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FORUM

UNCLOS under Fire: Recalibrating Maritime Security Governance

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Abstract
Maritime security challenges are intensifying globally, from armed attacks on shipping in the Red Sea to critical infrastructure sabotage and environmental threats from shadow fleets. These developments have led some to question whether the United Nations Convention on the Law of the Sea (UNCLOS) remains 'fit for purpose'. This article reframes that debate, suggesting that maritime security operates through a complex assemblage of institutions and mechanisms. In this context, UNCLOS is best understood not as a monolithic 'constitution', but as one important site in a more complex and dynamic system of maritime security governance. It examines how the United Nations (UN) system, regional organisations and informal arrangements collectively address maritime security challenges, revealing both the strengths and limitations of this diverse governance landscape. The analysis shows that while this complexity enables flexible responses to varied challenges, it also creates coordination problems and accountability gaps. Rather than calling for a revision of UNCLOS, the article proposes three pathways for recalibrating the system: establishing a dedicated UN maritime security body; addressing interface conflicts through targeted interventions; and selectively formalising successful informal mechanisms.

Keywords: maritime security; law of the sea; ocean governance; governing assemblages; global security governance

1. Maritime security governance today

The contemporary maritime domain faces an unprecedented array of security challenges. Attacks on commercial shipping by Houthi forces in the Red Sea, sophisticated acts of sabotage on critical maritime infrastructure like the 2022 Nord Stream 2 gas pipeline attack in the Baltic Sea and the emergence of a global 'shadow fleet' primarily carrying sanctioned oil and posing significant environmental risks exemplify these threats.[1] These

[1] On Houthi attacks in the Red Sea, see EJ Lee, 'Red Sea, Tensions, Tanker War Lessons?' (2025) 66 Survival 115, 115–26. On the Nord Stream 2 attacks, see N Adomaitis and J Ahlander, 'What is Known about

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developments occur against a backdrop of persistent challenges: escalating maritime cyberattacks, ongoing piracy, seaborne trafficking of arms, narcotics and persons and illicit fishing operations.[2] This proliferation of maritime security challenges has prompted major scrutiny of the international legal framework governing the oceans. A growing number of politicians, diplomats and observers have raised the question of whether the core framework of ocean governance—the United Nations Convention on the Law of the Sea (UNCLOS)—continues to be appropriate or sufficient to provide the means for coping with such challenges. As phrased by a 2022 British Parliamentary inquiry, debates continue on whether UNCLOS remains 'fit for purpose'.[3]

This line of questioning seems logical given that UNCLOS is often presented as the 'constitution' of the oceans, governing all aspects of maritime activity. Indeed, not only practitioners but also academics tend to prioritise analyses of UNCLOS when investigating global ocean politics and governance. Yet, as this article argues, such 'UNCLOS-centrism' mischaracterises the nature of contemporary maritime security governance. UNCLOS neither represents the totality of the rules and regulations that govern the sea today, nor was it ever designed to comprehensively address security challenges.[4] Indeed, drafted during the Cold War, it deliberately excluded many peace and security-related matters. Thus, while UNCLOS indeed provides essential principles for ocean governance, it falls short of being the 'global constitution' for the oceans envisioned by some of its architects.[5] In consequence, rather than putting UNCLOS 'under fire', it is necessary to scrutinise the broader architecture of maritime security governance. This requires consideration of diverse institutions through which rules and regulations for the oceans are developed, negotiated, monitored and enforced, and how they interact and hang together.

This analysis reveals maritime security governance to be neither centralised nor hierarchical but, rather, a complex assemblage held together by a web of formal and informal relationships, rules and practices, which operate at both regional and global levels. Addressing maritime security challenges thus requires an examination of how the ocean governance assemblage could be recalibrated to meet current demands. More specifically, this article argues that maritime security governance has become increasingly complex—both in terms of the number and diversity of institutions. Although this complexity has enhanced maritime security around the world, it has also led to new problems, such as institutional overlap and fragmentation, that undermine the system's effectiveness. Maritime security governance thus requires

the Nord Stream Gas Pipeline Explosions?' *Reuters* (22 August 2025) <https://www.reuters.com/world/europe/what-is-known-about-nord-stream-gas-pipeline-explosions-2025-08-21/>. On the shadow fleet, see International Bar Association, 'Russia's Shadow Fleet: A Growing Threat' (3 February 2025) <https://www.ibanet.org/Russia-shadow-fleet-a-growing-threat>.

[2] For an overview of current challenges in maritime security, see C Bueger and T Edmunds, *Understanding Maritime Security* (OUP 2024).

[3] International Relations and Defence Committee, *UNCLOS: The Law of the Sea in the 21st Century* (HL 2022, 159–I).

[4] S Bateman, 'UNCLOS and Its Limitations as the Foundation for a Regional Maritime Security Regime' (2007) 19 Korean Journal of Defense Analysis 27.

[5] SV Scott, 'The LOS Convention as a Constitutional Regime for the Oceans' (Brill 2005) 9–38; R Lewis, 'A "Constitution for the Oceans"? The Law of the Sea Convention as a Living Treaty' (2025) 74 ICLQ 1.

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new institutions to coordinate this complexity to ensure a certain degree of coherence at the global level without stifling innovation by centralising governance efforts within a single global framework or institution.

This article proceeds in three parts: Section 2 establishes an analytical framework through a brief review of maritime security challenges and how these have been discussed in UNCLOS-centred scholarship, before going on to outline the analytical guidelines that inform the subsequent mapping. Section 3 then presents the results of this mapping starting with a review of global institutions. The role and function of regional and informal mechanisms as well as the importance of non-State actors in the process are discussed in Section 4. Section 5 concludes by exploring potential pathways for systemic recalibration that could allow for better responses to maritime security challenges.

