



The Hague Centre  
for Strategic Studies

Bridging Waters  
Paper Series

# EU-Philippines Cooperative Maritime Measures

Charmaine Misalucha-Willoughby

December 2025





# EU-Philippines Cooperative Maritime Measures

**Author:**

Dr. Charmaine Misalucha-Willoughby

De La Salle University

The author thanks John Louis Benito for invaluable research assistance.

**Editors:**

Pieter-Jan Vandoren, Benedetta Girardi and Thomas Jansen

**Quality Assurance:**

Paul Sinning

December 2025

**Cover photo:** [Canva](#)

The analysis presented in the paper, including the conclusions and recommendations, is the product of independent research. The responsibility for the content of this paper lies with the authors and the authors alone.

The research for and production of this report has been conducted within the PROGRESS research framework agreement. Responsibility for the contents and for the opinions expressed, rests solely with the authors and does not constitute, nor should be construed as, an endorsement by the Netherlands Ministries of Foreign Affairs and Defence.

© *The Hague* Centre for Strategic Studies. All rights reserved.

No part of this report may be reproduced and/or published in any form by print, photo print, microfilm or any other means without prior written permission from HCSS. All images are subject to the licenses of their respective owners.

HCSS

Lange Voorhout 1

2514 EA The Hague

Follow us on social media:

@hcssnl

The Hague Centre for Strategic Studies

Email: [info@hcss.nl](mailto:info@hcss.nl)

# Introduction

With a surface area of 3.5 million square kilometres, the South China Sea is a vital waterway for regional and global trade. An estimated 24 percent of global maritime trade passes through these waters, worth approximately USD 3.4 trillion to USD 5.3 trillion in commercial goods annually, including crude oil, propane, liquefied natural gas, electronics, and automotive parts.<sup>1</sup> These numbers underscore the importance of these sea lines of communication for carrying goods to and from China, Taiwan, Japan, and South Korea via the Strait of Malacca, which links the South China Sea to the Pacific and Indian Oceans. Against this backdrop, the maritime supply chain is more critical than ever to the global economy, especially given that roughly 80 percent of global trade by volume and more than 70 percent by value moves by sea.<sup>2</sup>

Apart from trade, the South China Sea is also significant from an ecological perspective.<sup>3</sup> These waters contain one of the highest levels of marine biodiversity in the world, with over 6,500 marine species.<sup>4</sup> Coral reefs are essential ecosystems that sustain global marine life, and the region is home to 571 known coral species.<sup>5</sup> In addition, eight global species of giant clam are found here, which act not only as food and shelter for animals, but also as reef builders and shapers.<sup>6</sup> As a result, around 22 percent of fish species are found in the South China Sea, with the corals supporting a total of 3,790 fish species.<sup>7</sup> Marine mammals, sharks, and other organisms also inhabit the waters of the South China Sea, each playing a crucial ecological role in maintaining the marine environment.

With thriving fish stocks, the South China Sea supports a community of fishers from mainland China, Hong Kong, Taiwan, and Southeast Asia, generating approximately 3.7 million jobs and supporting the livelihoods of 190 million coastal residents.<sup>8</sup> While industrial fishing is sizeable – 75 percent of the annual catch in the South China Sea – small-scale fishers make up most of the workforce. By 2015 numbers, 86 percent of the 1.77 million vessels in the South China Sea were small-scale.<sup>9</sup> Despite the South China Sea's significance for trade, the marine ecosystem, and coastal communities, the waterway is facing several critical challenges across multiple fronts.

<sup>1</sup> China Power Team, "How Much Trade Transits the South China Sea?" *China Power*, 2 August 2017.

<https://chinapower.csis.org/much-trade-transits-south-china-sea/>; Srishti Chhaya, "The \$5.3 Trillion Question: How South China Sea Tensions are Rewriting Global Trade Rules," *Atlas Institute for International Affairs*, 4 July 2025.

<https://atlasinstitute.org/the-5-3-trillion-question-how-south-china-sea-tensions-are-rewriting-global-trade-rules/>.

<sup>2</sup> "What is the Maritime Supply Chain?" *Sinay*, 3 March 2022. <https://sinay.ai/en/what-is-the-maritime-supply-chain/>.

<sup>3</sup> Alfredo C. Robles, Jr. *Endangered Species and Fragile Ecosystems in the South China Sea: The Philippines v. China Arbitration* (Palgrave Macmillan, 2019).

<sup>4</sup> Monica Sato, Harrison Prétat, Tabitha Mallory, Hao Chen, and Gregory Poling, "Deep Blue Scars: Environmental Threats to the South China Sea," *Center for Strategic and International Studies*, 18 December 2023.

<https://features.csis.org/environmental-threats-to-the-south-china-sea/>.

<sup>5</sup> Danwei Huang, Wilfredo Y. Licuanan, Bert W. Hoeksema, et al., "Extraordinary Diversity of Reef Corals in the South China Sea," *Marine Biodiversity* 45 (2015): 157-168.

<sup>6</sup> Qiqi Chao, Zhifeng Gu, Aimin Wang, Chunsheng Liu, Yi Yang, "Diversity of Three Small Type's Giant Clams and Their Associated Endosymbiotic Symbiodiniaceae at Hainan and Xisha Islands, South China Sea," *Marine Fisheries, Aquaculture and Living Resources* 8 (2021). <https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2021.774925/full>.

<sup>7</sup> Sato, et al.

<sup>8</sup> U. Rashid Sumaila, William W.L. Cheung, Louise S.L. Teh, et al., *Sink or Swim: The Future of Fisheries in the East and South China Seas*, ADM Capital Foundation, Hong Kong, 2021. [https://www.admcf.org/wp-content/uploads/2021/11/Sink-or-Swim-Full-Report\\_171121.pdf](https://www.admcf.org/wp-content/uploads/2021/11/Sink-or-Swim-Full-Report_171121.pdf).

<sup>9</sup> U. Rashid Sumaila and William W.L. Cheung, *Boom or Bust: The Future of Fish in the South China Sea*, ADM Capital Foundation, Hong Kong, 2015. [https://www.admcf.org/wp-content/uploads/2023/12/4-Resource-a\\_-Boom-or-Bust\\_-The-Future-of-Fish-in-the-South-China-Sea-English-version-November-2015-compressed.pdf](https://www.admcf.org/wp-content/uploads/2023/12/4-Resource-a_-Boom-or-Bust_-The-Future-of-Fish-in-the-South-China-Sea-English-version-November-2015-compressed.pdf).

