

# Troubled Straits

## Analyzing Trade Chokepoints in the South China Sea

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### THE ISSUE

Each year, trillions of dollars of goods flow through the South China Sea, making it the world's most consequential maritime corridor. The region is also a hotbed of geopolitical tensions that threaten to upturn global commerce. Despite the enormous stakes, the sea's critical chokepoints have been poorly understood—until now. This CSIS brief and its companion [interactive dashboard](#) offer groundbreaking insight into the value and types of goods transiting eight different South China Sea chokepoints. The new data reveals the extent of each country's reliance on each chokepoint and challenges existing notions about the importance of these chokepoints.

### INTRODUCTION

Each year, more than half of all international trade travels by sea, flowing along established routes that converge at strategically critical “chokepoints” where disruptions can cascade across global commerce.<sup>1</sup>

Maritime chokepoints have surged to the forefront of global attention amid the 2026 Iran war and intensifying geopolitical competition. Since March, Iran has wreaked havoc on global energy markets by largely severing traffic through the Strait of Hormuz, which handles over one-fifth of global **oil** and **liquefied natural gas** trade flows. Tehran's actions have showcased that controlling a key waterway can significantly augment a country's power and deterrence.

The stakes are even higher in the South China Sea, where chokepoints connect many of the world's most important economic centers. The two busiest of these, the Malacca Strait and the Taiwan Strait, dwarf the Strait of

Hormuz in maritime traffic, with each handling trillions of dollars of goods each year.

Despite their importance, existing estimates of trade through the South China Sea's chokepoints are often rudimentary. Most estimates focus primarily on the Malacca Strait, ignoring the role of others, and most existing studies rely on traffic **volume** rather than monetary value. Additionally, they tend to offer only global, macro-level figures that obscure how differently individual economies depend on each chokepoint.

Now, new CSIS analysis based on chokepoint-level trade estimates offers unprecedentedly granular insight into the value of trade flows through multiple South China Sea chokepoints and reveals how reliant each economy is on each chokepoint. This brief explores key takeaways and implications from the data.

**To see the full dataset, explore the [interactive dashboard](#).**

## KEY TAKEAWAYS

1. **The South China Sea is vital not just for regional maritime traffic but also for global trade.** In 2024, nearly \$6.4 trillion worth of goods collectively passed through its eight major straits (inclusive of repeat counting of goods that cross multiple straits).<sup>2</sup> Among these, the Malacca Strait and Taiwan Strait are in a league of their own. These two trade superhighways each moved over \$2.4 trillion worth of goods in 2024—or 21 percent of global maritime trade each.
2. **A conflict could cause major disruptions to the flow of trade through the South China Sea.** Iran’s efforts to control and toll traffic through the Strait of Hormuz have renewed fears that states could try to do the same to the Malacca Strait. China’s threats to use force against Taiwan have also put the Taiwan Strait at the epicenter of one of the world’s most high-stakes geopolitical hotspots. If either of these two major straits is interrupted, rerouting options exist, but they will come at a cost.
3. **China faces more of a “Taiwan Strait dilemma” than a “Malacca dilemma.”** Chinese officials have long warned of a “Malacca dilemma” given that much of China’s trade—especially energy imports—must transit through the Malacca Strait and are exposed to blockades or other disruptions. Yet a military action by China that disrupts the Taiwan Strait could harm China’s economy even more severely than a disruption of the Malacca Strait. In 2024, about 33 percent of China’s imports and 16 percent of its exports passed through the Taiwan Strait, while 21 percent of China’s imports and 14 percent of its exports transited through the Malacca Strait.
4. **The United States is not directly reliant on the South China Sea for much of its trade, but key U.S. allies and partners are deeply dependent on its waterways—especially the Taiwan Strait.** Just 3–4 percent of all U.S. trade traveled through the Malacca and Taiwan Straits each in 2024. For U.S. allies Japan, South Korea, and the Philippines, the risks are much greater, especially in the Taiwan Strait. In 2024, they collectively shipped \$755 billion worth of goods through the Taiwan Strait and some \$474 billion through the Malacca Strait. For Taiwan, the stakes in the Taiwan Strait are existential.

5. **Australia, New Zealand, and their Oceanic neighbors are outliers.** Whereas almost all other economies around the world are most reliant on the Malacca and Taiwan Straits, economies in Oceania rely on different routes to reach major markets like China, Japan, and South Korea.
6. **Many countries in Africa and the Middle East are among the most reliant on the South China Sea.** Six Persian Gulf countries—Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE)—relied on the Malacca Strait for more than 40 percent of their exports in 2024. In Africa, the small coastal nation Eritrea relied on the Malacca Strait to send 90 percent of its exports to Asia, and three African states—Djibouti, Ethiopia, and Kenya—received more than 40 percent of their imports through the Malacca Strait.