2. Entering the maritime security governance assemblage

Historically, security at sea has centred on managing conflicts between States, upholding peaceful relations and averting armed conflict at sea. Since the 1990s, the agenda of 'maritime security' has broadened this understanding to encompass a wider range of issues and threats from non-State actors. While the term 'maritime security' lacks a commonly accepted definition, it generally implies a focus on safeguarding maritime activities and protecting the marine environment from threats such as terrorism, piracy and other forms of insecurity and violence at sea. Since the 2000s, maritime security issues have increasingly been prioritised on the international peace and security agenda. Initial concerns around maritime terrorism were quickly joined by the need to develop global responses to piracy attacks off the coast of Somalia and elsewhere in the late 2000s, along with other manifestations of cross-border crime on the oceans. Maritime security today concerns a wide range of challenges, including not only illicit fishing, trafficking of various sorts by sea and environmental crimes, but also physical and cyberattacks on shipping and sabotage of maritime installations. Further, so-called 'grey zone' activities and hybrid threats in regions such as the Baltic and the South China Sea are often included in the maritime security agenda.[6]

The proliferation of such challenges and the growing importance and complexity of the maritime security agenda have exposed gaps and weaknesses in the international legal regime for the oceans. Particular attention has been paid to UNCLOS and whether there is a need to reinterpret, complement or even modify it to better accommodate and strengthen the range of responses to contemporary challenges of maritime security and ocean governance.[7]

[6] So-called 'grey zone' activities commonly refer to coercive actions by States or their proxies which avoid the overt or attributable use of military force and therefore fall below the threshold of outright war. Hybrid threats combine military and non-military and overt and covert means to achieve political and strategic effects. C Bueger, T Edmunds and J Stockbruegger, 'Securing the Seas: A Comprehensive Assessment of Global Maritime Security' (United Nations Institute for Disarmament Research (UNIDIR) 2024) 39–72 <https://unidir.org/wp-content/uploads/2024/11/Securing_the_seas_web-1.pdf>.

[7] MRK Chowdhury et al, 'Maritime Dispute Resolution: Understanding Adequacy of UNCLOS: A Systematic Review' [2024] Australian Journal of Maritime & Ocean Affairs 1; E Mendenhall, 'Drivers and Mechanisms of Change in UNCLOS: An International Relations Research Agenda' in J Alger and UR Sumalia (eds), *A Research Agenda for Sustainable Ocean Governance* (Edward Elgar 2025) 135; S Rometius, 'Forty Years' Reflection of the Legislative Features of the UNCLOS: A Critical Analysis' (2023) 16 Journal of East Asia and International Law 29.

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2.1. The limitations of UNCLOS-centrism

Recent maritime security challenges have prompted criticism of UNCLOS from both policy analysts and practitioners, who argue that it provides insufficient or ambiguous guidance for contemporary threats and pays limited attention to enforcement. Some of these omissions are longstanding and relate to the efficacy of the flag State regime in providing enforcement mechanisms on the high seas.[8] Others concern issues which were either not envisaged or afforded little appreciation at the time that UNCLOS was agreed, including climate change and sea-level rise,[9] maritime autonomous vehicles,[10] sub-sea cable protection[11] and grey zone activities at sea.[12]

Hence, while many of these critiques are valid on their own terms, their tendency to focus on UNCLOS and related treaties risks occluding many of the other important mechanisms and arrangements through which maritime security is enacted in practice. This UNCLOS-centric perspective stems partly from its remarkable success and the emergence of a specialised legal community dedicated to its interpretation and preservation. However, scholars such as Natalie Klein have demonstrated that the legal framework relevant to maritime security extends far beyond UNCLOS alone.[13] This broader perspective is particularly significant given that UNCLOS did not establish a primary interpretative forum—such as a Conference of the Parties—beyond the International Tribunal for the Law of the Sea (ITLOS). In addition, and while UNCLOS establishes certain rules applicable to military activities, such as those governing innocent passage, it was not designed to address what is now understood as maritime security. As this article demonstrates, other forums, sites and instruments have emerged to fill this governance gap. UNCLOS thus represents only one component within a larger system that is characterised as the 'maritime security governance assemblage'.

2.2. Assemblages: an analytical framework

To understand contemporary maritime security governance, it is useful to draw on frameworks that are apt at grasping complexity and allow for consideration of informal

[8] R Collins, '"Outlaw Oceans" and "Lawless Seas"?: Revisiting the High Seas as a Regulatory Space under (and after) UNCLOS 1982' in K Siig, B Feldtmann and FMW Billing (eds), *The United Nations Convention on the Law of the Sea: A System of Regulation* (Routledge 2023) 25; N Klein, 'Geneva Declaration on Human Rights at Sea: An Endeavor to Connect Law of the Sea and International Human Rights Law' (2022) 53 ODIL 232; J Mossop, 'Can We Make the Oceans Greener: The Successes and Failures of UNCLOS as an Environmental Treaty' (2018) 49 VUWLR 573.

[9] N Oral, 'Sea-Level Rise and Maritime Boundaries: From Uncertainty to Clarity?' (2025) 74(Supp) ICLQ 163.

[10] B Dong, L Bautista and L Zhu, 'Navigating Uncharted Waters: Challenges and Regulatory Solutions for Flag State Jurisdiction of Maritime Autonomous Surface Ships under UNCLOS' (2024) 161 Marine Policy 106039. See also B Stępień and M Rivera León, 'Law Enforcement in Autonomous Shipping across Maritime Zones: Rethinking Jurisdictional Challenges under UNCLOS' (2025) 74(Supp) ICLQ 47.

[11] M Cardillo, 'Navigating International Law Safeguards for Submarine Cables: Charting a Course for Effective Protections Note' (2024) 49 YaleJIL 312. See also A Lott, 'Conventional Jurisdictional Approaches to Protecting Offshore Infrastructure' (2025) 74(Supp) ICLQ 63.

[12] R McLaughlin, 'Different Pacta or Different Servanda? Grey-Zone Lawfare and Law of the Sea-Based Passage and Operational Rights' (2024) 55 ODIL 329.

[13] For an overview, see N Klein, *Maritime Security and the Law of the Sea* (OUP 2011).

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governance processes and relations. Here, the article draws on assemblage thinking which has been developed for such purposes. As a structural metaphor and methodology that originates in anthropology and the philosophy of Giles Deleuze, assemblage thinking has been widely employed across socio-legal studies, international relations theory and geography.[14] In the context of this article, assemblage thinking focuses on the way in which heterogeneous actors, institutions, ideas and objects come together to form interlinked arrangements of governance and action. It offers a valuable framework for examining complex governance arrangements by directing analysis towards practices and relations.

