

The "Hormuz Shadow": Maritime Security Beyond the Navy

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A satellite view of the Strait of Hormuz [File: Gallo Images/Orbital Horizon/Copernicus Sentinel Data 2025]

Introduction

The Strait of Hormuz has long been one of the most critical maritime chokepoints in the global economy which facilitates roughly one-fifth of the world's total oil and gas trade. It has also been a center of attention for global maritime security, yet in recent years the narrative has shifted from naval confrontation to a more extensive set of threats, embodied in a widely used term now known

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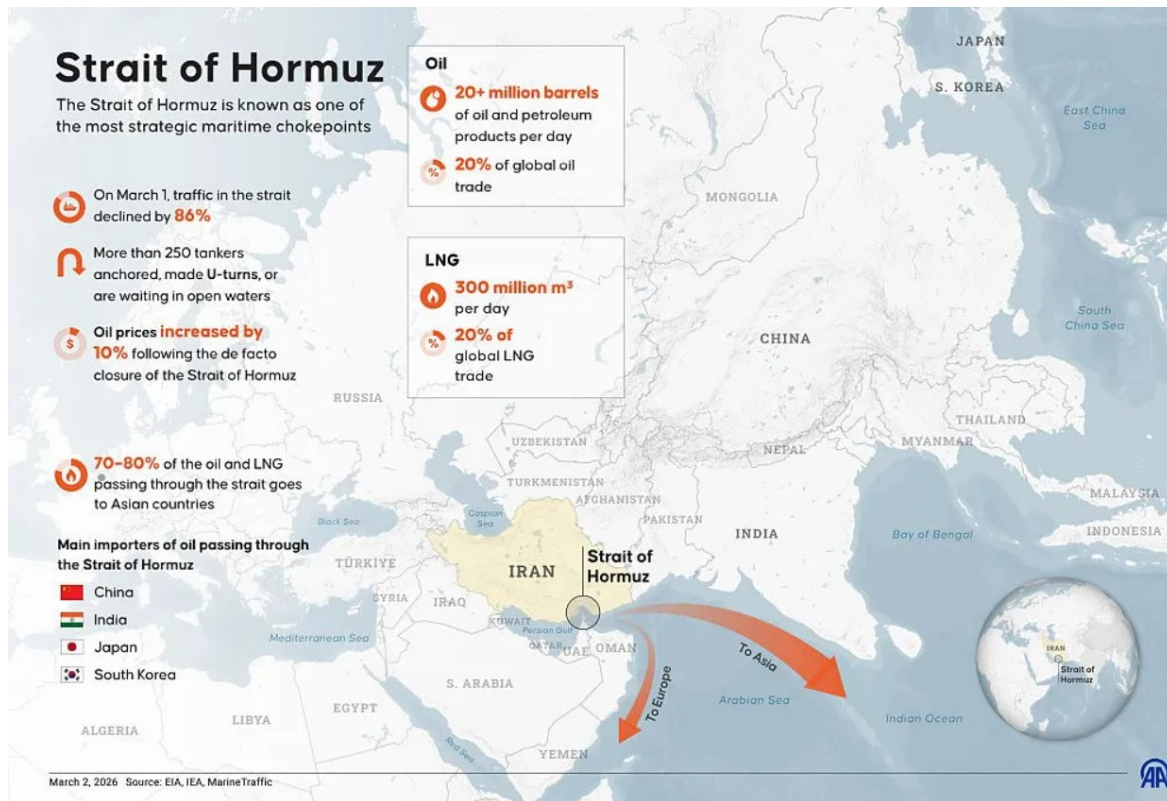
as “Hormuz Shadow.” This shadow refers to a systemic condition in which maritime security is contested across commercial shipping, insurance, regulations, private operators, and networked information platforms rather than exclusively through naval confrontation. The recent escalation in 2026, signified by US-Israel strikes on Iran and subsequent Iranian retaliation, has demonstrated how fragile this area truly is. Shipping traffic has collapsed from around 138 vessels daily to a mere fraction, triggering global energy shocks and supply chain disruptions.² Right now, the Hormuz Strait is effectively closed. Iran has threatened to destroy any ships, including oil tankers, that pass through the strait from the oil depots of the Persian Gulf to the Arabian Sea and the rest of the world. But some vessels are still transiting the strait. In maritime circles, the vessels are called the “shadow fleet.” They are vessels that ignore international restrictions on trade with certain countries, violate anti-pollution regulations, smuggle unauthorized goods or don’t want their cargo or activities to be closely monitored. The “Hormuz Shadow” uncovers a new security ecology where the stability of the seaway depends as much on the behaviour of global shipping markets and sanction-enforcement ecosystems as on the deployment of warships.