Taken together, these dynamics illustrate how closely intertwined the geopolitical, environmental, and coastal dimensions of the South China Sea have become, and how they increasingly shape the strategic outlook of external partners such as the European Union. To reflect this interconnection, the paper concludes with a set of policy recommendations that build directly on the challenges identified in the following sections. These recommendations outline practical avenues through which the EU and the Philippines can enhance maritime cooperation, strengthen environmental and coastal resilience, and help reduce the risks posed by escalating tensions in one of the world's most critical waterways.

# The Driving Forces Behind Maritime Insecurity

Three major categories of challenges predominate in the South China Sea: geopolitics and its spillover effects on geoeconomics, environmental issues, and fisheries. These issues can be considered as the driving forces behind growing interstate maritime disputes in the region. Territorial claims fuel the rising tensions in the region. China's sweeping claims over the waters (represented by the nine-dash line that it submitted to the United Nations in 2009) prompted competing claims from Brunei, Malaysia, the Philippines, Taiwan, and Vietnam under the United Nations Convention on the Law of the Sea (UNCLOS). Following a series of incidents that led to a standoff in Scarborough Shoal in 2012, the Philippines filed a case against China. By 2016, the Permanent Court of Arbitration in The Hague ruled in favour of the Philippines.<sup>10</sup> Even though China is a signatory to UNCLOS, it did not accept the arbitration initiated by the Philippines.

In recent years, satellite imagery has revealed China's intensified efforts to reclaim and construct artificial islands in the South China Sea. It piled sand onto existing reefs, constructed ports, military installations, and airstrips, thereby effectively militarising various features in the waters. Chinese Coast Guard (CCG) vessels also began to employ dangerous manoeuvres against the Philippine Coast Guard (PCG), including the use of a military-grade laser and water cannons. In June 2024, the skirmishes resulted in a collision between a Chinese vessel and a Philippine supply ship near Second Thomas Shoal.<sup>11</sup> Throughout 2025, various CCG and People's Liberation Army Navy (PLAN) ships were spotted in the Philippines' exclusive economic zone, but Chinese research vessels started becoming a staple.<sup>12</sup> The PCG estimated that between three and four research ships encroached on the West Philippine Sea per month, and between 21 and 28 for the year.<sup>13</sup> In September 2025, the PCG confiscated a 12-foot-long sub-surface drone in Philippine waters, reportedly capable of garnering and transmitting data for encrypted communications.<sup>14</sup>

As tensions escalate in the region, the likelihood of a tipping point increases, potentially disrupting the volume of trade that passes through the South China Sea. For example, the estimated USD 2.45 trillion in goods that transit the South China Sea via the Taiwan Strait will be severely impacted, given that Taiwan produces over 60 percent of the world's semiconductors and over 90 percent of the most

---

<sup>10</sup> *The South China Sea Arbitration (The Republic of the Philippines v. The People's Republic of China)*, Permanent Court of Arbitration, 2016. <https://pca-cpa.org/en/cases/7/>.

<sup>11</sup> Simian Mistreanu and Jim Gomez, "China Blames Philippines for Ship Collision in South China Sea, Manila Calls the Report Deceptive," *Associated Press*, 17 June 2024. <https://apnews.com/article/china-philippines-second-thomas-shoal-collision-navy-8c14b945066967189b01d701b17c10ae>.

<sup>12</sup> Faith Argosino, "PCG Sends Aircraft to Monitor Chinese Research Vessel in Luzon Strait," *Inquirer*, 4 August 2025. <https://www.inquirer.net/451631/chinese-vessel-in-luzon-strait-pcg-sends-aircraft/>; Joviland Rita, "PCG Alarmed Over Increase of Chinese Research Ships in PH EEZ," *GMA News Online*, 4 August 2025. <https://www.gmanetwork.com/news/topstories/nation/954691/pcg-alarmed-over-increase-of-chinese-research-ships-in-ph-eez>.

<sup>13</sup> Ghio Ong, "Increased Presence of Chinese Research Vessels in West Philippine Sea Alarming – PCG," *Philippine Star*, 5 August 2025. <https://www.philstar.com/headlines/2025/08/05/2463147/increased-presence-chinese-research-vessels-west-philippine-sea-alarmed-pcg>; Job Manahan, "Coast Guard: Around 21 to 28 Chinese Research Vessels Spotted in Philippine EEZ This Year," *ABS-CBN*, 4 August 2025. <https://www.abs-cbn.com/news/nation/2025/8/4/coast-guard-around-21-to-28-chinese-research-vessels-spotted-in-philippine-eez-this-year-1452>.

<sup>14</sup> Aaron-Matthew Lariosa, "Manila Recovers Chinese Underwater Drone Operating in Philippine Waters," *USNI News*, 1 October 2025. <https://news.usni.org/2025/10/01/manila-recovers-chinese-underwater-drone-operating-in-philippine-waters>.

advanced ones.<sup>15</sup> Should an invasion of Taiwan occur, shipping companies would be compelled to reroute, thereby incurring high costs and delays. This would effectively lead to an increase in global goods prices and negative economic impacts resulting from disruptions to the flow of commerce.

