in shaping UNCLOS, such as Africa's Ubuntu in shaping the "common heritage of mankind." By highlighting how small oceanic countries have pursued their interests, the book reinforces their agency and underscores their significance. Thus, the book creatively reveals how colonial legacies disrupted and inspired innovations in maritime governance. It establishes that maritime law is not the triumph of the West or the East, but a joint effort of negotiation, clash, and collaboration between both.

Another significant strength of this book is its firm empirical grounding. The book backs its claims by grounding abstract ideas and concepts in substantial evidence, including historical evidence, concrete case studies, and cross-regional examples. By integrating theory with empirics, the book strengthens the persuasiveness of its claims and enhances its academic credibility. Moreover, the book is easy to read, even for non-legal scholars. By integrating philosophies, values, and traditions, it reminds the reader that cultural legacies are as influential and powerful as geopolitics in determining the law of the sea and the fate of the countries at sea. It also opens an avenue to reassess problems at sea through a cultural lens beyond a technical legalistic framework.

Despite these limitations, the book is well worth reading as it presents an alternative understanding of maritime law through culture. It is an easy-to-read book for scholars who wish to understand the voices and representations in lawmaking. Moreover, it provides a convincing, timely, comprehensive, and empirically rich understanding of maritime law that helps one broaden their understanding beyond the narrow geopolitical and legal context. This book is strongly recommended for scholars, policymakers, and anyone interested in how culture shapes the governance of the oceans, as it offers a rich interdisciplinary approach and global coverage, providing innovative solutions to contemporary issues such as climate change, indigenous rights, and human rights at sea. Additionally, this book is strongly recommended for scholars in the Global South, as it elaborates on colonial disruptions at sea, postcolonial states reclaiming their agency, and how small countries influence these debates, helping readers appreciate underrepresented voices.

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Connecting the Indian Ocean World: Across Sea and Land

Radhika Seshan (ed.) and Ryuto Shimada (ed.) (2023). New Delhi: Routledge India. 142 pages. ISBN: 978-1-032-24832-5, hardcover, $170; ISBN: 978-1-032-43929-7, paperback, $49.99; ISBN: 978-1-003-36248-7, e-book, $49.99.

Seshan and Shimada's volume moves with quiet authority across time-slices and geographies, ports, spice forests, and dusty market towns, then returns to the archive with sharper questions. The introduction reads less like scaffolding than a manifesto: commercial circuits are never singular but constantly braided, diverging and rejoining, so any "Indian Ocean world" worth the name resists a master plot and instead yields a mosaic of partial, sometimes contradictory scenes whose coherence lies in their productive messiness.

The editors' own trajectories earn that stance. Radhika Seshan, a historian of early-modern India's maritime and urban economies and former head of History at Savitribai Phule Pune University, has long mapped port–hinterland linkages and provincial markets; her recent coedited *Wage Earners in India 1500–1900* presses readers to place granular labor regimes alongside long-distance trade.

Ryuto Shimada, an associate professor of Asian history at the University of Tokyo, has traced intra-Asian commodity networks with particular acuity in *The Intra-Asian Trade in Japanese Copper by the Dutch East India Company*, showing how VOC-era flows hinged on Asian intermediaries as much as on European firms. That combined expertise on coastal–interior ties, labor and urban worlds, and the intra-Asian logistics of commodities underwrites the book's refusal of neat arcs. It also explains its archive-forward method: Dutch *dagregisters*, Marathi Modi records, Persian travelogues, French factory letters, and zakat accounts are treated not as corroboration for big theses but as engines of interpretation, capable of unsettling scale and sequence.

The volume's first half, given over to maritime arenas, fulfills that promise with measured confidence. Shohei Okubo's reconstruction of opium routes from Bihar to Batavia treats monopoly less as an achieved structure than as a fragile aspiration, constantly unsettled by smugglers, private traders, and the sheer unpredictability of monsoon logistics. Tomoko Morikawa's study of the 1685 Safavid mission to Siam has an almost novelistic sense of pace: Persian diplomats drift between ports, note the prayer habits of shipmates and the texture of coastal bazaars, and, in doing so, expose the shrinking horizon of Safavid ambition. Kazuo Kobayashi deftly links Pondicherry's modest textile mills to Senegambian gum forests, showing that the rebirth of a French Indian port after 1816 depended on demand curves that curved well beyond the Bay of Bengal. Hideaki Suzuki's itinerant Kachchhi Bhatiya merchants, forever departing Kachchh, forever returning, supply a human counterpoint to the commodity histories, reminding us that circulation is also emotional labor carried in accents and account books.