The Hormuz Strait as a Strategic Chokepoint

The strategic importance of Hormuz lies not only in geography but in its systemic centrality to global energy flows. It connects the Persian Gulf with the Gulf of Oman and the wider Indian Ocean, carrying roughly 20–30 percent of the world’s seaborne oil and a significant share of its liquefied natural gas. This narrow waterway concentrates immense strategic gravity into a small maritime corridor, making it a natural chokepoint for both energy flows and geopolitical leverage. States that depend on Gulf energy, including major Asian economies and European importers, have long treated the Strait as a critical infrastructure node, not merely a transit line. Any disruption on the flow spreads across continents, affecting energy prices, inflation, and political stability. The 2026 crisis illustrates this interdependence vividly. Asian economies, which are heavily reliant on Gulf energy, face immediate shortages, while global oil prices have surged dramatically yet again. This situation is an example of Chokepoint dependency trap, where global markets remain

² “Iran War Live Updates: Yemen’s Houthis Attack Israel for First Time since War Began.” 2026. The Wall Street Journal. March 27, 2026. <https://www.wsj.com/livecoverage/iran-war-middle-east-news-updates>.

dependent on narrow and volatile transit route. Although many scholars suggested to find alternative routes, in practice it's not still feasible.



An infographic titled 'Strait of Hormuz,' created in Ankara, Türkiye, on March 2, 2026. The (Photo by Mehmet Yaren Bozgun/Anadolu via Getty Images

Operation Epic Fury and The Limits of Naval Power in a Missile Age

When the U.S. launched Operation Epic Fury in late February 2026, the intent was to reclaim the world's oil artery through decisive strikes on Iranian military infrastructure. Air campaigns hit Iranian command centers, missile bases, and naval installations, but Iran responded asymmetrically: mining the strait, deploying fast-attack boats, and targeting American and Israeli bases across the Gulf states. Within days, both Hormuz and the Bab al-Mandeb Strait were under effective blockade or threat.

US Navy is called the largest and most expensive Navy in the world. Yet, people may wonder why it is sitting well outside the Strait of Hormuz, watching powerlessly as the Iranians decide which

ships they will allow to transit the waterway. This shows a sign how U.S sea power's omnipotence as a power projection instrument in the well defended other states is coming to an end. This began in the 1990's, when the U.S. Navy began reducing the transit of its carriers through the strait, after Iran installed anti-ship missiles into concrete and steel-reinforced bunkers on its coastline and islands, giving it the ability to easily target any ships passing near the strait. Cheap drones and autonomous mines have allowed Iran to maintain a blockade despite losing its traditional naval surface fleet.³

Iran's ability to paralyze the world's most critical energy corridor without formally declaring it "closed" reveals a mastery of strategic ambiguity. Instead of blockading the strait outright, Tehran declared selective navigation for friendly or neutral nations, while deterring others with drones, mines, and missile warnings. Here, trust was weaponized. They forced insurers, shipping companies, and investors to decide for themselves whether Hormuz was safe. Iran's strategy has proven effective. It does not need to defeat Western navies in open battle. Iran does not need to defeat Western navies outright to achieve its objectives, only to raise the risks of transit high enough that insurers, ship-owners, and traders halt the flow of energy and commodities themselves. This strategy demonstrated that closure, in the age of the global economy, is less about naval blockade and more about perceived risk.⁴

The Rise of the Shadow Fleet and Other Non-Traditional Maritime Insecurity

In recent years, the security landscape of the Strait of Hormuz has gone through transformation from conventional naval confrontations to a complex ecosystem of hybrid threats. Traditional naval threats like warships, blockades, and fleet engagements are no longer the primary concern. These hybrid threats operate in the grey zone between war and peace, combining military, technological, and irregular tactics that are difficult to detect and counter. In Hormuz, hybrid

³ Russell, James A. 2026. "Why the US Navy Won't Blast the Iranians and 'Open' Strait of Hormuz." Responsible Statecraft. March 31, 2026. <https://responsiblestatecraft.org/iran-strait-of-hormuz/>.