Assemblage thinking also invites exploration of a broader range of 'sites' where governing potentially takes place, taking us beyond institutions that draw on treaty frameworks, such as informal governance forums. This approach thus broadens our understanding of rulemaking processes and sources and highlights the significance of seemingly minor instruments, such as indicators, lists, best practices or information-sharing classifications, which are often produced by informal bodies, non-State actors or experts rather than the governing councils of major international institutions.[15]

Assemblage analysis has proven particularly effective in deciphering complex political phenomena. These include studies of global governance, which examine, for instance, how scientific panels, non-governmental organisations (NGOs), State agencies and international organisations collectively shape climate or conservation policy.[16]

Drawing on insights from assemblage thinking, this analysis showcases the complexity and diversity of maritime security governance along three primary axes:

i. First, formality: this axis distinguishes between formalised governance mechanisms, such as those established by treaties with permanent secretariats and headquarters, and informal arrangements, such as regular gatherings or non-binding memoranda of understanding.
ii. Second, scale: this axis differentiates between universal and global governance mechanisms and those with regional scope, defined either through explicit membership criteria or geographical parameters.
iii. Third, comprehensiveness: this axis captures whether sites address maritime security holistically or focus on particular issues or subsets of challenges, such as piracy or illicit fishing activities.

Section 3 presents the results of a systematic mapping of the maritime security governance assemblage that was conducted in 2024.[17] The selection of which bodies to include was influenced by how maritime security is conceptualised and which issues fall within its scope. Rather than adopting a rigid definition, the mapping employed an

[14] See, e.g. C Bueger and T Liebetrau, 'Governing Assemblages: Territory, Technology and Traps' in F Gadinger and JA Scholte (eds), *Polycentrism: How Governing Works Today* (OUP 2023) 236.

[15] C Bueger, 'Territory, Authority, Expertise: Global Governance and the Counter-Piracy Assemblage' (2018) 24 European Journal of International Relations 614; G Sullivan, 'Transnational Legal Assemblages and Global Security Law: Topologies and Temporalities of the List.' (2014) 5 TLT 81; J Larsen, *Counter-Piracy Law in Practice: An Ethnography of International Security Governance* (Routledge 2023).

[16] C Corson et al, 'Assembling Global Conservation Governance' (2019) 103 Geoforum 56; T Naylor, 'Assembling International Society' (2025) 62 International Politics 107.

[17] Bueger, Edmunds and Stockbruegger (n 6).

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inductive approach, examining entities that explicitly present themselves as addressing issues of maritime security. It further included bodies that, while not prominently using the term, engage with the three core dimensions of maritime security: inter-State naval conflict, maritime terrorism and blue crimes.[18]

While the objective is comprehensiveness, the complexity of maritime security governance requires that the article examines selected illustrations from this vast landscape. The subsequent discussion proceeds systematically, beginning with a mapping of the United Nations (UN) system and affiliated international organisations (Section 3). It then examines formal and informal regional mechanisms with maritime security functions, including regional economic communities and UN-facilitated arrangements (Section 4). The final section evaluates the role of non-State actors in maritime security governance (Section 5).

3. The UN system: a complex web of maritime security governance

The UN system exemplifies how maritime security governance operates through diverse, interconnected institutions rather than through a single hierarchical structure. While UNCLOS provides an important foundation, maritime security governance within the UN system incorporates multiple bodies with varying mandates, competencies and approaches.[19]

Using the analytical framework outlined in Section 2, it is clear that the UN system consists mainly of formal institutions and mechanisms that address maritime security at the global level. Yet while the Security Council and the General Assembly address, at least potentially, all issues related to maritime security, the UN Secretariat and UNCLOS bodies target more specific legal, developmental and environmental issues. The UN system also consists of specialised agencies such as the International Maritime Organization (IMO) and the Food and Agriculture Organization (FAO), which develop specific diplomatic, regulatory and technical solutions to major maritime security challenges, including at the regional level.

3.1. Core UN bodies: Security Council and General Assembly

The Security Council has emerged as a central institution in maritime security through its consistent engagement with maritime threats. Wilson demonstrates how it has increasingly addressed threats and shaped naval operations, particularly in pursuing nuclear proliferators, rogue States and pirates.[20] The Council's maritime security agenda spans several key areas, including maritime sanctions enforcement and the prevention of smuggling through maritime routes,[21] non-proliferation particularly concerning weapons of mass destruction,[22] responses to regional conflicts with maritime dimensions, such as in

[18] Bueger and Edmunds (n 2) 2–3.

[19] N Klein, *Maritime Security and the Law of the Sea* (OUP 2011).

[20] B Wilson, 'The Turtle Bay Pivot: How the United Nations Security Council Is Reshaping Naval Pursuit of Nuclear Proliferators, Rogue States, and Pirates' (2018) 33 EmoryInt'lLRev 1.

[21] TJ Biersteker and Z Hudáková, 'UN Targeted Sanctions: Historical Development and Current Challenges' in PAG van Bergeik (ed), *Research Handbook on Economic Sanctions* (Edward Elgar 2021) 107.

[22] R Nayan, 'The United Nations and Nuclear Issues' (2020) 44 Strategic Analysis 438.

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Yemen and Libya,[23] and specific maritime security threats, like piracy off the Coast of Somalia and in the Gulf of Guinea.[24]

In 2021, India sponsored a high-level debate on maritime security, which marked a watershed moment for how the Council approached these issues.[25] For the first time, Council members comprehensively examined maritime security challenges, expanding their conception to include environmental challenges and illicit fishing. While proposals for a dedicated maritime security sub-body remained (and continue to remain) unrealised, the debate established maritime security as a standalone agenda item rather than merely a component of regional conflicts or specific threats. It is expected that the members that joined the Council in 2025—specifically the shipping powers of Denmark, Greece and Panama—will add new momentum to these debates.[26]

The General Assembly provides another crucial governance site through its standing agenda item on 'oceans and the law of the sea'. This annual resolution draws on extensive inputs from the UN Secretary-General's report, related committees, UN organisations and Member States. The resolution's dedicated section on 'marine safety and security' has grown significantly, with recent iterations giving substantial attention to emerging maritime security matters and transnational organised crime at sea.[27]

The Assembly has several other initiatives that concern the seas, but which only address maritime security at the margins. This work is structured through three primary mechanisms. The UN Open-Ended Informal Consultative Process investigates specific annual themes, providing a forum for detailed examination of emerging challenges.[28] The Regular Process for Global Reporting produces comprehensive assessments of the marine environment, including security-related impacts on ocean governance.[29] Finally, the First Committee regularly addresses maritime security within its broader mandate, with a particular focus on State conflicts and disputes, small arms smuggling, non-proliferation and counterterrorism.[30] These discussions can inform subsequent General Assembly resolutions and contribute to the broader development of maritime security governance frameworks.

