



**IISPP**  
INSTITUTE FOR INTERNATIONAL  
STUDIES AND PUBLIC POLICY

CENTER FOR SOUTHEAST ASIAN STUDIES

**CSEAS COMMENTARY**



[www.rupp.edu.kh/iispp/cseas](http://www.rupp.edu.kh/iispp/cseas)

CSEAS Commentary #52 / Nov 2025

## **Plugging the Hidden Gaps Under Southeast Asia's Seas**

*Ly Nory*



Undersea cables are the invisible backbone of Southeast Asia's digital infrastructure, yet they receive surprisingly little attention, especially in the Cambodian context. Gaps in surveillance, network resilience, and governance leave the region vulnerable, threatening its economic prosperity and digital sovereignty amid rising geopolitical competition. Southeast Asia is one of the world's fastest-growing digital markets and one of its most strategically contested maritime regions. Undersea cables require serious attention to safeguard digital sovereignty; however, there are potential challenges in realizing such protection, such as lacking undersea domain awareness, weak network resilience, and limited regional governance.

Subsea cables carry [more than 95% of global internet traffic](#), and Southeast Asia is a critical junction. When grey-zone actors cut or tap cables, states quickly lose connectivity.

Yet most ASEAN members lack undersea domain awareness; they have little ability to detect submarines or unmanned vehicles moving clandestinely through the region's busy chokepoints. The Malacca, Sunda and Lombok straits are some of the world's narrowest shipping lanes, handling [up to 90,000 vessels per year](#), but they remain unmonitored below the surface. The United States and Japan have built extensive hydroacoustic lines like the "[Fish Hook](#)" barrier around the Philippine Sea, but Southeast Asia has nothing comparable. China has [exploited this gap](#), it has deployed research vessels and unmanned underwater vehicles (UUV) in the South China Sea and laid dual-use cables under the Belt and Road banner to secure a permanent presence. Without sensors, regional navies find themselves unable to even prove such incursions.

Another undersea gap lies in network resilience. Southeast Asia's cables have proliferated, but they often follow the same routes, creating chokepoints. An anchor dragging incident [near Egypt in 2022](#) severed the AAE-1 cable and triggered a cascade of disruptions on the SeaMeWe-5 system. In 2023, [four of Vietnam's five cables](#) failed simultaneously, forcing the government to plan two new cables by 2025 and universal fibre coverage by 2030. [Indonesia's cabotage laws](#) delayed repairs to the SeaMeWe-5 line for weeks in 2024. [Malaysia](#), after briefly reimposing cabotage restrictions, reversed course in June 2024 to attract data-centre investment. All of this demonstrates the fragility of a network that is too concentrated and subject to national jurisdiction.

A third gap is in governance. ASEAN adopted [Guidelines for Strengthening Resilience and Repair of Submarine Cables](#) in 2019 and [pledged in 2024](#) to build a "secure, diverse and resilient submarine cable network". Yet guidelines remain aspirational if states continue to impose protectionist cabotage rules or fail to share data. The region has only about [30 cable repair ships](#), and there is no dedicated cable protection committee. Without a clear regional mechanism to coordinate repairs, permit access and share threat intelligence, individual states will remain vulnerable.

Singapore offers one model, where its economy depends on [subsea cables for 99%](#) of its international traffic. It has attracted 28 cables with 13 more on the way and has invested in a cable-laying and repair fleet. The city-state supports global best practices and works with the U.S., Japanese and European suppliers. Brunei is following this example through its planned [Asia United Gateway East](#) cable linking Singapore and Japan, which aims to diversify routes and position the sultanate as a digital hub. Vietnam and Singapore are also cooperating to develop a [direct cable](#) and plan ten new lines by 2030.

Cambodia's experience warns that external dependence can turn cables into geopolitical tools. The [Sihanoukville–Hong Kong cable](#) is financed and built by China's Unicom Group

and will replace older connections by 2025. Such investments can strengthen connectivity but also entrench a single supplier, raising espionage and leverage concerns. The U.S. has blocked Chinese suppliers from certain projects, but [Southeast Asian states seek a balanced mix](#); Japanese companies control roughly 41% of regional cables, American firms 20% and Chinese companies 19%. Maintaining diversity is essential to avoid monopolies.

To tackle the undersea gaps, first, integrate undersea surveillance into broader maritime security. Deploy hydrophone arrays at chokepoints, link them with automatic identification system data, and use artificial intelligence to detect anomalies. [A phased strategy](#) begins with deploying basic sensor networks and gradually develops into integrated data fusion centers. The concept has precedent likewise Japan's Fish Hook network has deterred submarine intrusions for decades. Second, invest in redundancy and route diversity. Encourage a broader menu of suppliers and incentives to land cables through multiple straits. When one cable fails, another route should maintain service. Third, streamline regulations. Revoke protectionist cabotage rules that delay repairs. ASEAN's guidelines should evolve into binding commitments with mutual aid clauses and pre-approved repair permits. Fourth, build [repair capacity](#). Regional navies or coastguards can sponsor cable security fleets and training programs; Malaysia and Indonesia could join Singapore to host repair hubs. Finally, address the geopolitical context head-on. States should insist that no single power, neither China nor the United States, monopolize the digital arteries of Southeast Asia. Diverse partnerships, transparency, and adherence to international law will ensure that the region's undersea networks remain open and secure.

The undersea realm is often out of sight and mind. Yet if Southeast Asia fails to close its undersea gaps, the consequences will be visible on land including dropped calls, stalled economies, and lost sovereignty. Now is the time for ASEAN governments to collaborate, invest, and innovate in the world beneath the waves.

---

**Ly Nory** is a Researcher at the Center for Southeast Asian Studies (CSEAS) of the Institute for International Studies and Public Policy (IISPP), Royal University of Phnom Penh.

*The author gratefully acknowledges peer review and constructive feedback from Lim Chhay.*

---

*Disclaimer: The views expressed are the author's own and do not necessarily reflect the opinions and views of the editorial team and the Center for Southeast Asian Studies or the Institute for International Studies and Public Policy. Hence, assumptions made in the articles are not reflective of any other entity other than the author(s) themselves—following, they may be opinionated and subject to revision as well.*

---

### Editorial Board

**Assoc. Prof. Dr. Neak Chandarith**

Director of the Institute for International Studies and Public Policy, Royal University of Phnom Penh.

**Asst. Prof. Dr. Yun Kea**

Designated Deputy Director in charge of Research and Development of the Institute for International Studies and Public Policy.

**Lak Chansok**

Senior Lecturer of International Relations and Master's Program Coordinator at the Institute for International Studies and Public Policy.

**Lim Chhay**

Designated Deputy Director of the Center for Southeast Asian Studies (CSEAS) of the Institute for International Studies and Public Policy, Royal University of Phnom Penh.

---

*Center for Southeast Asian Studies (CSEAS) of the Institute for International Studies and Public Policy (IISPP) aims to be a highly reliable and advanced hub of knowledge on Southeast Asian affairs to catalyze progress and advance prospects of positive integration, peace, and development. With its pool of high-caliber researchers, IISPP's CSEAS aims to be an alternative to ad-hoc research, training, and policy dialogue arrangements with limited or short-lived national and regional impacts.*