If the sea chapters evoke movement, the landward essays dwell on the granular mechanics that enable it. Neelambari Jagtap's portrait of Tal Konkan in the 17th century is quietly revisionist: provincial ports such as Rajapur are shown to feed, and often frustrate, the strategies of European companies, yet their rhythms remain tuned to hinterland markets like Raibag rather than to imperial metropoles. Sumitra Kulkarni extends that sensibility into the eighteenth-century Konkan, tracing how war, toll-barriers, and new postal timetables re-strung older coastal–interior linkages. Michihiro Ogawa's detailed mapping of Indapur pargana's customs houses supplies the local state its due; bullock-loads of salt and jaggery become, in his reading, data points in a Maratha fiscal geography that was anything but static.

Throughout, the editors allow their contributors to linger over archival eccentricities, a Persian scribe's irritation with Buddhist "infidels," an auction ledger's fluctuating opium prices, the sketch of a Konkan salt-warehouser's night halt. That tolerance for the anecdotal is one of the collection's understated strengths: it prevents smooth narratives and foregrounds contingency. Yet the essays converse with one another more by resonance than by design; a reader might yearn for an explicit cross-chapter dialogue on, say, the social afterlives of monopoly or the emotional vocabularies of itinerant traders. The introduction gestures toward such themes, but subsequent signposting is sparse.

Methodologically, the book is unapologetically eclectic. Quantitative graphs of opium auctions rub shoulders with micro-philological readings of Persian travelogues; GIS-style maps of Konkan trade routes sit beside more impressionistic sketches of French warehouse accounts. The effect is enriching, though occasionally disorienting. Works that favor longue durée economic patterns are placed alongside chapters that hover within a single diplomatic episode; the shifts in scale require, and repay, close attention. Importantly, the plurality of sources, Dutch *dagregisters*, Marathi Modi records, French factory letters, de-centers Anglo-imperial perspectives without trumpeting the fact.

One might query what remains outside the frame. East African voices appear primarily through European mediation; the ecological terms of exchange, forests felled for ship-timber, fields rewritten by cash-crop demand receive less sustained treatment than budgets or correspondence. Gender surfaces briefly in Suzuki's note on male Bhatiya migration taboos but is not pursued further. These silences are perhaps inevitable in a slim volume that attempts a broad canvas, yet they signal directions for future work rather than weaknesses of execution.

In the end, *Connecting the Indian Ocean World* wins you over not by hammering its sea into a single, airtight thesis, but by letting it breathe. Across its seven chapters, the ocean shape shifts—now a highway for merchants, now a tariff wall for treasurers, now a rumor's favorite playground, and occasionally the moody monsoon hazard that ruins your travel plans. The land, meanwhile, refuses to play the quiet background. Pepper vines curl into the narrative, postal runners pound dusty roads, and Maratha tax-farmers keep the inland ledgers humming, reminding us that, as Michael Pearson warned, the tang of ozone is never far from the grit between your toes. It's this refusal to let either sea or shore sit still patiently documented, free of historical chest-thumping, that makes the book's contribution to Indian Ocean historiography feel both persuasive and oddly intimate. The work will be of particular value to scholars and graduate students in maritime history, South Asian studies, and global history, as well as to advanced readers seeking a nuanced, source-rich account of the region's interconnected worlds.

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Call for Papers and Style Guide

JTMS Summer/Fall 2026 Issue Call for Papers

The *Journal of Territorial and Maritime Studies* (*JTMS*) is soliciting submissions for its Summer/Fall 2026 issue. *JTMS* is an interdisciplinary journal of research on territorial and maritime issues sponsored by the Northeast Asia History Foundation with editorial offices hosted by Yonsei University in South Korea. The journal provides an academic medium for the announcement and dissemination of research results in the fields of history, international law, international relations, geography, peace studies, and any other relevant discipline as they pertain to terrestrial and maritime territorial issues. The journal covers all continental areas across the world, and it discusses any territorial and maritime subjects through the various research methods from different perspectives; moreover, practical studies as well as theoretical works, which contribute to a better understanding of terrestrial and maritime territorial issues, are encouraged.