3.2. The UN Secretariat and UNCLOS bodies

The Secretariat's engagement with maritime security spans multiple functions. Through regular briefings and reports, it provides crucial support to the Security

[23] See, e.g. UNSC Res 2739 (27 June 2024) UN Doc S/RES/2739 (on Yemen); UNSC Res 2292 (14 June 2016) UN Doc S/RES/2292 (on Libya).

[24] UNSC Res 2634 (31 May 2022) UN Doc S/RES/2634.

[25] UNSC, 'Concept Note for the Security Council High-Level Open Debate on the Theme "Enhancing Maritime Security: A Case for International Cooperation"' (27 July 2021) UN Doc S/2021/680.

[26] C Bueger, 'All Hands on Deck at the United Nations Security Council' (UNIDIR, 19 December 2024) <https://unidir.org/all-hands-on-deck-at-the-united-nations-security-council/>.

[27] See, e.g. UNGA Res 79/144 (12 December 2024) UN Doc A/RES/79/144, 19–31.

[28] See, e.g. UN Division for Ocean Affairs and the Law of the Sea, *UN Open-Ended Informal Consultative Process on Oceans and the Law of the Sea* <https://www.un.org/depts/los/consultative_process/consultative_process.htm>.

[29] See, e.g. UNGA Res 65/27 (7 December 2010) UN Doc A/RES/65/27.

[30] See, e.g. UNGA, 'First Committee Coalesces around UN Disarmament Machinery Drafts, but Differences Persist over "ICT" Security, Regional Disarmament in the Mediterranean Region' (2 November 2023) UN Doc GA/DIS/3732.

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Council's maritime security work. This includes the series of annual reports on Somali piracy (2008–2022) and comprehensive analyses of conflicts with maritime dimensions in Yemen, Mozambique and Libya.[31] The annual reports to the General Assembly on oceans provide another important vehicle for addressing maritime security challenges.[32]

The Division for Ocean Affairs and the Law of the Sea (DOALOS) serves as both UNCLOS Secretariat and Coordinator of UN-Oceans. While UN-Oceans coordinates environmental and development activities across 31 UN entities, it lacks a specific maritime security mandate. DOALOS also manages the World Ocean Assessment process which, despite its primary environmental focus, addresses security-related issues such as shipping impacts, piracy and illicit fishing.

The UNCLOS framework has also established several specialised institutions. ITLOS has heard 33 cases since 1996, including landmark decisions like the *Dispute concerning the Delimitation of the Maritime Boundary between Mauritius and Maldives in the Indian Ocean (Mauritius/Maldives)* and the *Request for an Advisory Opinion Submitted by the Commission of Small Island States on Climate Change and International Law*.[33] The International Seabed Authority governs deep-sea mining under the common heritage principle, though its security role remains potential rather than actual.[34] UNCLOS also has a Meeting of States Parties to the Convention. However, the mandate of this annual meeting is limited to administrative questions, such as the appointment of judges and the approval of budgets. The meeting does not review UNCLOS nor comment on its interpretation or application. This has at times been controversial and is often seen as a major gap in the treaty.[35]

3.3. The 'Big Five': specialised UN agencies in maritime security

Five key UN agencies have developed distinct yet overlapping maritime security portfolios, each approaching maritime security through its specific mandate and institutional framework:

i. The IMO is the oldest UN body addressing maritime security. Its engagement spans from the 1960s discussions of narcotics smuggling to contemporary challenges of cybersecurity and sanctions evasion.[36] The IMO's Maritime Safety Committee (MSC) and Facilitation

[31] See, e.g. UNSC, 'The Situation with respect to Piracy and Armed Robbery at Sea off the Coast of Somalia: Report of the Secretary-General' (3 November 2021) UN Doc S/2021/920.

[32] See, e.g. UN Division for Ocean Affairs and the Law of the Sea, *Oceans and the Law of the Sea in the General Assembly of the United Nations: Reports of the Secretary General* <https://www.un.org/depts/los/general_assembly/general_assembly_reports.htm>.

[33] *Request for an Advisory Opinion Submitted by the Commission of Small Island States on Climate Change and International Law* (Advisory Opinion) (Case No 31, 21 May 2024). See K Kittichaisaree, *The International Tribunal for the Law of the Sea* (OUP 2021) 65–112.

[34] E Egede, 'Maritime Security and Deep Seabed beyond National Jurisdiction' in C Banet (ed), *The Law of the Seabed: Access, Uses, and Protection of Seabed Resources* (Brill 2020) 185.

[35] T Treves, 'The General Assembly and the Meeting of States Parties in the Implementation of the LOS Convention' in AG Oude Elferink (ed), *Stability and Change in the Law of the Sea: The Role of the LOS Convention* (Brill 2005) 55.

[36] OA Eruaga, 'The Role of the IMO in Promoting Maritime Security' in L Carballo Piñeiro and MQ Mejia Jr (eds), *The Elgar Companion to the Law and Practice of the International Maritime Organization* (Edward Elgar 2024) 155.