## THE SOUTH CHINA SEA AND ITS CHOKEPOINTS

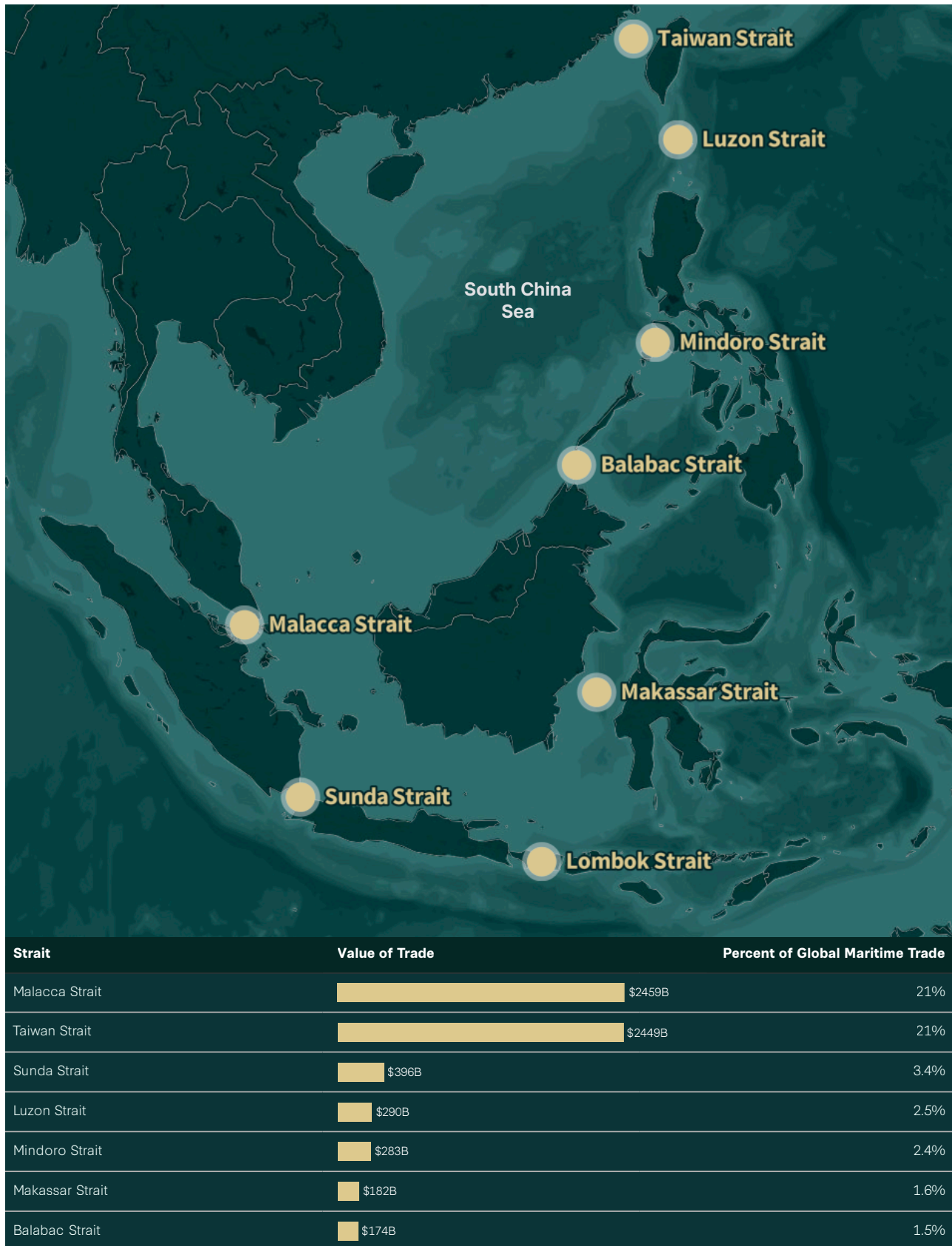
The South China Sea is a nexus of global economic activity. The economies in and around the sea boasted a collective GDP of some **\$24 trillion** in 2024, or about 22 percent of the global total.<sup>3</sup> But the South China Sea is not just important to the region. It is a superhighway for global maritime traffic.

Eight key straits serve as conduits through the South China Sea: the Balabac, Makassar, Malacca, Mindoro, Lombok, Luzon, Sunda, and Taiwan Straits. Collectively they serviced some \$6.4 trillion of trade through the South China Sea in 2024 (inclusive of repeat counting of goods that cross multiple straits; see Figure 1).

Among these, the Malacca and Taiwan Straits are in a league of their own. In 2024, over \$2.4 trillion worth of goods transited each strait—roughly 21 percent of global maritime trade and 10 percent of all global trade.

The Malacca Strait is the region’s western gateway connecting the vast Indian Ocean to the South China Sea and broader Pacific Ocean. Almost all of the northern side of the 560-mile-long strait borders Malaysia, while Indonesia’s coastline makes up the southern edge. Much of the strait is dozens of miles wide, but at its narrowest point, near the mega-port city of Singapore, the strait bottlenecks into a channel just two miles wide.

Figure 1: Key Chokepoints in the South China Sea



Source: Jasper Verschuur, Johannes Lumma, and Jim W. Hall, "Systemic Impacts of Disruptions at Maritime Chokepoints," *Nature Communications* 16, no. 10421 (2025), <https://www.nature.com/articles/s41467-025-65403-w>.

To the northeast, the Taiwan Strait separates Taiwan and the Chinese mainland and connects the South China Sea to the East China Sea. At around 80 to 100 miles wide, the Taiwan Strait is considerably wider and more open than the Malacca Strait.

## THE POTENTIAL FOR DISRUPTIONS

There are several scenarios that could result in disruptions to the South China Sea's chokepoints. A major military conflict carries the greatest risk of systematically disrupting trade for a prolonged period, but piracy, terrorism, accidents, and environmental disasters could pose short-term problems as well.

### POTENTIAL DISRUPTION SCENARIOS

A conflict over Taiwan poses the gravest threat to trade in the region. China continues to assert that it will bring Taiwan under its control, and Chinese leaders have repeatedly threatened to do so by force. In recent years, China has increased gray zone and military pressure against Taiwan, and Chinese forces are preparing for a range of contingencies.

A full-scale invasion or **major military blockade** of Taiwan would turn the Taiwan Strait into a war zone and could also ensnare the nearby Luzon Strait—the stretch of water dividing Taiwan and the Philippines. A more limited “quarantine” of **Taiwan** could also disrupt traffic in the region, but to a lesser extent.

### *A conflict over Taiwan poses the gravest threat to trade in the region.*

A major Taiwan conflict involving the United States could also complicate trade through the Malacca Strait. Beijing has long feared a situation in which the United States imposes a distant blockade on China by asserting control over passage through the Malacca Strait. In 2003, Chinese President Hu Jintao **warned** that some “major powers” (i.e., the United States) were seeking to control the Malacca Strait, posing a threat to China's energy security. Hu's “Malacca Dilemma” (马六甲困局) became a rallying cry for China to diversify its energy imports by seeking new sources and transportation routes, which in turn framed some of the planning behind Xi Jinping's signature **Belt and Road Initiative**.