For consideration in the Summer/Fall 2026 issue, Manuscripts should be submitted electronically to *jtms@yonsei.ac.kr* by February 1, 2026. Submitted papers should include four major sections: the title page, structured abstract, main body, and references. The title page should contain the title of the paper, the author's name, the institutional affiliation, and keywords. To be considered, manuscripts must follow the *JTMS* style guide available on our website. A length of maximum 9,000 words is preferred for an article, including endnotes, and approximately 2,000 words for a review. Inquiries may be sent via the email address provided above.

Our style guide and other journal information may be found on our website at: *http://www.journalofterritorialandmaritimestudies.net/*

JTMS Call for Blog Entries

The blog of *Journal of Territorial and Maritime Studies* welcomes submissions for blog entries. This forum is intended to discuss topics related to recent territorial and maritime news, research, and policy. It is hoped that this blog will help bring a fresh perspective on how to deal with territorial and maritime issues and the complexities these issues present.

Those wishing to submit a blog post can send their post to *jtms*@yonsei.ac.kr along with the author's contact info, bio, and a recent photo.

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JTMS Style Guide

General Guidelines

JTMS is a scholarly journal. Paragraphs must be fully developed without contractions, first and second person pronouns, repetition, jargon, sexist language, or awkward syntactical constructions. Use a limited number of succinct headings and subheadings that are underlined or italicized as appropriate. Carefully honed style that is in a mellifluous prose is as important as substantive content. *JTMS* recommends authors ask colleagues whose writing style they respect for help with review and revision. Please note that all accepted material is subject to editorial emendation.

Length: Research articles should be no more than 9,000 words, commentary essays no more than 4,000 words and book reviews no more than 2,000 words.

Format: Research should be saved as Microsoft Word document formatted Times New Roman, 12-point font, double-spaced. There should be generous margins, no right-hand justification, and pages numbered consecutively.

Title Page: Title page must include (1) the title of the paper, (2) author's contact information including name, affiliation, address, phone number, fax number, email address, (3) A structured abstract (see samples below) and a few keywords of the paper.

Biography: Author's biographical statement (75 words or less) must be underneath his/her contact information. This will be edited and published in the *Journal of Territorial and Maritime Studies*.

Headings: *JTMS* uses three levels of headings. Major headings (heading level 1) are center justified in bold with no indentation of the first sentence following the heading. Secondary heading (heading level 2) is left justified in italic with the first sentence after the heading indented. Tertiary heading (heading level 3) is left justified in italic with the first sentence after the heading beginning on the same line.

Tables & Figures: Insert each table or figure on a separate page at the end of the text. Indicate the position of the table or figure in the text (e.g., Insert Table 2 here). The page containing the table or figure should be placed after the page that first references the table/figure in the text. Authors have the responsibility of providing high quality figures and images in tiff format and a resolution of 800dpi or higher. Supporting materials may be submitted as hard copies for scanning or through email submission. Please forward all materials to the editor.

One File: Submit the paper as one file in the following order: Title, Structured Abstract, Text, Endnotes, Tables and Figures, and Biographical Statement.

Endnotes: Use full citation endnotes with no bibliography or reference list. Endnotes should be brief, used sparingly, and consecutively numbered with subscript Arabic numbers. Please convert all footnotes to endnotes.

Book

1. Robert Jervis, The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Nuclear Armageddon (Ithaca, NY: Cornell University Press, 1989), p. 167.

2nd non-consecutive endnote

2. Jervis 1989, p. 160

Consecutive endnote

3. Ibid. p. 50

Journal

2. David Karl, "Proliferation Pessimism and Emerging Nuclear Powers," International Security 21(3) (1996–97), p. 89.

Website

3. Sangwon Yoon and David Lerman, "Hagel Calls on North Korea to Tone Down Rhetoric," Bloomberg News, April 11, 2013, *http://www.bloomberg.com/news/2013-04-10/south-korea-braces-for-possible-missile-test-from-north-today.html*, accessed January 21, 2014.