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Committee (FAL) serve as primary venues for addressing ship and port security challenges. However, the IMO continues to be dominated by flag States, trading nations and the global maritime transport industry, and its ability to address major environmental threats such as greenhouse gas emissions has thus remained limited.[37]

ii. The FAO approaches maritime security through its International Plan of Action to combat illegal, unreported and unregulated fishing. The FAO also works through providing secretariat roles to regional fisheries management organisations (RFMOs), developing standards and methodologies for assessing and responding to illicit fishing.[38]

iii. The UN Environment Programme (UNEP) plays a key role in managing 18 regional seas conventions and action plans. These typically include issues of countering marine pollution, search and rescue, salvage, marine heritage protection and cooperation and information-sharing amongst regional maritime law enforcement agencies. In addition, UNEP provides technical assistance to States for environmental monitoring, restoration and incident response and works closely with environmental regulators and protection agencies.[39]

iv. The UN Office on Drugs and Crime (UNODC) operates the Global Maritime Crime Programme across 26 States. The programme has evolved from its origins in Somali piracy prosecution support to encompass comprehensive maritime security capacity-building activities with partner States around the globe.[40] UNODC also facilitates and supports a range of informal regional mechanisms focused on maritime law enforcement.

v. The International Organization for Migration (IOM) addresses maritime security through its Immigration and Border Management Division. The IOM supports States in developing maritime border management policies, legislation and operational systems, aiming to balance humanitarian concerns with security requirements.[41]

Each of these agencies approaches maritime security through a distinct problem set. The IMO primarily addresses the domain as a problem of maritime safety, the UNEP deals with marine environmental protection, the UNODC is concerned with transnational organised crime at sea, the FAO focuses on illegal fishing and the IOM on border management and human security. Beyond these core agencies, a diverse network of 19 additional UN bodies and 10 non-UN international organisations contribute to maritime security governance, including the International Atomic Energy Agency's work on nuclear waste disposal at sea, the International Labour Organization's focus on seafarer safety and working conditions and the International Telecommunication Union's work on protecting subsea cables.

While UN agencies are encouraged to coordinate their work through the 'Delivering as One' approach under the UN System Chief Executives Board for Coordination and national resident coordinators, in practice, coordination and information-sharing

[37] J Stockbruegger and C Bueger, 'From Mitigation to Adaptation: Problematizing Climate Change in the Maritime Transport Industry' [2024] WIREs Climate Change 894.

[38] UN Food and Agricultural Organization (FAO), 'Regional Fishery Body Secretariat's Network' (2018); FAO, 'Implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing' (2024).

[39] N Oral, 'Forty Years of the UNEP Regional Seas Programme: From Past to Future' in R Rayfuse (ed), *Research Handbook on International Marine Environmental Law* (Edward Elgar 2015) 351.

[40] UN Office on Drugs and Crime, *Global Maritime Crime Programme* <www.unodc.org/unodc/en/piracy/index.html>.

[41] PM Frowd, 'Developmental Borderwork and the International Organization for Migration' (2017) 44 Journal of Ethnic and Migration Studies 1656.

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between the different agencies on maritime security has often been limited due to the differing mandates, problem sets and areas of priority. This has led to a degree of fragmentation across the UN response and led to calls for a more integrated approach.[42]

3.4. Summary

The UN system addresses maritime security and ocean governance across a large number of formal institutions that deal with specific maritime security issues and challenges from different mandates. The absence of a coordination body or oversight mechanism for maritime security implies high-level fragmentation and a lack of coherence. Moreover, while the UN's formal institutions provide stability, they lack the flexibility to adapt quickly and to address new and emerging maritime security challenges that do not neatly fit into their mandate or expertise.

4. Regional governance mechanisms

Regional mechanisms address key gaps in the UN framework for maritime security, especially the system's lack of a coherent governance framework and its inability to adjust and respond flexibly to new threats. Ranging from comprehensive regional strategies to informal cooperation mechanisms, they enhance maritime security governance but they also increase complexity with overlapping institutions and frameworks—both formal and informal—at different regional scales. The resulting assemblage of regional mechanisms thus demonstrates both the potential and the limitations of addressing maritime security challenges through multilayered governance structures.

4.1. Regional organisations

Regional organisations have increasingly recognised maritime security as a strategic priority, though their approaches and capabilities vary significantly. The European Union (EU) exemplifies the most comprehensive regional approach, operating three agencies with maritime security functions beyond territorial waters: the European Maritime Safety Agency, the European Fisheries Control Agency and the European Border and Coast Guard Agency (Frontex). While these are mainly focused on European seas, the EU's ambition as a global maritime security provider is demonstrated through naval operations and capacity-building missions in the Gulf of Guinea and the Western Indian Ocean. Notably, the EU maintains a comprehensive information-sharing system for Member States and has developed a dedicated maritime security strategy that extends beyond its territorial waters to support global ocean governance.[43]

The African Union has developed two key frameworks: the African Integrated Maritime Strategy and the Lomé Charter on Maritime Security and Safety.[44] However, the Charter's limited ratification (only three of 35 signatories) illustrates the challenges

[42] Bueger, Edmunds and Stockbruegger (n 6) 37–38.

[43] C Bueger and T Edmunds, 'The European Union's Quest to Become a Global Maritime Security Provider' (2023) 76 US Naval War College Review 1.

[44] P Brits and M Nel, 'African Maritime Security and the Lomé Charter: Reality or Dream?' (2018) 27 African Security Review 226.

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of formalising regional maritime security cooperation. Despite this limitation, all the continent's subsidiary regional organisations have developed maritime security initiatives, though implementation remains uneven, and is partly driven by donor interests that do not necessarily overlap with regional and local priorities.

In Southeast Asia, the Association of Southeast Asian Nations (ASEAN) facilitates maritime security dialogue but relies heavily on informal cooperation mechanisms. The Malacca Straits Patrol, which coordinates maritime law enforcement activities between Indonesia, Malaysia and Singapore, exemplifies this approach. These informal arrangements have proven effective in addressing specific challenges but lack the institutional foundation for more comprehensive responses.[45] Similarly, the Pacific Islands Forum has taken a more institutionalised approach through its Forum Fisheries Agency (FFA), which coordinates regional responses to illicit fishing and has developed significant surveillance and enforcement capabilities.[46]

Other regional organisations have developed specialised maritime security programmes. The Indian Ocean Commission operates an EU-funded information-sharing centre and regional coordination centre under the Programme for the Promotion of Maritime Security (MASE).[47] The Indian Ocean Rim Association maintains a dedicated working group on maritime security, while the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation is developing its own maritime security strategy. Organisations like the Arctic Council, the Council of the Baltic Sea States and the Union for the Mediterranean focus primarily on maritime safety, search and rescue and marine protection.