⁴ "The Strait of Hormuz as a Key Theater of War—the Legal Dimension." 2026. INSS. March 29, 2026. <https://www.inss.org.il/publication/hormuz-legal/>.

threats are evident in the way Iran and its proxies mix conventional IRGC Navy assets, small-boat swarms, drones, missiles, and mines with ambiguous, low-intensity attacks on commercial vessels. Iran can use its naval, air, and/or missile forces and proxies to attack ships anywhere in the Gulf, around the Strait of Hormuz, in the Gulf of Oman outside the Gulf, and in Indian Ocean waters near the Strait of Hormuz. It has long threatened to "close the Gulf" at the Strait of Hormuz.⁵ Iran never launched a major war yet. But it has been conducting sporadic, low-level attacks to create sudden risk premiums in petroleum prices and the equivalent of a war of attrition. Some examples are:

Drone Warfare and Asymmetric Attacks: Iran and its proxies have demonstrated the capacity to deploy drones, missiles, and even suicide operations against commercial shipping. These tools are inexpensive, deniable, and difficult to counter, making them ideal instruments of asymmetric warfare.⁶

Sea Mines and Invisible Warfare: Naval mines remain one of the most disruptive yet low-cost threats. Even the mere suspicion of mines can halt shipping traffic which creates economic paralysis without direct confrontation.

Electronic and GPS Disruption: Reports of GNSS interference and AIS manipulation highlight the growing importance of electronic warfare. Ships navigating blindly or with spoofed signals face heightened risks of collision, misrouting, or capture.⁷

⁵ "The Strategic Threat from Iranian Hybrid Warfare in the Gulf." n.d. [www.csis.org](https://www.csis.org/analysis/strategic-threat-iranian-hybrid-warfare-gulf). <https://www.csis.org/analysis/strategic-threat-iranian-hybrid-warfare-gulf>

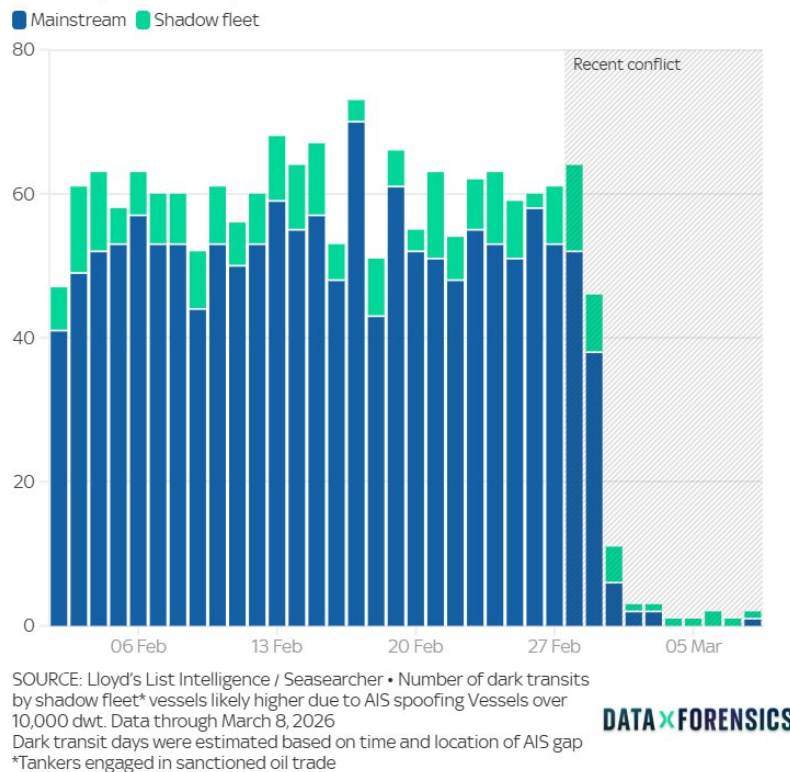
⁶ ET Infra. 2026. "Hormuz Security Push Faces Hurdles as Red Sea Effort Offers Cautionary Tale." ETInfra.com. Reuters. March 25, 2026. <https://infra.economictimes.indiatimes.com/news/ports-shipping/hormuz-security-push-faces-hurdles-as-red-sea-effort-offers-cautionary-tale/129794798?>

⁷ "Maritime Security Update: Gulf Region / Strait of Hormuz and Red Sea." 2026. Skuld.com. March 6, 2026. <https://www.skuld.com/topics/port/port-news/asia/maritime-security-update-gulf-region--strait-of-hormuz-and-red-sea/>.