Some Chinese experts **argue** that fears of the “Malacca Dilemma” are overstated in China. They assert that international shippers could reroute without much difficulty,

and that the U.S. military lacks the capability to simultaneously block the other key South China Sea straits that would cause more dire problems for China. Additionally, China's rapid ongoing **naval modernization** has increased the military options at Beijing's disposal to challenge a blockade.

The issue nevertheless persists in the minds of Chinese leaders. In May 2026, Chinese Foreign Minister Wang Yi met with his Singaporean counterpart amid the backdrop of the Iran war and disruptions to the Strait of Hormuz, and the two explicitly discussed the Malacca Strait, with Wang Yi **stating** that keeping critical shipping lanes open is “a shared aspiration of all countries.”

The second major potential scenario is a conflict over disputed features at the center of the South China Sea, which is home to some of the world's most contentious sovereignty disputes. Brunei, China, Indonesia, Malaysia, the Philippines, Taiwan, and Vietnam have **competing claims** over areas and features within the South China Sea, with China asserting the broadest claims based on its “nine-dash line,” which encompasses roughly 90 percent of the sea. China has particularly ramped up pressure on the Philippines at hotspots like Scarborough Shoal and Second Thomas Shoal, raising the prospect of a conflict that embroils not just the two claimants but also the United States as a treaty ally of the Philippines.

A conflict in the heart of the South China Sea could have cascading effects on trade in the region. A war centered in the sea could expand to complicate trade through the Malacca Strait or the Taiwan Strait in ways similar to a Taiwan conflict. It could also have more direct impacts on secondary chokepoints, such as the Balabac, Makassar, and Mindoro Straits.

Beyond a conflict, other scenarios pose lesser risks, primarily to the narrow Malacca Strait.

- **State Interventions:** After Iran began successfully blockading the Strait of Hormuz and moved to impose tolls on traffic through the strait, fears emerged that the same could happen at other chokepoints. Indonesian officials **inflamed** these anxieties with suggestions that Indonesia could potentially toll the Malacca Strait. Doing so would be **illegal** under international law, which guarantees free passage through straits used for international navigation, and Indonesian officials recanted their statements, but not before sparking concern from the region.

- **Piracy:** Due to the high concentration of ship traffic at the narrowest portions of the Malacca Strait, piracy is a perennial challenge there. In 2025, the Malacca Strait (and accompanying Singapore Strait) experienced **108 incidents** of piracy and armed robbery, marking a 74 percent increase over the previous year and a 19-year high.
- **Terrorism:** Extremist attacks on port terminal infrastructure or attacks to scuttle large ships could temporarily block or slow passage through narrow points of the Malacca Strait.
- **Accidents and Environmental Disasters:** An accident resulting in the sinking of a large ship could temporarily force rerouting around parts of the Malacca Strait. An **environmental disaster**, such as a massive volcanic eruption or tsunami—which the region is prone to—could also cause problems.

- **Backup Route 2:** If the Sunda Strait is inaccessible, the next option is to cross the Lombok Strait and head northward through the Makassar Strait.
- **Worst Case Scenario:** If all of these options become untenable, vessels could reroute much farther south around Australia and then along the eastern side of the Philippines to reach destinations in East Asia.

While there are options for rerouting around each chokepoint, doing so could **add** days or weeks of travel time and cost billions in extra shipping costs. The experience in the Middle East offers a recent example of the challenge. After Houthi militias began attacking commercial ships in the Red Sea in 2023, some vessels began rerouting around Africa’s southern tip at the Cape of Good Hope. For ships sailing from Europe to the Arabian Sea, this nearly doubled the voyage length **from 19 days to 34 days**. The longer route led to higher fuel costs, but also put greater demands on global shipping fleets and increased shipping insurance premiums—all of which resulted in inflated freight costs.

Disruptions to different straits would be felt differently. The Malacca Strait is particularly important as a conduit for oil and gas from energy-producing countries in the Middle East and Africa to energy-hungry markets in Asia. In the first half of 2025, an estimated **29 percent** of global seaborne oil trade flowed through the Malacca Strait, making it the busiest oil chokepoint in the world, ahead of even the Strait of Hormuz.

The Taiwan Strait carries huge quantities of oil and gas as well, but it also plays an outsized role in technology supply chains thanks to its proximity to global technology giants Taiwan, China, Japan, and South Korea. Some \$986 billion of electrical and machinery goods transited the Taiwan Strait in 2024, which is about \$103 billion more than through the Malacca Strait (see Figure 2).

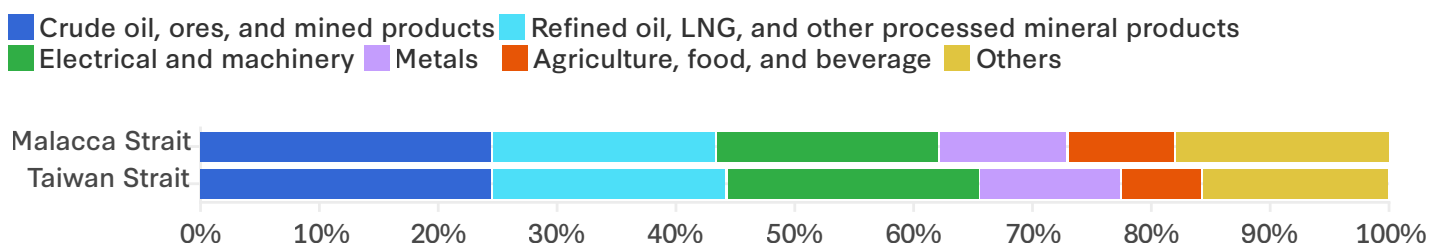
## THE IMPACTS OF REROUTING

Sustained disruptions to straits in the South China Sea could create major costs and challenges from rerouting. Take, for example, the impacts on an oil tanker bound from the Persian Gulf to an oil terminal at the Port of Qingdao in northern China (see Figure 3).

- **Standard Route:** A tanker on this journey would typically transit the Malacca Strait, cut across the South China Sea, pass through the Taiwan Strait, and continue onward to China’s northern coast.
- **Backup Route 1:** If the Malacca Strait is blockaded or otherwise impassable, a tanker could reroute through the Sunda Strait, but its shallow depth would make it inaccessible for some super-large vessels with a deep draft.