4.2. Regional seas conventions and fisheries organisations

The regional governance landscape includes 18 regional seas conventions supported or facilitated by the UNEP and 17 RFMOs supported by the FAO. These mechanisms transcend terrestrial boundaries of regional organisations, facilitating cooperation between neighbouring States, ocean users and international organisations. While early expectations that these forums would integrate broader security concerns have not materialised, they provide important frameworks for addressing specific aspects of maritime security.

Regional seas conventions, developed since the 1970s to complement UNCLOS, now include 146 countries.[48] While not explicitly addressing security concerns like maritime disputes or counterterrorism, they contain significant provisions for environmental monitoring, pollution control and law enforcement cooperation. These conventions

[45] S Edwards, 'Fragmentation, Complexity and Cooperation: Understanding Southeast Asia's Maritime Security Governance' (2022) 44 Contemporary Southeast Asia 87.

[46] B Haas et al, 'Security Cooperation and Fisheries in the Pacific' in J Wallis et al (eds), *Security Cooperation in the Pacific Islands: Politics, Priorities, and Pathways of the Regional Security Patchwork* (Routledge 2025) 241, 245–46.

[47] Bueger and Edmunds (n 43) 71–72.

[48] L Mead, 'The "Crown Jewels" of Environmental Diplomacy: Assessing the UNEP Regional Seas Programme' (International Institute for Sustainable Development, 2021) <https://www.iisd.org/system/files/2021-04/still-one-earth-regional-seas.pdf>.

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have proven particularly effective in strengthening cooperation and interoperability between coast guards and maritime law enforcement agencies.[49]

RFMOs focus primarily on fisheries management in areas beyond national jurisdiction, maintaining vessel blacklists and coordinating enforcement through flag States. While their mandate is specific to fisheries management, their monitoring and enforcement mechanisms contribute to broader maritime security objectives. The relationship between RFMOs and national enforcement agencies has become increasingly important in addressing illegal fishing and related maritime crimes, for instance, in sharing information on suspicious vessels potentially engaged in crimes. However, the interests of local fishing communities are often not adequately represented in these bodies.[50]

Additional cooperative mechanisms have emerged to address specific regional challenges. For example, the Cooperative Mechanism on Safety of Navigation and Environment Protection in the Straits of Malacca and Singapore facilitates dialogue between littoral States, user States and industry stakeholders.[51] The Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) maintains an information-sharing centre in Singapore that has become a crucial resource for monitoring and responding to regional piracy incidents.[52]

4.3. Informal regional cooperation

Informal cooperation mechanisms have emerged as crucial governance tools, often operating through soft law instruments like declarations or memoranda of understanding. The IMO has facilitated two significant regional networks: the Yaoundé Code of Conduct in West Africa and the Djibouti Code of Conduct in the Western Indian Ocean. These frameworks, while lacking formal legal status, promote regional cooperation and coordinate capacity-building and information-sharing.[53]

The evolution of issue-specific formats demonstrates the adaptability of informal mechanisms. The Shared Awareness and Deconfliction forum (SHADE) and the Contact Group on Piracy off the Coast of Somalia (CGPCS) played crucial roles in addressing Somali piracy. The CGPCS has since evolved into the Contact Group on Illicit Maritime Activities, expanding its mandate to address broader maritime crimes, while SHADE is now a crucial instrument in addressing the crisis in the Red Sea. This

[49] See, e.g. the discussion of the Baltic Regional Sea Convention in R Strempel, 'HELCOM's Role in Promoting Sustainable and Safe Shipping and Maritime Security in the Baltic Sea Region' (2025) 6 Discover Sustainability 761.

[50] EJ Molenaar, 'Regional Fisheries Management Organizations' in MC Ribeiro, FL Bastos and T Henriksen (eds), *Global Challenges and the Law of the Sea* (Springer International Publishing 2020) 81.

[51] J Ho, 'Enhancing Safety, Security, and Environmental Protection of the Straits of Malacca and Singapore: The Cooperative Mechanism' (2009) 40 ODIL 233.

[52] J Ho, 'Combating Piracy and Armed Robbery in Asia: The ReCAAP Information Sharing Centre (ISC)' (2009) 33 Marine Policy 432.

[53] OA Eruaga, 'The Role of the IMO in Promoting Maritime Security' in LC Pineiro and MQ Mejia Jr (eds), *The Elgar Companion to the Law and Practice of the International Maritime Organization* (Edward Elgar 2024) 155.

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transformation illustrates how informal mechanisms can adapt to changing security challenges.[54]

Minilateral formats on a macro-regional scope have gained prominence in recent years. In the Indo-Pacific, the Quadrilateral Security Dialogue (Quad) between Australia, India, Japan and the United States (US) has developed significant maritime security components, while the Australia-United Kingdom (UK)-US framework, known as AUKUS, represents a focused approach to maritime capability development in the region.[55] The G7++ Friends of the Gulf of Guinea format exemplifies how informal mechanisms can coordinate military responses and capacity-building while informing Security Council discussions, though effective coordination of assistance and regional information-sharing between international actors and regional States remains challenging.[56]

4.4. Maritime domain awareness and professional forums

A global network of Maritime Domain Awareness (MDA) centres has emerged since the early 2000s, starting with the Italian Navy's Mediterranean initiative. Centres now operate in Singapore (Southeast Asia), Madagascar (Western Indian Ocean), India (Indian Ocean) and Peru (South Pacific), with North Atlantic Treaty Organization and EU initiatives covering the North Atlantic. These centres typically operate through bilateral agreements with host States, focusing on developing common operating pictures and facilitating communication between maritime security agencies.[57] The South Atlantic remains the only major maritime region without dedicated MDA coverage.