Geopolitics in the South China Sea also impacts the marine environment. Between 2013 and 2017, China utilised cutter suction dredging to construct its artificial islands. As a result of slicing into reefs and pumping sediment to shallow areas to deposit it as landfill, clouds of abrasive sediment were produced to the detriment of nearby marine life and the reef's capacity to repair itself.<sup>16</sup> Since 2021, Vietnam has initiated a substantial program of dredging and landfill work.<sup>17</sup> Previously, Vietnam used clamshell dredgers and construction equipment to scoop up sections of shallow reef and deposit the sediment in the targeted landfill area.<sup>18</sup> However, by 2023, it had also begun to use cutter suction dredging, similar to China. Reports indicate that the result of these activities is that roughly 4,648 acres of reef have been buried and destroyed.<sup>19</sup>

In addition to the destruction of coral reefs, another environmental casualty caught amid geopolitics is the harvesting of giant clams. For centuries, fishers from the town of Tanmen in China's Hainan province depended on the waters of the South China Sea. However, in the period between 2002–2015, Tanmen's economic structure underwent a drastic transformation, driven by the rise of the giant clam handicraft industry. The number of local fishing vessels fell from more than 100 to just three, while the number of handicraft sellers grew from 15 to 460. At the same time, handicraft workshops expanded from a dozen to over 100, creating jobs that supported nearly 100,000 people.<sup>20</sup> The shell of the giant clam can grow to more than a meter in length, weigh over 200 kilograms, and live for more than a hundred years. It has been referred to as the "white gold of the sea," with a high-end pair of shells selling for as much as USD 150,000.<sup>21</sup> As of 2016, more than 25,000 acres of shallow reef surface damage were documented as resulting from China's clam extraction.<sup>22</sup> Although the 2016 arbitration ruled that China had violated its obligations under international law to protect the marine environment, China announced in September 2025 its plan to create a nature reserve in Scarborough Shoal.<sup>23</sup>

The above discussions examined the challenges in the South China Sea, which occur both *on* the waters (geopolitics) and *under* the sea (marine environment). The third category of challenges, meanwhile, occurs *beside* the sea, i.e., along the coast. Here, the plight of the fishers takes centre stage. The South China Sea provides food security and economic opportunities. Reports indicate that

<sup>15</sup> Matthew P. Funairole, Brian Hart, David Peng, Bonny Lin, and Jasper Verschuur, "Crossroads of Commerce: How the Taiwan Strait Propels the Global Economy," *Center for Strategic and International Studies*, 10 October 2024. <https://features.csis.org/chinapower/china-taiwan-strait-trade/>; "Taiwan's Dominance of the Chip Industry Makes It More Important," *The Economist*, 6 March 2023. <https://www.economist.com/special-report/2023/03/06/taiwans-dominance-of-the-chip-industry-makes-it-more-important>.

<sup>16</sup> John W. McManus, "Offshore Coral Reef Damage, Overfishing, and Paths to Peace in the South China Sea," *The International Journal of Marine and Coastal Law* 32, 2 (2017): 199-237.

<sup>17</sup> "Vietnam Ramps Up Spratly Island Dredging," *Asia Maritime Transparency Initiative*, 15 November 2023. <https://amti.csis.org/vietnam-ramps-up-spratly-island-dredging/>.

<sup>18</sup> "Vietnam's Major Spratly Expansion," *Asia Maritime Transparency Initiative*, 14 December 2022. <https://amti.csis.org/vietnams-major-spratly-expansion/>.

<sup>19</sup> Sato, et al., 2023; Camilo Mora, Iain R. Caldwell, Charles Birkeland, and John W. McManus, "Dredging in the Spratly Islands: Gaining Land but Losing Reefs," *PLOS Biology* 14, 6 (2016).

<sup>20</sup> Hongzhou Zhang, "South China Sea: The Story of the Tanmen Fishermen," *The Diplomat*, 8 January 2016. <https://thediplomat.com/2016/01/south-china-sea-the-story-of-the-tanmen-fishermen/>.

<sup>21</sup> Victor Robert Lee, "Satellite Imagery Shows Ecocide in the South China Sea," *The Diplomat*, 15 January 2016. <https://thediplomat.com/2016/01/satellite-images-show-ecocide-in-the-south-china-sea/>.

<sup>22</sup> "China's Most Destructive Boats Return to the South China Sea," *Asia Maritime Transparency Initiative*, 20 May 2019. <https://amti.csis.org/chinas-most-destructive-boats-return-to-the-south-china-sea/>.

<sup>23</sup> "China to Establish Nature Reserve at Disputed Scarborough Shoal," *Reuters*, 10 September 2025. <https://www.reuters.com/en/china-establish-nature-reserve-disputed-scarborough-shoal-south-china-sea-2025-09-10/>.

12 percent of the global fish catch originates from these waters, with at least 3.7 million people relying on fishing as their primary livelihood.<sup>24</sup> The scale of the dependence, however, has led to the overexploitation of fisheries in the South China Sea, exacerbated by subsidies provided by Southeast Asian governments to the industrial fishing fleet. Approximately USD 20 billion is spent annually on fisheries subsidies through income guarantees, fuel tax exemptions, insurance schemes, and investments in vessel modernisation.<sup>25</sup> China is reported to allocate 96 percent of its fishing subsidies to the industrial fleet, while others in Southeast Asia allocate an average of 75 percent to the industrial fleet.<sup>26</sup> Certainly, support for industrial fishing is skewed, even though small-scale fishers make up most of the region's workforce. To earn extra income, many fishers are driven to engage in illegal, unregulated, and unreported fishing or join the maritime militias of China and Vietnam.<sup>27</sup>

In summary, the threefold challenges emerging from the South China Sea indicate constrained cooperation at the expense of the marine environment and worsening conditions for small-scale fishers, and by extension, coastal communities. Notwithstanding the fact that they contribute to rising tensions in the region, there have been notable response measures, particularly in the European Union's (EU) efforts to deepen and widen its maritime collaboration with the Philippines. Similarly, several EU member states have started to boost their bilateral relations with the Philippines.

---

<sup>24</sup> Sumaila and Cheung, *Boom or Bust*.

<sup>25</sup> Anna Schuhbauer, Daniel J. Skerrett, Naazia Ebrahim, Frédéric Le Manach, U. Rashid Sumaila, "The Global Fisheries Subsidies Divide Between Small- and Large-Scale Fisheries," *Frontiers in Marine Science* 7 (2020).

<sup>26</sup> Madelyn MacMurray, Carolyn Gruber, "Militarized Commons: How Territorial Competition is Weaponizing Fisheries and Destroying the South China Sea," *Stimson Center*, 8 September 2025. <https://www.stimson.org/2025/territorial-competition-weaponizing-fisheries-south-china-sea/>.

<sup>27</sup> Nguyen The Phuong, "Vietnam's Maritime Militia is not a Black Hole in the South China Sea," *Asia Maritime Transparency Initiative*, 22 May 2020. <https://amti.csis.org/vietnams-maritime-militia-is-not-a-black-hole-in-the-south-china-sea/>.