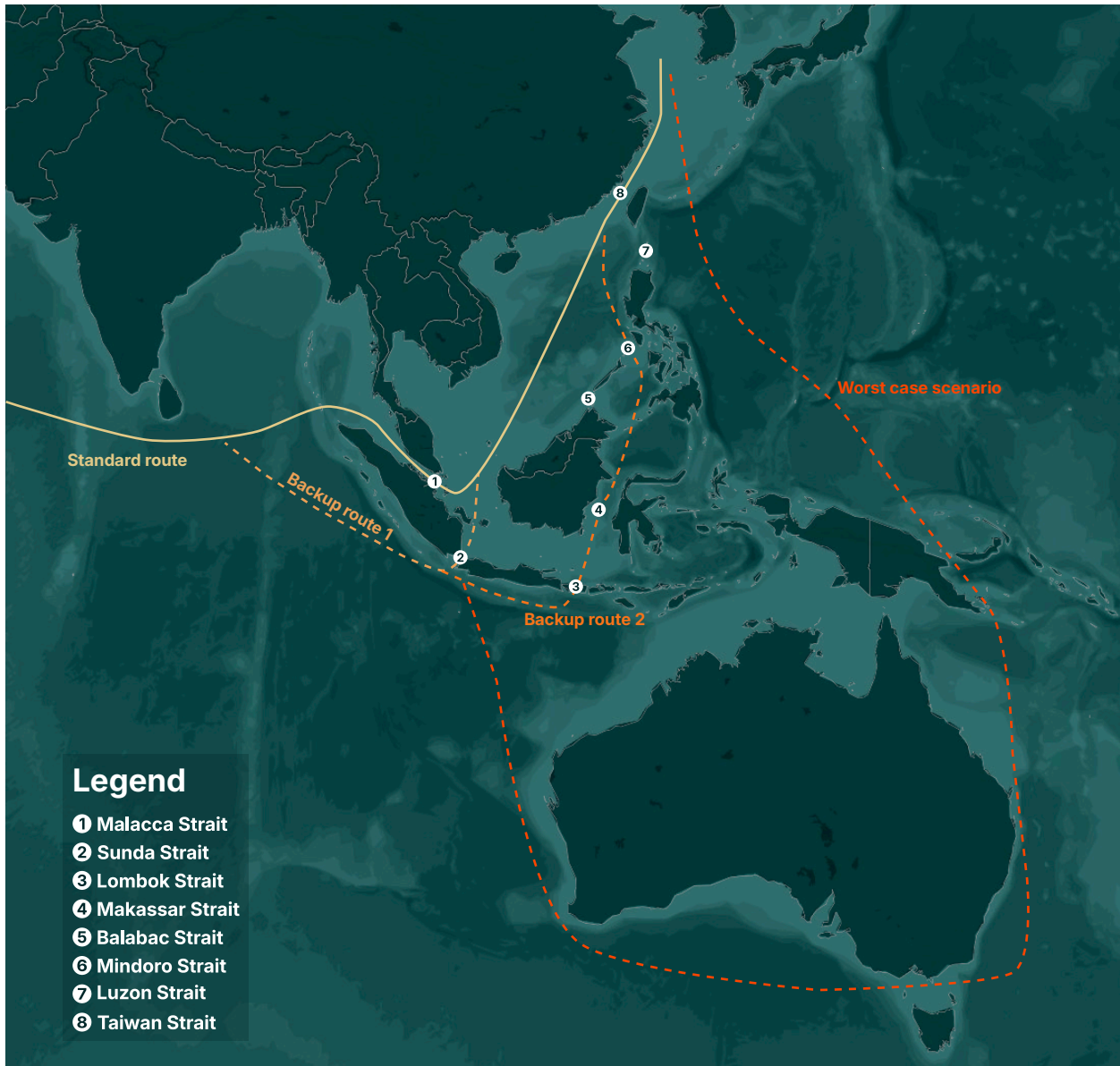
Figure 2: Industry Breakdown of Trade Through the Malacca and Taiwan Straits

Percent of total trade transiting each strait, 2024



Source: CSIS analysis based on Verschuur, Lumma, and Hall, “Systemic Impacts of Disruptions at Maritime Chokepoints.”

Figure 3: Options for Rerouting Around the Malacca Strait



Source: CSIS.

## CHINA'S TAIWAN STRAIT DILEMMA

Beijing is justified in worrying about its exposure to disruptions in the Malacca Strait. In 2024, nearly \$963 billion of China's trade transited the Malacca Strait. That included 21 percent of China's imports and 14 percent of its exports. Yet China faces more of a Taiwan Strait dilemma than a Malacca dilemma. In 2024, nearly \$1.3 trillion of Chinese trade transited the Taiwan Strait—nearly 33 percent more than through the Malacca Strait.<sup>4</sup> The Taiwan Strait is especially crucial in supplying China with industrial imports like oil, coal, natural gas, ores, and metals arriving from resource-rich countries. Altogether, 33 percent of China's total imports—and an impressive 58 percent of its maritime imports—transited the strait in 2024 (see Figure 4).

The Taiwan Strait also has extra value compared to Malacca in that it is a vital conduit for China's own domestic shipping. Much of the traffic through the Taiwan Strait is on Chinese-flagged ships moving goods between China's own ports. For instance, goods produced in China's southern technology hubs like Shenzhen and Guangzhou are frequently loaded onto container ships bound for eastern mega-ports in Shanghai and Ningbo or more northern cities like Tianjin.

In the event of a conflict that obstructs traffic through the Taiwan Strait, Chinese shippers could shift seaborne traffic to roads and rail, but doing so would come with a higher price tag. Moving goods by road from Guangzhou

to Tianjin, for example, can cost about **three times** the price of moving the same goods by sea. There would also be logistical hurdles to overcome. Switching China's massive north-south transport lines en masse from maritime shipping to overland routes could create bottlenecks within China's inland logistics networks, sending ripple effects throughout the economy.