Cybersecurity Threats: Maritime infrastructure like ports, logistics networks, and vessels—is increasingly vulnerable to cyberattacks. Disruptions to shipping systems or port operations can have cascading global consequences, as seen in previous ransomware attacks on shipping giants.⁸

Few oil and gas tankers have passed through the Strait of Hormuz during the recent conflict, and most of them are part of the shadow fleet

Compliant vs shadow fleet oil and gas transits through the Strait of Hormuz (both directions) since February



Insurance, Law, and the Hidden Architecture of Maritime Order

If the 2024 crisis has taught us anything, it is that the real architecture of maritime order is not composed of warships, it is composed of insurance contracts, flag registries, legal conventions, and compliance systems. These are the tools that normally keep the global shipping system running, and they are precisely the tools that have been most severely disrupted in this war.

⁸ Raymaker, Anna, Akshaya Kumar, Miuyin Yong Wong, Ryan Pickren, Animesh Chhotaray, Frank Li, Saman Zonouz, and Raheem Beyah. 2025. "A Sea of Cyber Threats: Maritime Cybersecurity from the Perspective of Mariners." ArXiv.org. <https://doi.org/10.1145/3719027.3744816>.

Mainstream insurers, mostly based in London, require vessels to meet safety standards, carry proper documentation and comply with international trade sanctions. A ship without insurance coverage cannot easily enter major ports or secure cargo contracts with reputable firms. Those restrictions are precisely what froze so many law-abiding ships in the Persian Gulf when war broke out. The result was, by early March 2026, more than 400 tankers found themselves stranded in the Persian Gulf, their owners paralyzed by risk and lack of insurance, refusing permission for them to move.⁹

The legal dimension is equally striking. Part III of UNCLOS, particularly Articles 37 through 44, governing "Straits used for international navigation," holds that all ships and aircraft have a right of transit passage "which shall not be impeded," and that "there shall be no suspension of transit passage" through a strait. The logic is that when much of global trade depends on a narrow corridor, the bordering states are not allowed to use that corridor as leverage.¹⁰ Iran's closure of the strait is thus not merely a military act, it is a fundamental legal rupture. Yet as the crisis demonstrates, the crisis in the strait raises a deeper question about whether doctrines developed largely in an earlier era of maritime conflict are capable of addressing modern forms of economic warfare that can disrupt global markets rather than merely weaken an adversary's ports or trade. The insurance market and the legal framework are, ultimately, only as strong as the will and capacity to enforce them.

⁹ quantosei. 2026. "Hormuz Crisis: How Shadow Tankers Defy Global Sanctions." QuantoSei News. March 11, 2026. <https://news.quantosei.com/2026/03/11/why-shadow-tankers-are-the-only-ships-still-moving-through-the-strait-of-hormuz/>.

¹⁰ Bertina Kudrin. 2026. "The Strait of Hormuz and the Limits of Maritime Law." Lawfare. 2026. <https://www.lawfaremedia.org/article/the-strait-of-hormuz-and-the-limits-of-maritime-law>.



Tankers are seen off the coast of the Fujairah, as Iran vows to close the Strait of Hormuz, amid the U.S.-Israel conflict with Iran, in Fujairah, United Arab Emirates, March 3, 2026. Source: REUTERS

Sanctions, Shadow Networks, and Geopolitical Fracture

The Hormuz shadow is not a spontaneous reaction to the 2026 crisis. It is the product of years of geopolitical fracturing, in which sanctions regimes designed to constrain state behaviour have unintentionally created an entire alternative trading infrastructure. Policymakers are increasingly targeting vessels, insurers, flag registries, and the shady ownership structures that sustain these operations. This reflects a recognition that sanctions leakage is not just a legal loophole, it is a logistical system, and one that requires physical interdiction or systemic disruption to meaningfully constrain.¹¹

¹¹ Points, Pressure. 2026. "Maritime Pressure Points: Sanctions, Shadow Fleets, and the Intelligence Race at Sea." K4i.com. April 2026. <https://k4i.com/2026/04/01/maritime-pressure-points-sanctions-shadow-fleets-and-the-intelligence-race-at-sea/>.

