

Testimony before the
**House Committee on Transportation and
Infrastructure**
Subcommittee on Coast Guard and Maritime
Transportation

Hearing on
“China’s Maritime Silk Road Initiative: Implications for the Global
Maritime Supply Chain”

Testimony by
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Chairman Maloney, Ranking Member Gibbs, Members of the Subcommittee, thank you for the opportunity to testify today. It is an honor to appear before you and to serve on this panel with such distinguished witnesses. The views in this testimony are informed by the Commission's body of work. They are, however, my own and do not necessarily reflect those of the full U.S.-China Economic and Security Review Commission.

I. Overview of the Commission and its Study of BRI

The U.S.-China Commission was created by the Congress in 2000, as Congress voted to grant China Permanent Normal Trade Relations (PNTR), which paved the way for China's accession to the World Trade Organization (WTO). We were established to advise Congress on the national security implications of the U.S.-China economic relationship and to make recommendations to Congress on our findings.

There are 12 Commissioners—six Democrats and six Republicans—three each appointed by the House and Senate Democratic and Republican leaders. Commissioners are backed up by an excellent professional staff. We do an annual report to the Congress based on eight hearings, meetings with government officials and other experts, outside research, and, generally, one trip to the Indo-Pacific region. Our 2019 report, which has 38 recommendations to the Congress on a range of economic and national security issues, has gone to press and will be released on November 14. I have included, as an attachment, a list of some of the Commission's previous recommendations which may be of interest to the Subcommittee's members (see Appendix 1).

The Commission first discussed China's Belt and Road Initiative (BRI), originally called One Belt One Road (OBOR), in our 2015 Annual Report in a section on China and Central Asia. Indeed, when BRI was first introduced, most of its focus was on Asia. Much has changed since then.

II. The History and Current State of the Belt and Road Initiative

The BRI, formally launched in 2013, is the signature foreign policy of General Secretary of the Chinese Communist Party (CCP) Xi Jinping, and has become a pillar of China's expanding presence on the global stage. BRI is not a new concept. It is a culmination and rebranding of previous policies and projects aimed at linking China with its trading partners. It is, however, so important now that Chinese leaders call it the "Project of the Century" and have written it into China's constitution. The BRI marks the end of Deng Xiaoping's era of "hide your capabilities and bide your time" and underscores China's move onto the global stage, with economic, diplomatic, geopolitical, and national security implications.

Chinese leaders want to use BRI to revise the global political and economic order to align with Chinese interests. In a speech marking BRI's fifth anniversary in August 2018, General Secretary Xi emphasized that the initiative serves as a solution for China to participate in global opening up and cooperation, improve global economic governance, promote common development and prosperity," and build a "community of common human destiny."¹

Broadly, BRI's land-based "Belt" crosses from China to Central and South Asia, to the Middle East, and then to Europe. The sea-based "Road" connects China with South Asia, the Middle East, East Africa, and Europe via sea lanes traversing the South China Sea, Indian Ocean, Red Sea, Suez Canal, and Eastern Mediterranean.² (See map in Appendix 2.)

China's ambitions for BRI are not confined to just two geographic paths. China's vision for BRI includes Latin America and the Caribbean, the Arctic, space, and cyberspace (the so-called "Digital Silk Road"). The most visible manifestations of BRI are economic and official Chinese communiqués focusing on economic objectives. But BRI has clear strategic intent, including increasing China's influence over global politics and governance.

According to the Chinese government, it has signed 171 BRI cooperation agreements with 29 international organizations and 123 countries.³ Others estimate around 70 countries.⁴ The second Belt and Road Forum took place in Beijing in late April. A reported 5,000 delegates, including leaders from 37 countries, delegations from more than 150 countries and 90 international organizations, participated. One-third of the participating heads of state were from Europe.⁵

III. The Economic Background on the Maritime Silk Road

The witnesses from the Department of Defense are focusing on the national security implications of the Maritime Silk Road, a critical component of BRI. I would like to situate China's Maritime Silk Road activities in the bigger economic picture.

China is the world's largest exporter and second-largest importer, so its investment in ports helps facilitate China's global trade footprint. By owning and/or operating a network of logistical nodes across Asia, Europe, and Africa, China can control a significant portion of its inbound supply chain for essential commodities and outbound trade routes for its exports. About 90 percent of the world's trade is carried by sea.⁶ China's growing investments in ports increases Beijing's ability to influence and control global supply chains, which could affect the United States' ability to maintain reliable cross-border trade volumes. China has focused its port investments in countries where the interruption of its own trading routes would be most costly, based on the amount of trade that would be diverted, or the extra distance that would have to be traveled, if shipping were interrupted.⁷

The Maritime Silk Road rebrands existing maritime policies and directs investment toward key strategic blue economy sectors, which include traditional marine industries (e.g., shipbuilding and fisheries), emerging strategic industries (e.g., maritime engineering and maritime renewable energies), and maritime services (e.g., maritime transport and finance).⁸ According to a 2018 report from the European Council of Foreign Relations,

Concretely, today the Maritime Silk Road consists of a set of flagship projects in port infrastructure [e.g., Piraeus in Greece, Hambantota and Colombo Port City in Sri Lanka, Gwadar in Pakistan, and Djibouti],

*financial investment in port management, and acquisitions of container management companies across Europe, the MENA region, and east Africa.*⁹

The Chinese Communist Party (CCP) has repeatedly highlighted the importance of its maritime economy and shipbuilding industry in recent high-level meetings and policy documents, including the 13th Five-Year Plan, the 19th Party Congress, and the Made in China 2025 Plan.