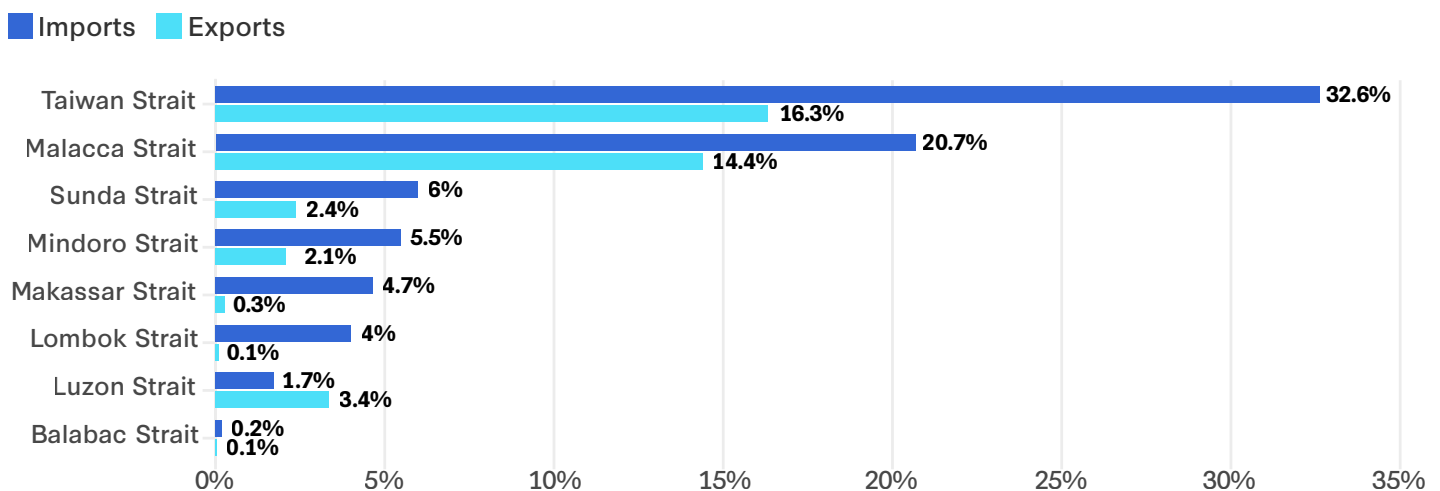
Beijing would have some options to mitigate these shocks if the Taiwan Strait was shut down due to a conflict. Vessels heading to China from outside of the region could reroute well away from the South China Sea and Taiwan Strait and sail through the Miyako Strait that divides Japan's outlying islands, but this could still leave Chinese-bound ships susceptible to interdiction. China could also attempt to regulate traffic through the Taiwan Strait, leaving it open to Chinese-flagged vessels or other friendly shippers, but doing so during wartime would be a risky and unappealing prospect—even for China's own shipping companies.

## THE STAKES FOR U.S. ALLIES AND PARTNERS

The United States does not get much of its trade via any of the South China Sea's straits. The Luzon, Malacca, and Taiwan Straits each handle around 3-4 percent of total U.S. trade. Furthermore, much of this U.S. trade through the Taiwan and Luzon Straits is with China, which would likely already be jeopardized in the event of a conflict over Taiwan.

Figure 4: China's Reliance on South China Sea Chokepoints

Percent of China's trade transiting each strait



Source: CSIS analysis based on Verschuur, Lumma, and Hall, "Systemic Impacts of Disruptions at Maritime Chokepoints."

The picture is much grimmer for U.S. allies and partners in Asia. Several key U.S. allies and partners are particularly reliant on the Taiwan Strait. Japan, South Korea, and the Philippines collectively shipped \$755 billion through the Taiwan Strait in 2024. That was far more than the \$474 billion that they traded through the Malacca Strait. The Taiwan Strait's outsized importance is partly due to these economies' trade with China, but also the result of high levels of trade between Japan and South Korea and economies in Southeast Asia.

As an island nation, Japan is deeply reliant on maritime trade. In 2024, the Taiwan Strait carried 28 percent of Japan's total trade and the Malacca Strait carried 18 percent, but they mattered to Japan for different reasons (see Figure 5). Of all Japanese imports passing through the Malacca Strait, 64 percent (by value) comprised oil, natural gas, and various other mineral products. Meanwhile, those goods only accounted for about 44 percent of Japan's imports through the Taiwan Strait. Instead, the Taiwan Strait was critical for electrical goods and machinery, including key technologies like semiconductors. These goods made up a quarter of all Japanese imports through the Taiwan Strait.

South Korea was slightly less reliant on these straits than Japan, but it still depended on the Taiwan Strait for 22 percent of its trade and on the Malacca Strait for 13 percent of its trade. However, it was even more reliant on these straits