# Response Measures to Reduce Interstate Maritime Threats

Some key achievements in EU-Philippines relations include regional commitments and bilateral mechanisms that specifically address maritime-related concerns and aim to reduce interstate maritime disputes in the South China Sea. The EU's Indo-Pacific Strategy is a prime example of a region-wide commitment. Released in 2021, the strategy serves as a framework for deepening cooperation with the region across key areas, including sustainable and inclusive prosperity, green transition, ocean governance, digital governance and partnerships, connectivity, security and defence, and human security. France also released its Indo-Pacific strategy in 2021, focusing on security, the economy, multilateralism, and climate change. Meanwhile, Germany and the Netherlands published their own guidelines in 2020, followed by Czechia in 2022, Lithuania in 2023, and Sweden in 2024. For many in the Philippines and Southeast Asia, the shift of Europe's gaze to the Indo-Pacific represents the continuation of longstanding cooperation between the two regions and is perceived positively.

In addition to region-wide commitments, the EU and the Philippines have made significant strides in maritime cooperation. The Philippines-EU Joint Committee Meetings in June 2023 established a new dialogue on maritime security.<sup>28</sup> The first sub-committee meeting was held in September 2023, during which the Philippines highlighted its adoption of the Indo-Pacific Regional Information Sharing (IORIS) platform and its participation in training exercises through the Critical Maritime Routes Indo-Pacific (CRIMARIO) project.<sup>29</sup> The second sub-committee meeting, held in October 2024, further identified opportunities for maritime cooperation, including coast guard cooperation and maritime domain awareness through existing projects like Enhancing the EU's Security Cooperation in and with Asia and the Indo-Pacific (ESIWA Plus), CRIMARIO II, and the EU-ASEAN Sustainable Connectivity Package (SCOPE) Seafarers Technical Assistance Project.<sup>30</sup> Additionally, a security and defence dialogue was established in June 2025, during which both sides indicated their intent to explore cooperation on environmental monitoring and practices related to uncrewed vessels and submarine cables.<sup>31</sup>

Some EU member states – due to their capabilities, risk perceptions, or historical ties – are predisposed to take the lead in this endeavour. Indeed, the result of some EU member states' efforts to form minilateral arrangements has been the establishment of EU-wide policies on maritime security in the Indo-Pacific.<sup>32</sup> In this context, bottom-up initiatives can lead to institutionalised and long-lasting cooperation. Some examples of these bilateral relations aimed at reducing interstate

---

<sup>28</sup> Philippines: Department of Foreign Affairs, "Philippines-EU Joint Committee Meets, Establishes New Dialogue on Maritime Security," 2023. <https://dfa.gov.ph/dfa-news/statements-and-advisoriestupdate/32885-philippines-eu-joint-committee-meets-establishes-new-dialogue-on-maritime-security>.

<sup>29</sup> European Union External Action Service, "Philippines: First Subcommittee on Maritime Cooperation with the European Union Takes Place in Brussels," 27 September 2023. [https://www.eeas.europa.eu/eeas/philippines-first-subcommittee-maritime-cooperation-european-union-takes-place-brussels\\_en](https://www.eeas.europa.eu/eeas/philippines-first-subcommittee-maritime-cooperation-european-union-takes-place-brussels_en).

<sup>30</sup> European Union External Action Service, "Philippines: Second Subcommittee on Maritime Cooperation with the European Union Takes Place in Manila," 29 October 2024. [https://www.eeas.europa.eu/eeas/philippines-second-subcommittee-maritime-cooperation-european-union-takes-place-manila\\_en](https://www.eeas.europa.eu/eeas/philippines-second-subcommittee-maritime-cooperation-european-union-takes-place-manila_en).

<sup>31</sup> European Union External Action Service, "The EU and the Philippines Enhance Security Cooperation," 2 June 2025. [https://www.eeas.europa.eu/eeas/eu-and-philippines-enhance-security-cooperation\\_en](https://www.eeas.europa.eu/eeas/eu-and-philippines-enhance-security-cooperation_en).

<sup>32</sup> Liselotte Odgaard, "European Security and Minilateralism in the Indo-Pacific," *Australian Journal of International Affairs* 78, 6 (2024): 911-928.

tensions include those between the Philippines and Czechia and France, which focus on defence cooperation. In February 2025, Czech Defence Minister Jana Černočková met with Philippine President Ferdinand Marcos Jr. to explore potential joint initiatives in defence and security and to revive the Philippine-Czech Joint Defense Committee, established through a 2017 Memorandum of Understanding.<sup>33</sup> Joint exercises between France and the Philippines have been consistent. In April 2024, France participated in the annual Balikatan Exercises as part of a multilateral maritime drill.<sup>34</sup> In July 2024, the Philippine Air Force took part in the Projection of a Heavy Air Package Southeast Asia (PEGASE) mission.<sup>35</sup> Negotiations are underway for a Status of Visiting Forces Agreement between the two.<sup>36</sup>

Bilateral relations between the Philippines, on the one hand, and Italy, Spain, and Sweden, on the other, focused on acquisitions to support the Armed Forces of the Philippines' (AFP) modernisation program. In March 2025, the Italian frigate Antonio Marceglia arrived in Manila.<sup>37</sup> A month later, Italy's largest shipbuilder, Fincantieri, partnered with German firm ThyssenKrupp Marine Systems to bid for the Philippine Navy's submarine acquisition, aimed at its Horizon III modernisation initiative.<sup>38</sup> Although Spain and the Philippines signed a Memorandum of Understanding on defence cooperation in 2011, it was not until 2019 that the two sides agreed on a Memorandum of Agreement on Logistics, Defence Material, Armaments, and Defence Industry Cooperation.<sup>39</sup> Spain's autonomous region of Galicia, with its advanced naval sector, has expressed interest in exploring deeper maritime cooperation.<sup>40</sup> As full foreign ownership is allowed in shipbuilding ventures in the Philippines, this is a clear opportunity for Galician shipbuilders and marine equipment manufacturers to establish a niche in Southeast Asia. Similarly, the Philippines signed an Acquisition of Defense Material agreement with Sweden in 2023, enabling cooperation in logistics, technology research and development, defence industry development, and information exchange.<sup>41</sup> Clearly, these achievements are impressive. However, when juxtaposed with the range of challenges confronting the Philippines in the South China Sea, there are undeniable gaps that can be addressed by existing technologies.