Professional forums have become increasingly important coordination mechanisms. They present opportunities for representatives from navies, coastguards and other professional groups to meet, exchange ideas, share best practices and enable interpersonal information sharing outside of formal coordination mechanisms. Navy-to-navy forums like the Western Pacific Naval Symposium (WPNS) and Indian Ocean Naval Symposium (IONS) facilitate cooperation on humanitarian relief, information-sharing and maritime crimes.[58] The WPNS, established in 1988, has developed standardised guidelines, including the Code for Unplanned Encounters at Sea, demonstrating how professional forums can contribute to practical governance solutions.

Coast guard forums, often linked to regional organisations, address both safety and security concerns. The European Coast Guard Function Forum, Arctic Coast Guard

[54] C Bueger and T Edmunds, 'Pragmatic Ordering: Informality, Experimentation, and the Maritime Security Agenda' (2021) 47 Review of International Studies 171, 185–87.

[55] N Bisley, 'The Quad, AUKUS and Australian Security Minilateralism: China's Rise and New Approaches to Security Cooperation' (2025) 34 Journal of Contemporary China 1, 5–7.

[56] K Lindskov Jacobsen and J Riber Nordby, 'Maritime Security in the Gulf of Guinea' (Royal Danish Defence College 2015) 31–32 <https://research.fak.dk/view/pdfCoverPage?instCode=45FBI_INST&filePid=13431409300037 41&download=true>.

[57] C Bueger, 'A Glue That Withstands Heat? The Promise and Perils of Maritime Domain Awareness' in ER Lucas (ed), *Maritime Security: Counter-Terrorism Lessons from Maritime Piracy and Narcotics Interdiction* (IOS Press 2020) 235, 238–40.

[58] J Mortimer, 'Western Pacific Naval Symposium' (1996) 87 Maritime Studies 8; PK Ghosh, 'Indian Ocean Naval Symposium: Uniting the Maritime Indian Ocean Region' (2012) 36 Strategic Analysis 352.

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Forum, Mediterranean Coast Guard Function Forum and the proposed African Coast Guard Function Forum exemplify this trend.[59] Additionally, UNODC's Global Maritime Crime Programme has established professional networks for prosecutors and maritime law enforcement agencies, though these often depend on continued UNODC support and funding.

This diverse landscape of regional mechanisms reveals both the strengths and limitations of current maritime security governance. While regional arrangements provide flexible and context-specific responses to maritime security challenges, their effectiveness is often limited by overlapping mandates, resource constraints and varying levels of institutionalisation. The proliferation of informal mechanisms, while enabling practical cooperation, also points to the challenges of establishing more formalised governance structures at the regional level.[60]

The interplay between formal and informal mechanisms, coupled with the emergence of new coordination formats, suggests that regional maritime security governance will likely continue to evolve through multiple, complementary channels rather than consolidating into more centralised structures. This institutional diversity, while creating coordination challenges, also provides adaptability in addressing emerging maritime security threats.

4.5. Summary

While the UN system is based on stable formal institutions, regional mechanisms increasingly embrace informal governance solutions. They either aim at delivering more focused interventions to target specific maritime threats and issues in a certain region, or they seek to coordinate regional maritime security interventions across several issues, providing comprehensive regional governance frameworks. The regional level has thus become a breeding ground for innovative and flexible efforts to ensure maritime security. However, the proliferation of regional actors and initiatives also increases complexity and the risk of governance fragmentation at the global level—especially in the absence of coordination efforts in the UN system.

5. The landscape of non-governmental organisations

An analysis of the assemblage would not be complete without also considering non-State actors. The spectrum of NGOs, including civil society organisations, science-based organisations and philanthropies that engage in ocean governance is considerable.[61] However, the number of organisations directly engaged in maritime security is more limited.

[59] Bueger and Edmunds (n 2) 135–36.

[60] Edwards (n 45).

[61] For instance, in addition to the NGOs accredited to ECOSOC, 174 organisations were accredited to attend the 2022 UN Ocean Conference. See 'Letter from All Permanent Representatives of Permanent Observers to the UN to the President of the General Assembly' (10 December 2019) <https://sustainabledevelopment.un.org/content/documents/2532520191210_PGA_letter_announcing_preparatory_meeting_date_and_draft_programme.pdf>.

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Most NGOs with a maritime remit work on specific issues, such as environmental crimes, fisheries crimes and irregular migration. Examples of globally operating NGOs include the Environmental Justice Foundation, Greenpeace, the World Wide Fund for Nature and Sky Truth, which address environmental crimes at sea, and Global Fishing Watch, Oceana, Ocean Conservancy, Pew Charitable Trusts, The Sea Shepherd Conservation Society, Spyglass or Too Big to Ignore, which address fisheries crimes. Irregular migration is addressed by NGOs such as the International Red Cross and Red Crescent Movement, Médecins Sans Frontières, Sea Watch or SOS Mediterranée. A strong human rights focus is pursued by the UK-based NGO Human Rights at Sea, while the Maritime Anti-Corruption Network focuses on reducing corruption in ports. Organisations such as the Transnational Initiative against Organized Crime address crimes more broadly, including maritime ones.[62]

Several science-based organisations are vital in driving the maritime security debate and meet regularly to set the tone for policy debates and exchanges or directly engage in diplomatic efforts at the expert level. Cross-cutting and comprehensive research is carried out by research networks such as the Center for International Maritime Security, SafeSeas and the Yokosuka Council on Asia-Pacific Studies. Internationally active research institutions include the US NGO Stable Seas, which is developing a global maritime security index, the Portuguese Atlantic Center, the Korean Institute for Maritime Strategy, India's National Maritime Foundation and Observer Research Foundation, Sri Lanka's Pathfinder Foundation, the S Rajaratnam School of International Studies in Singapore, the Australian National Centre for Ocean Resources and Security, the Institute for Security Studies in South Africa as well as the IMO's International Maritime Law Institute and the World Maritime University.

Self-protective measures by the shipping and offshore energy industries have become common. Piracy off the coast of Somalia between 2008 and 2012 led to extensive work in the industry to define best management practices for vessels transiting high-risk areas.[63] First introduced in 2008, guidance documents for regional high-risk areas, including dedicated maritime security charts, have become common practice. Piracy off the coast of Somalia also led to the creation of new standards for ship managers to employ private security advisors and armed guards onboard high-risk routes.[64]

Maritime industry associations and the marine insurance industry are important sources of regulation by providing standard contracts and guidelines for maritime cybersecurity and other challenges.[65] The industry also runs reporting centres such as the International Maritime Bureau, which records piracy incidents and alerts vessels and shipping companies operating in dangerous areas.[66]

[62] Bueger and Edmunds (n 2) 145–51.