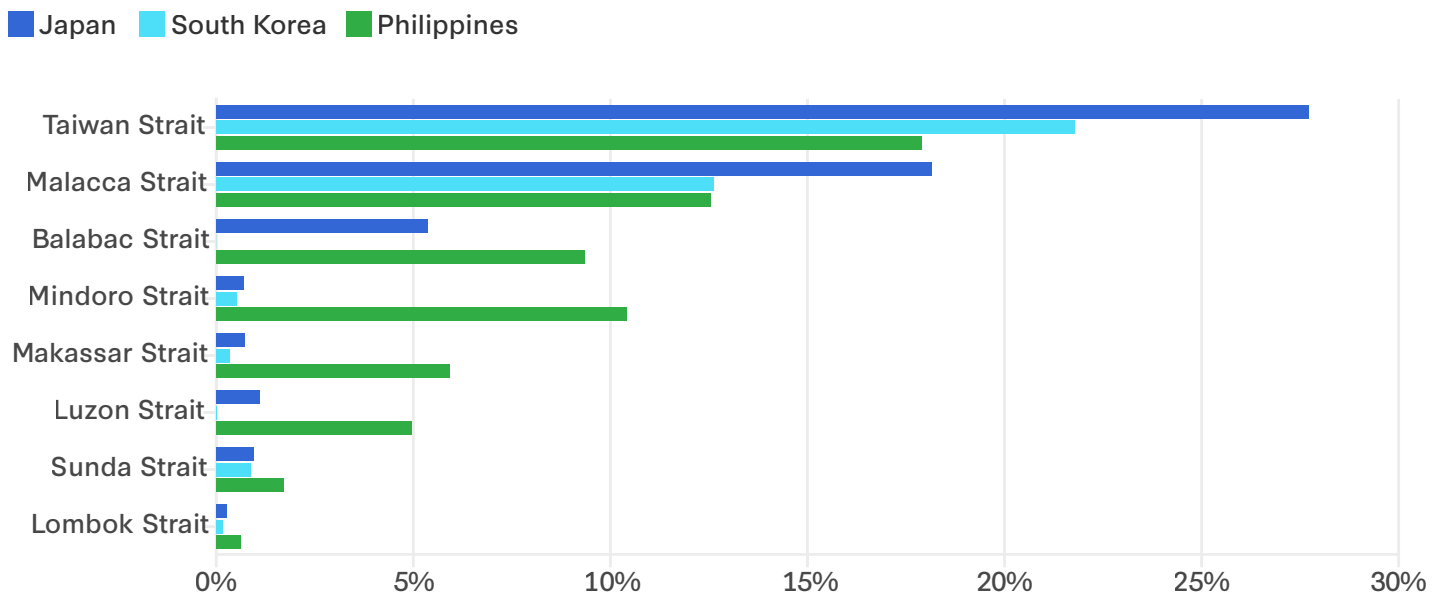
in the case of energy products. Oil, gas, and related minerals accounted for over 78 percent of South Korea's imports through the Malacca Strait and 64 percent of its imports through the Taiwan Strait.

The Philippines is likewise most reliant on the Taiwan and Malacca Straits, but thanks to its position at the heart of the South China Sea, the country is broadly reliant on almost all of the straits in the region.

Given the stakes for these countries, it is unsurprising that their leaders have been vocal about their concerns over China's provocations around Taiwan and in the South China Sea. In November 2025, Japanese Prime Minister Sanae Takaichi **responded** to questions in parliament by saying that "warships with the use of military force" against Taiwan could lead to a "survival-threatening situation" for Japan. Beijing **interpreted** her comments as suggesting that the Japan Self-Defense Forces would be legally allowed to engage in collective self-defense activities in the event of a conflict over Taiwan, and China responded with major military, gray zone, and economic forms of pressure. Similarly, Philippine President Ferdinand R. Marcos Jr. has been vocal in pushing back against Chinese pressure in the South China Sea, and in May 2026 he **acknowledged** that, in a conflict involving Taiwan, the Philippines was "going to be part of that or will feel the effects" due to its proximity.

**Figure 5: Reliance of Select U.S. Allies on Key South China Sea Straits**

Percent of total trade (exports and imports) transiting each strait



Source: CSIS analysis based on Verschuur, Lumma, and Hall, "Systemic Impacts of Disruptions at Maritime Chokepoints."

For Taiwan, the stakes in the Taiwan Strait are existential. Taiwan is almost totally dependent on maritime imports of energy to fuel its economy. Making matters worse, the vast majority of Taiwan’s maritime imports arrive at a handful of ports that are clustered on the western side of the island. Just two of Taiwan’s leading ports within the Taiwan Strait—Kaohsiung and Taichung—account for **72 percent** of the island’s total imports. Beijing could take advantage of these facts to put major pressure on Taipei, including through a quarantine or blockade of the island.

To learn more about potential Taiwan contingencies and the impacts of disruptions to the Taiwan Strait, explore *Measures Short of Invasion*, a special series of the CSIS China Power Project.

## AUSTRALIA, NEW ZEALAND, AND THEIR NEIGHBORS

Owing to the region’s geography, Australia, New Zealand, and their neighbors in Oceania experience the South China Sea differently from other countries. Australia is also unique from its other U.S. allied peers as a major exporter

to the region rather than a large importer.

For almost all countries in the region, either the Malacca Strait or the Taiwan Strait is the top chokepoint within the South China Sea, but that is not the case for Australia (see Figure 7). Instead, Australia is most heavily reliant on the Mindoro Strait, which connects the Sulu Sea to the larger South China Sea. While most other countries rely little on the Mindoro Strait, it carried a staggering 34 percent of Australia’s exports and 26 percent of its imports in 2024. Meanwhile, the Taiwan Strait ranks as Australia’s second most important maritime chokepoint, while the Malacca Strait ranks only fourth for Australia.

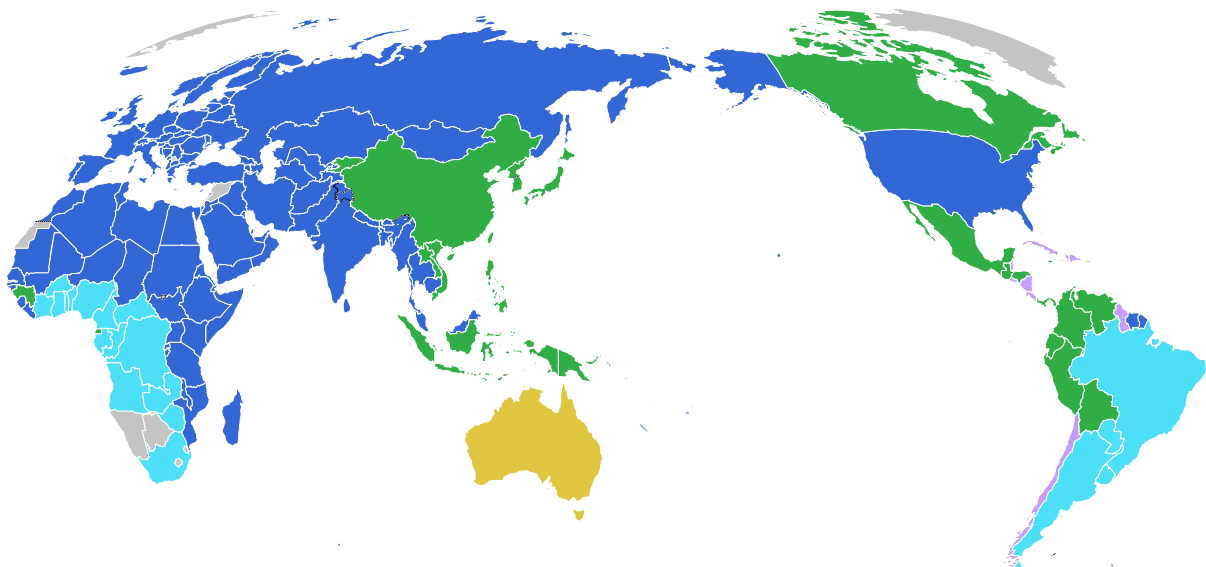
More broadly, Australia has an outsized presence in the South China Sea’s lesser straits. Australia is a major exporter of iron ore, liquefied natural gas, oil, and coal, which collectively make up over 57 percent of its exports. These goods are loaded onto vessels at major Australian ports like Perth before they meander through the South China Sea and on to China, South Korea, and Japan.