China's role in this system deserves particular scrutiny. A House Select Committee found that sanctioned oil accounted for one-fifth of China's total oil imports, as the country became the buyer of last resort for rogue regimes, allowing it to stockpile a large strategic reserve of oil while buying at below-market rates. Beijing did not build this system out of spite alone, it built it out of strategic logic. China relies on foreign suppliers for about 70% of its oil, much of which is delivered by sea routes that could be blockaded by U.S. and allied naval forces during a crisis, such as one stemming from a Taiwan contingency. That vulnerability prompted Chinese leaders to declare energy security an "urgent requirement in great-power competition."¹²

The broader implication is, energy logistics and conflict dynamics are now deeply intertwined. Revenues generated through maritime workarounds continue to feed into sustained military capacity, turning shipping lanes into extensions of the battlefield. The shadow fleet, in this reading, is not merely a sanctions-evasion mechanism, it is a geopolitical instrument, sustaining opposition states and shaping the balance of power in ways that traditional naval strategy has no ready answer to.

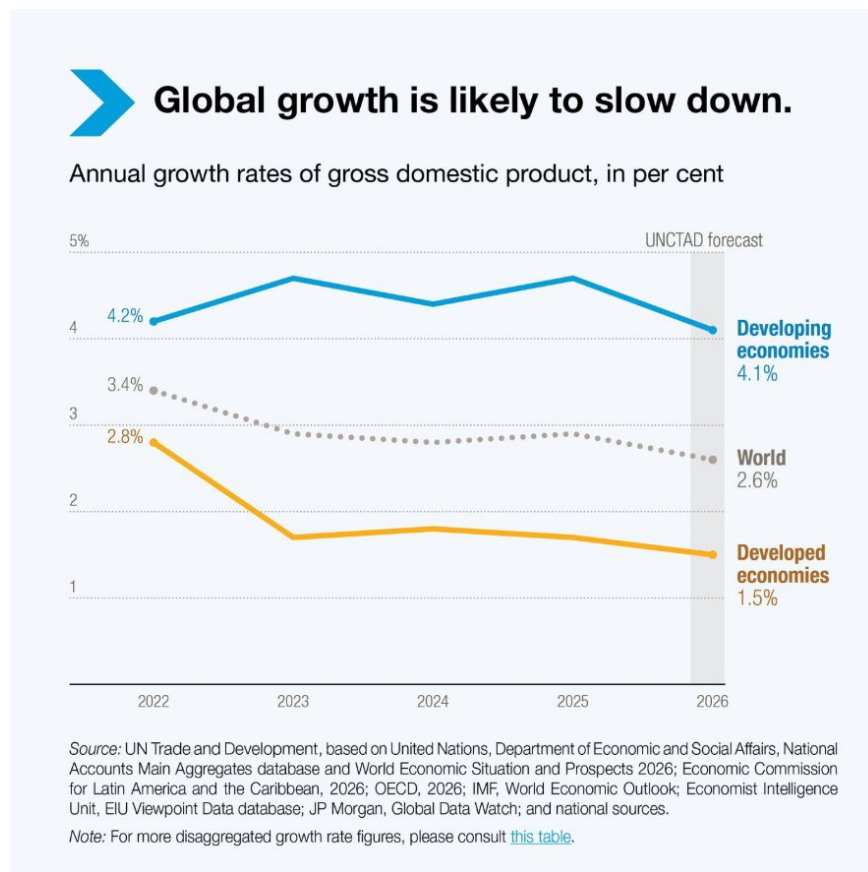
Economic Shock and the Weaponization of Passage

The human and economic cost of the Hormuz shadow has been immense. As of March 20, 2026, the de facto closure of the Strait of Hormuz triggered a systemic shock, with crude oil prices skyrocketing from a stable \$65 per barrel to a mid-March peak of \$126, before settling near \$108 following massive strategic reserve releases.¹³ The ripple effects extend far beyond oil. Oil and gas prices have spiked, raising prices for any kind of transport: road, air, or maritime as well as electricity and cooking gas globally. Prices for fertilizers and their fossil fuel-based precursors are rising, with implications for international food security. The delivery of humanitarian aid has also become costlier.