Legal Case Citations

Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar v. Bahrain), Merits, Judgment, ICJ Reports 2001, pp. 101102, para. 205

Non-consecutive citations:

ICJ Reports 1978, supra note 18, p. 50, para. 102

Newspaper Article

4. Andrei Lankov, "Stay Cool. Call North Korea's Bluff," New York Times, April 9, 2013.

Footnote

5. The classic optimist-pessimist debate can be found in Scott Sagan and Kenneth Waltz, The Spread of Nuclear Weapons: An Enduring Debate, 3d. ed. (New York: W. W. Norton & Company, 2013). For detailed surveys of the literature more generally, see Peter Lavoy, "The Strategic Consequences of Nuclear Proliferation: A Review Essay," Security Studies 4(4) (1995), pp. 695–753; and Francis Gavin, "Politics, History and the Ivory Tower-Policy Gap in the Nuclear Proliferation Debate," The Journal of Strategic Studies 35(4) (2012), pp. 573–600.

One File

Submit the paper as one file in the following order: Title, Structured Abstract, Text, Endnotes, Tables and Figures, and Biographical Statement.

Structured Abstract

Article Classification: JTMS categorizes articles into six of the following classifications: Research Paper, Viewpoint, Technical Paper, Conceptual Paper, Case Study, and General Review. Please write one of the categories in which your paper belongs on the article title page.

The article title page must include a structured abstract with 4–5 of the following subheadings: (1) Purpose, (2) Design/Methodology/Approach, (3) Findings, (4) Practical Implications, (5) Originality/Value. The structured abstract, including keywords and article classification, must be 200 words or less.

Structured Abstract Samples

Sample 1:

Article Type: Research Paper

Purpose: Some scholars imprint an academic discipline by their contribution to the manner in which people think and research, namely, by putting forward novel concepts and insights. The purpose of this paper is to examine the impact of Sumantra Ghoshal's work on the study of subsidiaries and multinational enterprises and organizational formats for foreign operations.

Design, Methodology, Approach: A bibliometric study on Bartlett and Ghoshal's well-known book Managing Across Borders: The Translational Solution is performed to assess its impact in international business (IB) research. The entire record of publications in the top leading IB journal, Journal of International Business Studies (JIBS), is examined.

Findings: Theoretically supported, Ghoshal's work was keenly influenced by his corporate experiences and his constant questioning of the dominant theories and assumptions. The analyzes in this paper show the impact of the work on the "transnational solution," namely, on the understanding of multinationals and subsidiaries, thus being one of the most notable contributions for IB research over the past 20 years.

Practical Implications: Useful for graduate students and in writing a literature review, this paper presents an interesting manner to examine a scholar's and a theory's impact on a discipline.

Originality, Value: This paper presents an extensive bibliometric analysis of research published over a time-span of 22 years in international business studies.

Sample 2:

Article Type: Research Paper

Purpose: While many studies on institutional environment have primarily focused on the influence of the host country environment, limited insights have been offered on how the different dimensions of home institutions affect firm internationalization. This paper aims to fill this gap by investigating the effects of regulatory institutions at home.

Design, Methodology, Approach: Using country governance quality to proxy quality of regulatory institutions, this study attempts to reveal how regulatory institutions at home facilitate a multinational enterprise's (MNE's) international expansion and why the influence differs in different country clusters. Using hierarchical linear modeling and

cluster analysis, proposed hypotheses were tested with a three-year panel 511 firms from 38 countries.

Findings: The results provide substantial support for authors' hypotheses that MNEs with high governance quality at home are more engaged in internationalization than those with low governance quality at home. Moreover, differences in institutional effect do exist between country clusters.

Practical Implications: This study provides evidence that while country difference exists, governance quality at home can facilitate MNE's expansion into foreign markets. This finding will help managers of any MNEs to consider country-level factors and evaluate the governance quality at home before committing resources into foreign operations.

Originality, Value: Building on the institutional environment literature, this theory and results make original contributions by underscoring how the consideration of regulatory institutions at home can significantly improve understanding of institutional influence on MNEs. The findings have important implications for both international business researchers and managers of MNEs.

McFarland

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