<sup>33</sup> Ched Rick Gatchalian, "PH, Czech Republic Tackle Defense Cooperation," *ABS-CBN News*, 20 February 2025.

<https://www.abs-cbn.com/news/nation/2025/2/20/ph-czech-republic-tackle-defense-cooperation-1800>.

<sup>34</sup> Priam Nepumoceno, "PH, US, France Conclude 1<sup>st</sup> 'Balikatan' Multilateral Maritime Drill," *Philippine News Agency*, 30 April 2024. <https://www.pna.gov.ph/articles/1223709>.

<sup>35</sup> Martin Sadongdong, "French Air Force Team Lands in PH for 'PEGASE' Mission," *Manila Bulletin*, 29 July 2024.

<https://mb.com.ph/2024/7/29/french-air-force-team-lands-in-ph-for-pegase-mission>.

<sup>36</sup> Frances Mangosing, "Philippines, France Nearing Deal to Boost Combat Drills," *Naval News*, 8 October 2025.

<https://www.navalnews.com/naval-news/2025/10/philippines-france-nearing-deal-to-boost-combat-drills/>.

<sup>37</sup> "Naval Diplomacy and Bilateral Cooperation for Frigate Marceglia in Manila Stopover," *Marina Militare*, 26 March 2025.

[https://www.marina.difesa.it/EN/Conosciamoci/notizie/Pagine/20250326\\_Marceglia\\_Manila.aspx](https://www.marina.difesa.it/EN/Conosciamoci/notizie/Pagine/20250326_Marceglia_Manila.aspx).

<sup>38</sup> Aaron-Matthew Lariosa, "Italian, German Shipbuilders Partner for Philippine Navy Sub Program Bid," *USNI News*, 17 April 2025. <https://news.usni.org/2025/04/17/italian-german-shipbuilders-partner-for-philippine-navy-sub-program-bid>.

<sup>39</sup> Philippines: Department of Foreign Affairs, "DND, AFP Officials Sign Bilateral Defense Cooperation Agreement with Spain, Hold First Joint Defense Cooperation Meeting," 20 January 2020. <https://dfa.gov.ph/dfa-news/news-from-our-foreign-service-postsupdate/25537-dnd-afp-officials-sign-bilateral-defense-cooperation-agreement-with-spain-hold-first-joint-defense-cooperation-meeting>.

<sup>40</sup> Othel V. Campos, "PH, Spain Explore Deeper Maritime Cooperation, Eye Technology Transfers," *Manila Standard*, 11 July 2025. <https://manilastandard.net/business/314614740/ph-spain-explore-deeper-maritime-cooperation-eye-technology-transfers.html>.

<sup>41</sup> Michaela del Callar, "Sweden Seeking Improved Defense Ties, Appoints Defense Attache to PH," *GMA News*, 7 July 2025. <https://www.gmanetwork.com/news/topstories/nation/951799/sweden-philippines-defense-attache-military-ties/story/>.

# Tapping Existing Technologies

To better address the threefold challenges of geopolitics, the marine environment, and fisheries in the South China Sea, the EU and the Philippines must further tap existing technologies in shared satellite monitoring and real-time vessel tracking. Satellite data, sensors, and data analysis can provide accurate, real-time information that benefits the maritime industry, actors working on marine environmental monitoring and risk management, and marine policy decision-making. Satellite-based technology enhances safety, efficiency, and sustainability in the maritime industry through imaging sensors, navigation systems, and connectivity. Remote sensing data from, for example, offshore installations or even in the deep seas can provide more comprehensive information beyond standard measurements. Another example is synthetic-aperture radar, which can generate high-resolution images and overcome the resolution limitations of traditional radar systems. The sensors then transmit information in real time via cellular networks, satellite communications, or radio frequency, enabling safer navigation and more efficient operations in the maritime industry.<sup>42</sup>

Satellite data can also be useful for continuous monitoring of the marine ecosystem's health, assisting in the conservation and sustainable management of marine resources, tracking changes, and identifying threats to marine life. These parameters, although by no means exhaustive, can identify areas of the seas that are at high risk of damage or overuse. Information can then be used to develop appropriate regulations and policies to address these issues and protect marine biodiversity.

In the context of the South China Sea, eleven maritime Philippine agencies created a National IORIS Governance Structure and agreed to become active members of the IORIS National Board.<sup>43</sup> The IORIS platform is a secure and neutral, web-based maritime coordination and information-sharing tool used by national and regional agencies. It is the maritime information-sharing tool developed by the CRIMARIO project, an EU-funded project established in 2015 to enhance maritime domain awareness.<sup>44</sup> The IORIS platform provides information to maritime centres, enabling them to jointly plan and coordinate operations, including crisis or incident management. Additionally, IORIS provides surveillance capabilities and is used by 20 countries and organisations across the Indo-Pacific. The Philippines and France rely heavily on the IORIS platform to strengthen maritime domain awareness and to support authorities in addressing illegal, unreported, and unregulated fishing.<sup>45</sup>

---

<sup>42</sup> "The Importance of Satellites and Sensors for the Maritime Industry," *Sinay*, 7 June 2023. <https://sinay.ai/en/the-importance-of-satellites-and-sensors-for-the-maritime-industry/>.

<sup>43</sup> Delegation of the European Union to the Philippines, "Interconnecting National Maritime Agencies to Strengthen Maritime Security and Safety, and Sustainable Fisheries in the Philippines and in the Wider Indo Pacific Region," 22 March 2023. [https://www.eeas.europa.eu/delegations/philippines/interconnecting-national-maritime-agencies-strengthen-maritime-security-and-safety-and-sustainable\\_en](https://www.eeas.europa.eu/delegations/philippines/interconnecting-national-maritime-agencies-strengthen-maritime-security-and-safety-and-sustainable_en).

<sup>44</sup> "The IORIS Information Exchange Platform," *EU CRIMARIO*, 4 October 2020. <https://crimario.eu/the-ioris-information-exchange-platform/>.