Australia is so prolific in its exports of these goods that, in 2024, its exports accounted for a staggering 88 percent of all trade through the Lombok Strait, as well as 61 percent of trade transiting through the Makassar Strait and 44 percent of trade through the Mindoro Strait (see Table 1).

**Figure 6: Economies’ Top South China Sea Strait**

Indicates which of the eight key South China Sea straits carries the greatest share of an economy’s trade

- Malacca Strait
- Sunda Strait
- Taiwan Strait
- Luzon Strait
- Balabac Strait
- Mindoro Strait
- Lombok Strait



Source: CSIS analysis based on Verschuur, Lumma, and Hall, “Systemic Impacts of Disruptions at Maritime Chokepoints.”

Table 1: Three Straits Serve Largely as Conduits for Australian Exports to Asia

	Value of Global Trade Transiting Strait (billions)	Value of Australian Exports Transiting Strait (billions)	Australian Exports As a Percent of Trade Transiting the Strait
Lombok Strait	\$133	\$117	88.0%
Makassar Strait	\$182	\$110	60.5%
Mindoro Strait	\$283	\$125	44.4%
Sunda Strait	\$396	\$23	5.8%
Taiwan Strait	\$2449	\$102	4.2%
Malacca Strait	\$2459	\$34	1.4%
Balabac Strait	\$174	\$1	0.6%
Luzon Strait	\$290	\$1	0.5%

Source: CSIS analysis based on Verschuur, Lumma, and Hall, “Systemic Impacts of Disruptions at Maritime Chokepoints.”

For other countries in Oceania, like New Zealand and Pacific Island countries, other straits are critical. Much of their trade largely bypasses the South China Sea, sailing in the South Pacific Ocean before crossing through the Luzon Strait to make its way to Asia—primarily to China. About 16 percent of New Zealand’s total trade and a massive 41 percent of the Solomon Islands’ trade went through the Luzon Strait in 2024.

## THE GLOBAL SOUTH

Based on the region’s geography, one might expect that the countries most reliant on straits in the South China Sea are those situated in the region themselves. Yet many of the economies most dependent on these straits are situated thousands of miles away.

The immense demand for energy and industrial inputs in East and Southeast Asia has created deep linkages between these economies and their suppliers in Africa and the Middle East. The Malacca Strait is their entryway to the region. Six oil- and gas-producing countries that border the Persian Gulf—Oman, Saudi Arabia, the UAE, Qatar, Kuwait, and Iraq—all relied on the Malacca Strait for at least 40 percent of their exports in 2024.

In Africa, several countries are likewise deeply reliant on trade through the Malacca Strait. The small developing nation **Eritrea**, for example, sends the vast majority of its exports—primarily zinc and copper ores—to China and South Korea. As a result, an eye-popping 90 percent of its exports (and 70 percent of its total trade) passed through the Malacca Strait in 2024, making it the most reliant country in the world on the Malacca Strait (see Figure 8). Other African nations are less reliant on Malacca for exports as opposed to imports. Djibouti, Ethiopia, and Kenya each got more than 40 percent of their imports through the Malacca Strait in 2024.