¹² Revell, Eric. 2026. "Congressional Report Details How China Buys Sanctioned Oil from Iran, Russia and Venezuela." Fox Business. April 2026. <https://www.foxbusiness.com/politics/congressional-report-details-how-china-buys-sanctioned-oil-from-iran-russia-venezuela>.

¹³ "The Hormuz Blockade: How the 2026 Energy 'Black Swan' Is Redrawing the Global Financial Map." 2026. Financialcontent.com. FinancialContent. March 20, 2026. <https://www.financialcontent.com/article/marketminute-2026-3-20-the-hormuz-blockade-how-the-2026-energy-black-swan-is-redrawing-the-global-financial-map>.

The UN's shipping regulator, the International Maritime Organization (IMO), estimates that nearly 2,000 ships and 20,000 seafarers are stuck in the Gulf. Before the war, approximately 140 ships usually passed through the strait daily; this has now dropped to two to four.¹⁴ The men and women who crew the world's merchant vessels, a large workforce from the Global South are bearing the human cost of a geopolitical crisis not of their making.



Global growth could slow from 2.9% in 2025 to 2.6% in 2026, UNCTAD warns.

For the longer term, the 2026 Hormuz crisis represents the definitive end of the era of "just-in-time" energy. For the global market, this represents a structural shift toward a "Security Premium" that will likely keep oil prices elevated for years, even after the Strait is eventually reopened. The crisis has already triggered structural changes in energy strategy worldwide, accelerating

¹⁴ Administrator G.O. 2026. "Strait of Hormuz: Time for a Maritime Peacekeeping Operation? - IPI Global Observatory." IPI Global Observatory. March 24, 2026. <https://theglobalobservatory.org/2026/03/strait-of-hormuz-time-for-a-maritime-peacekeeping-operation/>.

transitions to alternative sources and forcing governments to rethink supply chain resilience in ways that years of policy debate had failed to accomplish.

Maritime Security Reimagined: Beyond the Navy

The dominant lesson of the Hormuz crisis is that maritime security in the 21st century cannot be reduced to naval power. The shadow fleet thrives not because navies are weak, but because the broader ecosystem of maritime governance has been fractured by geopolitical competition. Restoring security requires repairing that ecosystem.

Several mechanisms in the region already support information sharing between navies and the shipping industry and can be used for coordination, including the US-led Joint Maritime Information Center under the Combined Maritime Forces, the Indian Navy's Information Fusion Centre for Indian Ocean Region, the European Union's Maritime Security Center – Indian Ocean, the Gulf Cooperation Council's Unified Maritime Operations Center, and the UK's Maritime Trade Organisation.¹⁵ These institutions represent the multi-layered, multinational architecture that maritime security genuinely requires. Yet they have been insufficient because they remain advisory and informational rather than enforcement-oriented.

What ultimately defines success in this environment is how quickly intelligence is converted into enforcement, and how effectively states can disrupt adaptive, decentralized systems at sea. The contest is no longer just over barrels of oil, but over visibility, attribution, and control within an increasingly contested maritime domain. Winning that contest demands investment in satellite surveillance, financial intelligence, port-state control, and the hard work of tracing shell companies and obscure flag registries. It demands that maritime security be treated as an interagency and international challenge rather than a purely naval one.

¹⁵ Administrator G.O. 2026. "Strait of Hormuz: Time for a Maritime Peacekeeping Operation? - IPI Global Observatory." IPI Global Observatory. March 24, 2026. <https://theglobalobservatory.org/2026/03/strait-of-hormuz-time-for-a-maritime-peacekeeping-operation/>.

Conclusion

The “Hormuz Shadow” is neither a niche maritime curiosity nor a temporary by-product of current conflict. It is a symptom of deeper structural tensions in the global maritime system. The shadow fleet did not appear from nowhere; it was built, patiently and deliberately, by states like Iran that saw the international maritime order as a system of rules applied selectively against them. It poses a test of whether the international community can adapt its maritime-security architecture to a world in which the line between naval and commercial domains is increasingly blurred. For policymakers and security analysts, the lesson is clear: maritime security beyond the navy must be treated as a systemic project from now on. Strengthening the institutional, financial, and technological levers that can make the legal maritime system more resilient, deploying naval and enforcement tools in ways that reinforce, rather than undermine, broader rules-based governance etc. are necessary steps.