<sup>45</sup> JP Soriano, "PH, France Boost Ties in Monitoring Maritime Threats, Illegal Fishing," *GMA News*, 19 September 2025. <https://www.gmanetwork.com/news/topstories/nation/959665/ph-france-boost-ties-in-monitoring-maritime-threats-illegal-fishing/story/>.

Shared satellite monitoring can also transmit Automatic Identification System (AIS) signals from vessels, allowing for the identification and real-time tracking of ships. Maritime surveillance is an integral part of maritime security, as it enables the detection, identification, tracking, and interception of illegal fishing, piracy, terrorism, organised crime, human smuggling, and illegal migration.<sup>46</sup> Likewise, it can prevent maritime accidents and protect the marine environment. The ability to track ship locations in real time can significantly aid in assessing anthropogenic pressures on sensitive habitats, enforcing regulatory compliance, and supporting conservation efforts in protected areas.<sup>47</sup>

---

<sup>46</sup> Ruxandra-Laura Bosilca, "The Use of Satellite Technologies for Maritime Surveillance: An Overview of EU Initiatives," *Incas Bulletin* 8, 1 (2016): 151-161.

<sup>47</sup> Murat Bakirci, "Advanced Ship Detection and Ocean Monitoring with Satellite Imagery and Deep Learning for Marine Science Applications," *Regional Studies in Marine Science* 81 (2025).

# Recommendations

To address the challenges in the South China Sea – categorised in this paper as geopolitical, environmental, and coastal – effectively, existing region-wide commitments and bilateral mechanisms should further leverage dual-use technologies, including shared satellite monitoring and real-time vessel tracking. Building on ongoing EU–Philippines initiatives on maritime domain awareness, the EU, its member states, and the Philippines can focus their cooperation on four interrelated policy areas: seabed activities and marine environmental protection, digital critical infrastructure (including submarine cables), coastal and community resilience, and maritime supply chain security.

First, large-scale human activities on and near the seabed – including land reclamation, dredging, and other forms of resource extraction – have already caused significant damage to coral reefs and associated ecosystems, with implications for fisheries and coastal communities. Practical entry points for EU–Philippine cooperation include strengthening regional expertise and technical capacity on the environmental impacts of such seabed activities, and disseminating norms and governance frameworks that safeguard ecosystems and take into account the interests of local communities. This would help ensure that future decisions about the use of the seabed keep environmental and livelihood protection at their core.

Second, digital critical infrastructure such as submarine cables and information-sharing platforms underpins maritime domain awareness and coordination, including the use of tools like IORIS and satellite-based surveillance. Rather than introducing new institutional architectures, EU–Philippines cooperation could concentrate on improving existing mechanisms for cable protection and maintenance, ensuring that technical standards and procurement practices support the integrity and resilience of this infrastructure. This may involve joint exercises, exchanges of best practices, and the development of clear procedures for communication and coordination in case of incidents affecting submarine cables.

Third, with marine ecosystems already under severe pressure – from coral reef degradation and giant clam extraction to overfishing – and with small-scale fishers facing increasingly precarious conditions, environmental protection and coastal resilience need to be better integrated. Legal rulings and environmental instruments, including the 2016 arbitration, can provide useful leverage when combined with local and regional initiatives. The EU and the Philippines can work together to embed environmental safeguards into their economic and trade cooperation, support the participation of coastal communities in decision-making on fisheries and marine resource management, and make use of regional processes within ASEAN to encourage stronger implementation of existing environmental and fisheries-related commitments.

Finally, the resilience of maritime supply chains in and around the South China Sea depends on reducing the risk of disruptions stemming from geopolitical tensions and unsafe encounters at sea. Building on emerging EU–Philippines dialogues on security and defence, cooperation could focus on improving information-sharing on maritime incidents, enhancing crisis-communication channels, and developing practical guidelines and contingency procedures for dealing with disruptions to shipping routes in contested waters. Strengthening maritime domain awareness and coordination among civilian and security actors would help mitigate the spillover of interstate tensions into broader trade and economic shocks.

# Bibliography

- Argosino, Faith. "PCG Sends Aircraft to Monitor Chinese Research Vessel in Luzon Strait." *Inquirer*, 4 August 2025. <https://www.inquirer.net/451631/chinese-vessel-in-luzon-strait-pcg-sends-aircraft/>.
- Bakirci, Murat. "Advanced Ship Detection and Ocean Monitoring with Satellite Imagery and Deep Learning for Marine Science Applications." *Regional Studies in Marine Science* 81 (2025).
- Bosilca, Ruxandra-Laura. "The Use of Satellite Technologies for Maritime Surveillance: An Overview of EU Initiatives." *Incas Bulletin* 8, 1 (2016): 151-161.
- Campos, Othel V. "PH, Spain Explore Deeper Maritime Cooperation, Eye Technology Transfers." *Manila Standard*, 11 July 2025. <https://manilastandard.net/business/314614740/ph-spain-explore-deeper-maritime-cooperation-eye-technology-transfers.html>.
- Chao, Qiqi, Zhifeng Gu, Aimin Wang, Chunsheng Liu, Yi Yang. "Diversity of Three Small Type's Giant Clams and Their Associated Endosymbiotic Symbiodiniaceae at Hainan and Xisha Islands, South China Sea." *Marine Fisheries, Aquaculture and Living Resources* 8 (2021). <https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2021.774925/full>.
- China Power Team. "How Much Trade Transits the South China Sea?" *China Power*, 2 August 2017. <https://chinapower.csis.org/much-trade-transits-south-china-sea/>.
- "China to Establish Nature Reserve at Disputed Scarborough Shoal." *Reuters*, 10 September 2025. <https://www.reuters.com/en/china-establish-nature-reserve-disputed-scarborough-shoal-south-china-sea-2025-09-10/>.
- "China's Most Destructive Boats Return to the South China Sea." *Asia Maritime Transparency Initiative*, 20 May 2019. <https://amti.csis.org/chinas-most-destructive-boats-return-to-the-south-china-sea/>.
- Chhaya, Srishti. "The \$5.3 Trillion Question: How South China Sea Tensions are Rewriting Global Trade Rules." *Atlas Institute for International Affairs*, 4 July 2025. <https://atlasinstitute.org/the-5-3-trillion-question-how-south-china-sea-tensions-are-rewriting-global-trade-rules/>.
- del Callar, Michaela. "Sweden Seeking Improved Defense Ties, Appoints Defense Attache to PH." *GMA News*, 7 July 2025. <https://www.gmanetwork.com/news/topstories/nation/951799/sweden-philippines-defense-attache-military-ties/story/>.
- Delegation of the European Union to the Philippines. "Interconnecting National Maritime Agencies to Strengthen Maritime Security and Safety, and Sustainable Fisheries in the Philippines and in the Wider Indo Pacific Region," 22 March 2023. [https://www.eeas.europa.eu/delegations/philippines/interconnecting-national-maritime-agencies-strengthen-maritime-security-and-safety-and-sustainable\\_en](https://www.eeas.europa.eu/delegations/philippines/interconnecting-national-maritime-agencies-strengthen-maritime-security-and-safety-and-sustainable_en).
- European Union External Action Service. "The EU and the Philippines Enhance Security Cooperation," 2 June 2025. [https://www.eeas.europa.eu/eeas/eu-and-philippines-enhance-security-cooperation\\_en](https://www.eeas.europa.eu/eeas/eu-and-philippines-enhance-security-cooperation_en).
- European Union External Action Service. "Philippines: First Subcommittee on Maritime Cooperation with the European Union Takes Place in Brussels," 27 September 2023. [https://www.eeas.europa.eu/eeas/philippines-first-subcommittee-maritime-cooperation-european-union-takes-place-brussels\\_en](https://www.eeas.europa.eu/eeas/philippines-first-subcommittee-maritime-cooperation-european-union-takes-place-brussels_en).