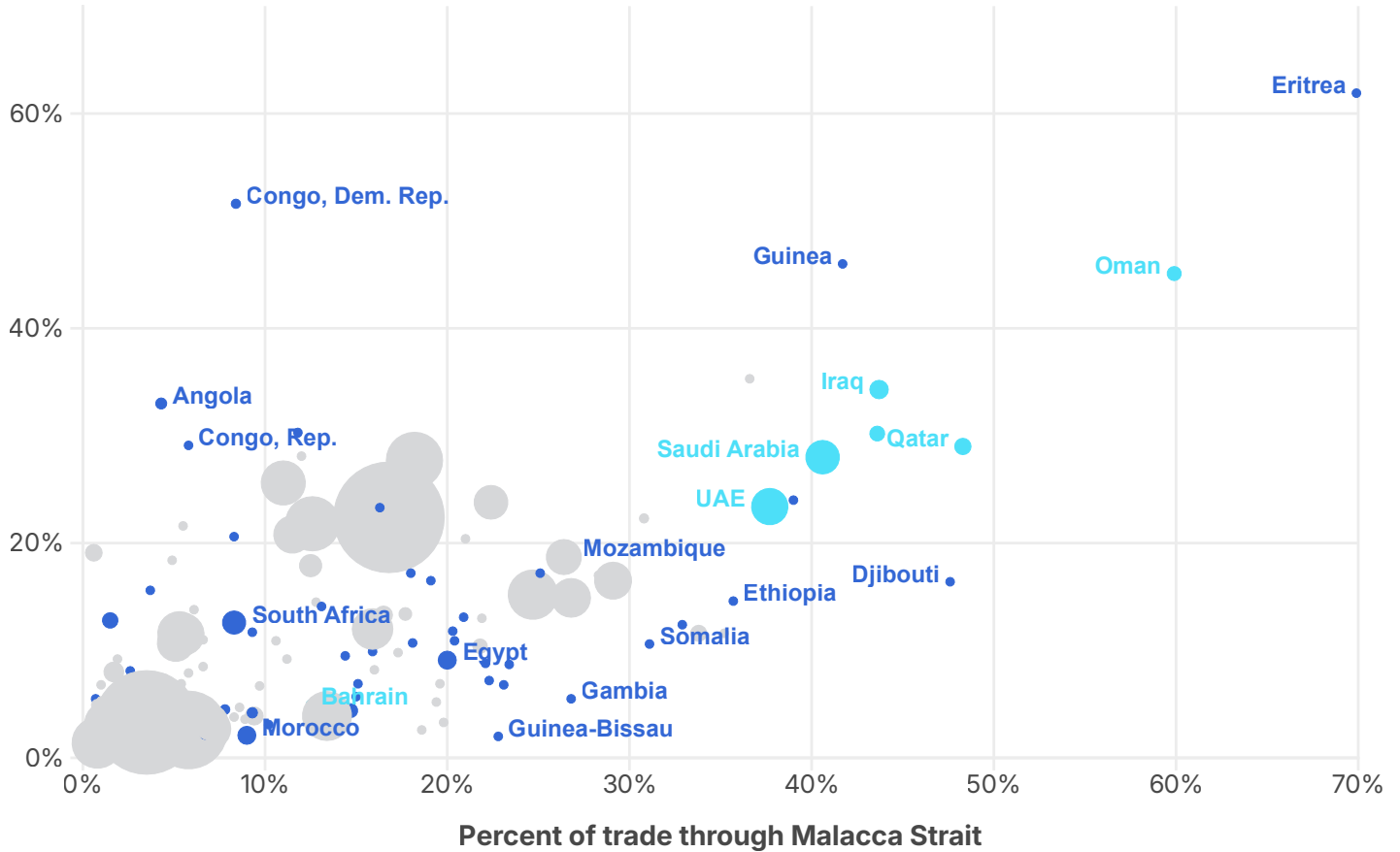
For almost all of these countries, the Malacca Strait is more vital than the Taiwan Strait because a share of their exports reaches destinations in Southeast Asia and does not continue on through the Taiwan Strait. There are a few exceptions to this, most notably the Democratic Republic of the Congo (DRC). Because the DRC is limited to accessing the western coast of Africa, the lion’s share of its trade travels around the southern tip of Africa and takes a more southerly route across the Indian Ocean, entering the South China Sea through the Sunda Strait rather than the Malacca Strait. Over half of its trade went through the Sunda and Taiwan Straits while just 8 percent transited at Malacca.

**Figure 7: Resource-Rich Countries in the Global South Are Most Reliant on the Malacca and Taiwan Straits**

Bubbles are sized based on countries' total maritime trade value

**Region:** ● African countries ● Persian Gulf countries ● Others

**Percent of trade through Taiwan Strait**



Source: CSIS analysis based on Verschuur, Lumma, and Hall, "Systemic Impacts of Disruptions at Maritime Chokepoints."

**CONCLUSION**

The South China Sea has long been seen as a critical junction for trade, with the Malacca Strait, in particular, regarded by analysts as a linchpin of global maritime trade. However, the new data presented here offers an opportunity to understand the region in a more nuanced way.

At a more granular level, the data shows that the importance of these waterways is not uniformly felt. While the Malacca Strait does narrowly lead the Taiwan Strait in overall value of trade, the reality is that several economies rely more on the Taiwan Strait. Crucially, these include China, Taiwan, and U.S. allies in the region—the key regional players that would be most directly impacted by a conflict over Taiwan.

This has significant implications for understanding and anticipating the potential trade impacts of a conflict. As policymakers plan for contingencies, they should look beyond topline figures and consult detailed data to best understand the intricacies of trade in the region. ■

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Cover Photo: Shannon Yeung and Shawn Fok

## APPENDIX I: METHODOLOGY

The data in this report was generated using the unique methodology developed by Verschuur, Koks, and Hall, as described in “**Ports’ criticality in international trade and global supply-chains.**” Those estimates were updated to 2024 figures through CSIS’s collaboration with Jasper Verschuur and adapted for analysis of the straits in the South China Sea.

The methodology relies on numerous models, starting with a modal split model to estimate the share of maritime trade in a bilateral trade flow of the harmonized **CEPII BACI trade database** at the commodity level, subsequently aggregated to sectors corresponding to the **EORA MRIO** data’s “industries.”<sup>5</sup> The Oxford Maritime Transport Model (OxMarTrans) then utilizes this global modal split to estimate the share of bilateral trade flow at disaggregated subnational levels. These disaggregated maritime trade flows are then routed through the global maritime transport network, consisting of hinterland transport networks (e.g., roads and rail connecting to ports) and a detailed maritime connectivity network informed by Automatic Identification System (AIS) vessel tracking data. This generates the port of exports, possible transshipment ports, port of imports, and maritime routes taken.

This brief leverages the aforementioned output, defining the eight specific South China Sea straits through a geo-spatial polygon to then estimate the quantity and value of trade passing through that defined area.

## ENDNOTES

1. Based on monetary value, just over 50 percent travels by sea. By volume, over 80 percent travels by sea since it is easier to transport bulk goods by ship rather than on land or in the air.
2. This figure does not represent the strict value of goods that move through the South China Sea as a whole; it is the summation of any trade passing through the eight straits. For instance, the value of oil on a tanker bound from the Middle East to South Korea would be counted at both the Malacca Strait and the Taiwan Strait. See the appendix for more details
3. This includes China, Indonesia, Taiwan, Thailand, Singapore, the Philippines, Vietnam, Malaysia, Cambodia, and Brunei.
4. Factoring in Hong Kong adds another \$95 billion in trade, bringing the total to nearly \$1.4 trillion.
5. Trade data from CEPII-BACI differs somewhat from other trade databases such as the UN Statistical Division Comtrade dataset. This is because it harmonizes Comtrade data through two approaches: (1) removing the cost of transport, insurance, and freight from the country-reported import values to calculate the net value of transported goods; and (2) reconciling bilateral trade flow values by weighing the reliability of each country as a reporter of trade data.