[63] BIMCO et al, 'BMP 5: Best Management Practices to Deter Piracy and Enhance Maritime Security in the Red Sea, Gulf of Aden, Indian Ocean and Arabian Sea' (2018) <https://www.ics-shipping.org/wp-content/uploads/2020/08/bmp5-hi-res-min.pdf>.

[64] J Stockbruegger, 'US Strategy and the Rise of Private Maritime Security' (2021) 30 Security Studies 578.

[65] Bueger and Edmunds (n 2).

[66] C Bueger, 'From Dusk to Dawn? Maritime Domain Awareness in Southeast Asia' (2015) 17 Contemporary Southeast Asia 157.

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6. Conclusion: recalibrating maritime security governance

This article's mapping reveals that maritime security governance operates through a complex assemblage of institutions, mechanisms and practices that extends far beyond UNCLOS. This governance landscape comprises multiple layers of formal and informal arrangements, ranging from UN agencies and regional organisations to professional networks and informal coordination mechanisms. Understanding the character and dynamics of this system is crucial for addressing contemporary maritime security challenges. Rather than calling for a revision of UNCLOS, the key task becomes how to recalibrate this complex system to enhance its effectiveness.

The assemblage analysis indicates that the proliferation of actors and institutions has enhanced the effectiveness of maritime security governance. It has led to an agile and flexible system in which new initiatives can evolve rapidly to address specific threats and to provide governance solutions for certain issues and challenges. Actors frequently craft informal governance interventions at the regional level, while the 'Big Five' UN agencies help provide global frameworks for addressing specific maritime security challenges.

Yet the growing complexity of the global maritime security governance architecture —which is vital to address new and evolving threats—also brings with it problems and disadvantages. It undermines governance efficiency, increases the risk of fragmentation and institutional overlap and makes it more difficult to develop best practices and coherent global standards. For example, fishery crimes are currently addressed not only by the FAO and regional fishery organisations but also by informal regional governance arrangements and a large number of NGOs. The more complex and fragmented the global maritime security architecture becomes, the more efforts are needed to coordinate these initiatives and to provide a certain degree of coherence at the global level.

While a perfectly coordinated and organised structure of maritime security governance is likely unrealistic, there are several promising pathways for recalibration. Three options merit particular consideration: establishing a dedicated UN body for maritime security, addressing interface conflicts through targeted interventions and formalising existing informal arrangements.

The first option responds to a significant gap in the current system. While the UN has established UN-Oceans as a general coordination mechanism for ocean governance, this body does not address peace and security concerns. Unlike other global challenges such as terrorism, the UN lacks both an integrated maritime security strategy and a dedicated coordination structure. The Security Council's discussions on streamlining the UN's maritime security work have remained inconclusive. A dedicated mechanism —whether as a subsidiary committee to the Security Council or as a standalone office— could provide much needed coherence to the UN's maritime security efforts. Such a body could coordinate capacity-building initiatives, develop common standards, ensure more systematic information-sharing between agencies and regional bodies and identify pathways for critical norm developments to deal with arising challenges.

The second pathway focuses on addressing interface conflicts through targeted interventions. Rather than attempting comprehensive coordination based on UNCLOS, this approach recognises the value of existing specialised responses while seeking to improve their interaction. Interface conflicts arise both between UN agencies

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and between regional constructs, often leading to duplication of efforts or gaps in coverage. For example, several organisations, including UN agencies, regional institutions and private industry actors, currently provide data and statistics on piracy attacks.[67] The challenge is not to eliminate these overlaps entirely but to manage them more effectively through practical coordination mechanisms. This might involve developing clear protocols for inter-agency cooperation, establishing information-sharing platforms or creating focused working groups for specific issues where mandates intersect.

The third option addresses the limitations of informal governance arrangements. While informal mechanisms have proven valuable in responding to immediate challenges—as demonstrated by the success of the Contact Group on Piracy off the Coast of Somalia—their long-term effectiveness is constrained by limited accountability and unstable attention. Many maritime security initiatives are driven by donors and global powers and do not reflect the specific needs and priorities of regional actors. The proliferation of informal arrangements, while providing flexibility, also creates challenges for sustained engagement and resource allocation. Selective formalisation of successful informal mechanisms, potentially through incorporating them into existing treaty frameworks like regional seas conventions, could provide more stable foundations for ongoing cooperation while maintaining operational flexibility.

These recalibration options are not mutually exclusive but represent complementary approaches to enhancing maritime security governance. The way forward requires recognising both the strengths and limitations of the current assemblage. Its complexity and diversity provide valuable flexibility in responding to varied maritime security challenges across different regions. However, the lack of systematic coordination mechanisms and comprehensive strategies risks undermining the development of effective responses to maritime insecurity. Future reforms should aim to enhance coordination where necessary while preserving the adaptive capacity that emerges from the system's diverse components.

Ultimately, improving maritime security governance requires moving beyond the false choice between rigid centralisation and complete fragmentation. The proliferation and growing diversity of maritime security initiatives over the last few decades, especially at the regional level, has enhanced governance at sea. Limiting actors' ability to create new institutions would therefore be counterproductive and undermine governance at sea. At the same time, however, the growing number and diversity of institutions also leads to new governance problems such as duplication and the risk of fragmentation.

The task therefore is to develop mechanisms that can provide coherence without sacrificing the benefits of specialised expertise and regional adaptation. This might involve combining formal coordinating structures at the UN level with flexible regional arrangements and professional networks, supported by more systematic assessment of how different governance mechanisms interact in practice. The goal is not to eliminate complexity but to make it work more effectively through strategic connections between different governance layers.

[67] C Bueger and J Stockbruegger, 'Oceans, Objects, Infrastructures: Making Modern Piracy' (2024) 4 Global Studies Quarterly 1.

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