- European Union External Action Service. "Philippines: Second Subcommittee on Maritime Cooperation with the European Union Takes Place in Manila," 29 October 2024. [https://www.eeas.europa.eu/eeas/philippines-second-subcommittee-maritime-cooperation-european-union-takes-place-manila\\_en](https://www.eeas.europa.eu/eeas/philippines-second-subcommittee-maritime-cooperation-european-union-takes-place-manila_en).
- Funairole, Matthew P., Brian Hart, David Peng, Bonny Lin, and Jasper Verschuur. "Crossroads of Commerce: How the Taiwan Strait Propels the Global Economy." *Center for Strategic and International Studies*, 10 October 2024. <https://features.csis.org/chinapower/china-taiwan-strait-trade/>.
- Gatchalian, Ched Rick. "PH, Czech Republic Tackle Defense Cooperation." *ABS-CBN News*, 20 February 2025. <https://www.abs-cbn.com/news/nation/2025/2/20/ph-czech-republic-tackle-defense-cooperation-1800>.
- Huang, Danwei, Wilfredo Y. Licuanan, Bert W. Hoeksema, et al. "Extraordinary Diversity of Reef Corals in the South China Sea." *Marine Biodiversity* 45 (2015): 157-168.
- "Importance of Satellites and Sensors for the Maritime Industry, The." *Sinay*, 7 June 2023. <https://sinay.ai/en/the-importance-of-satellites-and-sensors-for-the-maritime-industry/>.
- "IORIS Information Exchange Platform, The." *EU CRIMARIO*, 4 October 2020. <https://crimario.eu/the-ioris-information-exchange-platform/>.
- Lariosa, Aaron-Matthew. "Italian, German Shipbuilders Partner for Philippine Navy Sub Program Bid." *USNI News*, 17 April 2025. <https://news.usni.org/2025/04/17/italian-german-shipbuilders-partner-for-philippine-navy-sub-program-bid>.
- \_\_\_\_\_. "Manila Recovers Chinese Underwater Drone Operating in Philippine Waters." *USNI News*, 1 October 2025. <https://news.usni.org/2025/10/01/manila-recovers-chinese-underwater-drone-operating-in-philippine-waters>.
- Lee, Victor Robert. "Satellite Imagery Shows Ecocide in the South China Sea." *The Diplomat*, 15 January 2016. <https://thediplomat.com/2016/01/satellite-images-show-ecocide-in-the-south-china-sea/>.
- MacMurray, Madelyn, Carolyn Gruber. " Militarized Commons: How Territorial Competition is Weaponizing Fisheries and Destroying the South China Sea." *Stimson Center*, 8 September 2025. <https://www.stimson.org/2025/territorial-competition-weaponizing-fisheries-south-china-sea/>.
- Manahan, Job. "Coast Guard: Around 21 to 28 Chinese Research Vessels Spotted in Philippine EEZ This Year." *ABS-CBN*, 4 August 2025. <https://www.abs-cbn.com/news/nation/2025/8/4/coast-guard-around-21-to-28-chinese-research-vessels-spotted-in-philippine-eez-this-year-1452>.
- Mangosing, Frances. "Philippines, France Nearing Deal to Boost Combat Drills." *Naval News*, 8 October 2025. <https://www.navalnews.com/naval-news/2025/10/philippines-france-nearing-deal-to-boost-combat-drills/>.
- McManus, John W. "Offshore Coral Reef Damage, Overfishing, and Paths to Peace in the South China Sea." *The International Journal of Marine and Coastal Law* 32, 2 (2017): 199-237.
- Mistreanu, Simian and Jim Gomez. "China Blames Philippines for Ship Collision in South China Sea, Manila Calls the Report Deceptive." *Associated Press*, 17 June 2024. <https://apnews.com/article/china-philippines-second-thomas-shoal-collision-navy-8c14b945066967189b01d701b17c10ae>.
- Mora, Camilo, Iain R. Caldwell, Charles Birkeland, and John W. McManus. "Dredging in the Spratly Islands: Gaining Land but Losing Reefs," *PLOS Biology* 14, 6 (2016).

“Naval Diplomacy and Bilateral Cooperation for Frigate Marceglia in Manila Stopover.” *Marina Militare*, 26 March 2025.

[https://www.marina.difesa.it/EN/Conosciamoci/notizie/Pagine/20250326\\_Marceglia\\_Manila.aspx](https://www.marina.difesa.it/EN/Conosciamoci/notizie/Pagine/20250326_Marceglia_Manila.aspx).

Nepumoceno, Priam. “PH, US, France Conclude 1<sup>st</sup> ‘Balikatan’ Multilateral Maritime Drill.” *Philippine News Agency*, 30 April 2024. <https://www.pna.gov.ph/articles/1223709>.

Nguyen The Phuong. “Vietnam’s Maritime Militia is not a Black Hole in the South China Sea.” *Asia Maritime Transparency Initiative*, 22 May 2020. <https://amti.csis.org/vietnams-maritime-militia-is-not-a-black-hole-in-the-south-china-sea/>.

Odgaard, Liselotte. “European Security and Minilateralism in the Indo-Pacific.” *Australian Journal of International Affairs* 78, 6 (2024): 911-928.

Ong, Ghio. “Increased Presence of Chinese Research Vessels in West Philippine Sea Alarming – PCG.” *Philippine Star*, 5 August 2025. <https://www.philstar.com/headlines/2025/08/05/2463147/increased-presence-chinese-research-vessels-west-philippine-sea-alarming-pcg>;

Philippines: Department of Foreign Affairs. “DND, AFP Officials Sign Bilateral Defense Cooperation Agreement with Spain, Hold First Joint Defense Cooperation Meeting.” 20 January 2020. <https://dfa.gov.ph/dfa-news/news-from-our-foreign-service-postupdate/25537-dnd-afp-officials-sign-bilateral-defense-cooperation-agreement-with-spain-hold-first-joint-defense-cooperation-meeting>.

Philippines: Department of Foreign Affairs. “Philippines-EU Joint Committee Meets, Establishes New Dialogue on Maritime Security,” 2023. <https://dfa.gov.ph/dfa-news/statements-and-advisoriesupdate/32885-philippines-eu-joint-committee-meets-establishes-new-dialogue-on-maritime-security>.

Rita, Joviland. “PCG Alarmed Over Increase of Chinese Research Ships in PH EEZ.” *GMA News Online*, 4 August 2025. <https://www.gmanetwork.com/news/topstories/nation/954691/pcg-alarmed-over-increase-of-chinese-research-ships-in-ph-eez>.

Robles, Alfredo Jr. C. *Endangered Species and Fragile Ecosystems in the South China Sea: The Philippines v. China Arbitration*. Palgrave Macmillan, 2019.

Sadongdong, Martin. “French Air Force Team Lands in PH for ‘PEGASE’ Mission.” *Manila Bulletin*, 29 July 2024. <https://mb.com.ph/2024/7/29/french-air-force-team-lands-in-ph-for-pegase-mission>.

Sato, Monica, Harrison Prétat, Tabitha Mallory, Hao Chen, and Gregory Poling. “Deep Blue Scars: Environmental Threats to the South China Sea.” *Center for Strategic and International Studies*, 18 December 2023. <https://features.csis.org/environmental-threats-to-the-south-china-sea/>.

Schroeter, Marie and Monica Ang-Tan. “ASEAN Economic Security in the South China Sea,” *Friedrich Ebert Stiftung Philippines*, 2025. <https://library.fes.de/pdf-files/bueros/philippinen/22377.pdf>.

Schuhbauer, Anna, Daniel J. Skerritt, Naazia Ebrahim, Frédéric Le Manach, U. Rashid Sumaila. “The Global Fisheries Subsidies Divide Between Small- and Large-Scale Fisheries.” *Frontiers in Marine Science* 7 (2020).

Soriano, JP. “PH, France Boost Ties in Monitoring Maritime Threats, Illegal Fishing.” *GMA News*, 19 September 2025. <https://www.gmanetwork.com/news/topstories/nation/959665/ph-france-boost-ties-in-monitoring-maritime-threats-illegal-fishing/story/>.

*South China Sea Arbitration, The (The Republic of the Philippines v. The People’s Republic of China)*. Permanent Court of Arbitration, 2016. <https://pca-cpa.org/en/cases/7/>.

- Sumaila, U. Rashid, William W.L. Cheung. *Boom or Bust: The Future of Fish in the South China Sea*. ADM Capital Foundation, Hong Kong, 2015. [https://www.admcf.org/wp-content/uploads/2023/12/4-Resource-a\\_-Boom-or-Bust\\_-The-Future-of-Fish-in-the-South-China-Sea-English-version-November-2015-compressed.pdf](https://www.admcf.org/wp-content/uploads/2023/12/4-Resource-a_-Boom-or-Bust_-The-Future-of-Fish-in-the-South-China-Sea-English-version-November-2015-compressed.pdf).
- Sumaila, U. Rashid, William W.L. Cheung, Louise S.L. Teh, et al. *Sink or Swim: The Future of Fisheries in the East and South China Seas*. ADM Capital Foundation, Hong Kong, 2021. [https://www.admcf.org/wp-content/uploads/2021/11/Sink-or-Swim-Full-Report\\_171121.pdf](https://www.admcf.org/wp-content/uploads/2021/11/Sink-or-Swim-Full-Report_171121.pdf).
- “Taiwan’s Dominance of the Chip Industry Makes It More Important.” *The Economist*, 6 March 2023. <https://www.economist.com/special-report/2023/03/06/taiwans-dominance-of-the-chip-industry-makes-it-more-important>.
- “Vietnam’s Major Spratly Expansion.” *Asia Maritime Transparency Initiative*, 14 December 2022. <https://amti.csis.org/vietnams-major-spratly-expansion/>.
- “Vietnam Ramps Up Spratly Island Dredging.” *Asia Maritime Transparency Initiative*, 15 November 2023. <https://amti.csis.org/vietnam-ramps-up-spratly-island-dredging/>.
- “What is the Maritime Supply Chain?” *Sinay*, 3 March 2022. <https://sinay.ai/en/what-is-the-maritime-supply-chain/>.
- Zhang, Hongzhou. “Chinese Fishermen in Troubled Waters.” *The Diplomat*, 23 October 2014. <https://thediplomat.com/2014/10/chinese-fishermen-in-troubled-waters/>.
- \_\_\_\_\_. “South China Sea: The Story of the Tanmen Fishermen.” *The Diplomat*, 8 January 2016. <https://thediplomat.com/2016/01/south-china-sea-the-story-of-the-tanmen-fishermen/>.