A major goal of BRI is to open more markets for Chinese goods, displacing goods and services currently provided by the U.S. and other countries. While BRI is characterized as a boon to global development, it is, in large part, designed to boost the competitiveness and innovative capacity of Chinese companies. China's "marine GDP" (which includes marine industries, services such as transport and tourism, and exploitation of ocean resources) made up about 10 percent of its total GDP in 2017, according to China's State Oceanic Administration.¹⁰ BRI provides ripe opportunities to expand those activities.

IV. Chinese Investments in Ports and Related Infrastructure

Chinese state-owned enterprises (SOEs) play a major role in BRI activities. China's largest shipping and shipbuilding companies are all SOEs. Four Chinese SOEs are among the world's leading port operators: COSCO Ports, China Merchants Ports, Shanghai International Port Group, and Qingdao Port International.¹¹ These companies are backed by Chinese state-owned banks. For example, in 2017 state-owned China Development Bank provided COSCO a \$26 billion credit facility to develop its shipping interests.¹²

The total amount of Chinese port investment is difficult to determine because of the lack of transparency around deals. According to estimates by London-based investment bank Grisons Peak, between mid-2016 and mid-2017, Chinese investments in overseas ports reached \$20 billion.¹³ Nearly two-thirds of the world's top 50 container ports were Chinese owned or invested in by 2015, up from about one-fifth in 2010, according to research from the *Financial Times*.¹⁴ Chinese investments in overseas ports have mostly been outside of the world's top 25 container ports (ten of the top 25 container ports in the world are in China).¹⁵ According to the *Financial Times*, of the top 10 port operators worldwide, Chinese companies handled 39 percent of all volumes, nearly double the next largest nation group (Singapore).¹⁶

Chinese port investments range from building the port to managing and operating the port. They include:

- *Landlord ports*: China Merchants Port Holding's 99-year lease on Hambantota Port in Sri Lanka is an example of Chinese ownership through a "landlord port" model. In this model, "the port authority acts as regulatory body and as landlord, while port operations ... are carried out by private companies." This model is dominant in larger and medium-sized ports around the world.¹⁷ Under the concession agreement, China Merchants Port Holding holds a 70 percent stake in the Sri Lankan joint venture running the commercial operations of the port.

- *Fully privatized ports:* In fully privatized ports, the ownership of port land is transferred from the public to the private sector. In addition, “some governments may simultaneously transfer the regulatory functions to private successor companies.”¹⁸ For example, in 2016, COSCO acquired a 51 percent stake in the Piraeus Port in Greece. The Greek government agreed to privatize the port in 2015 as part of its bailout deal with the European Union. Piraeus is the only port in Europe where a Chinese company owns the port authority.¹⁹

China also has port investments in the Western Hemisphere. COSCO has minor investments in U.S. ports, including at the ports of Los Angeles and Seattle.²⁰ In 2013, China Merchant Holdings acquired a 49 percent stake in commercial container operator Terminal Link, which owns 15 container terminals around the world, including in Miami and Houston.²¹ In April 2019, Hong Kong-based Orient Overseas sold its ownership stake in the Long Beach Container Terminal to comply with an agreement reached with CFIUS to mitigate national security concerns; the agreement allowed COSCO to acquire Orient Overseas in July 2018.²² Panama Ports Company (a subsidiary of the Hong Kong-based firm Hutchinson Whampoa Ltd.) operates the two main ports—Balboa and Cristobal—located on either side of the Panama Canal. In addition, Chinese firms are acquiring and constructing port facilities on both sides of the canal.*

China’s shipping giants see investment in the port terminal business as an important source of growth. According to researchers from the European Council on Foreign Relations,

*Operating port terminals is a source of predictable and stable return on investment for Chinese conglomerates, unlike shipping, which depends on oil prices. As a result there is an incentive for Chinese state-owned enterprises to expand into business areas surrounding shipping, including investment in port infrastructure and other logistical components of maritime trade.*²³

The chairman of COSCO Shipping said in a 2016 interview he expects the company’s investment in the port terminal business to significantly increase in the coming years and become an important source of growth. He added the port terminal business is more stable and often more profitable than shipping because it has a fixed rate of return on investment, generally between 8 to 10 percent.²⁴

Port investments can give Beijing significant economic leverage as well as advance its geostrategic goals. Analysts have pointed to a number of ports where China is invested and, if converted to include a military presence or function, would significantly improve China’s ability to project naval power. Indeed, the requirements in China’s 2017 National Defense Transportation Law to “embed military in civilian” suggest commercial ports

* For a map of Chinese firms’ role in Panamanian port construction and a full list of Chinese port projects in Latin America and the Caribbean, see Katherine Koleski and Alec Blivas, “China’s Engagement with Latin America and the Caribbean,” *U.S.-China Economic and Security Review Commission*, October 17, 2018, 26, 33-34. <https://www.uscc.gov/Research/chinas-engagement-latin-america-and-caribbean>.

could be utilized by military personnel if Beijing were to decide it was in its interests to do so.²⁵ Chinese investment in civilian ports can also pave the way for military visits to rest crews, refuel, repair ships, or for joint exercises—even if China does not have a base there.²⁶

We can already see examples of where Chinese control of ports can be used as a form of market creation, through which China can leverage its port control to strengthen their economic relationships with certain countries. The ports in Hambantota, Gwadar, and Djibouti, for example, all include plans for free trade zones. Those three ports, as well as Piraeus and Colombo, also include plans for additional investment in the transportation sector, including airports, additional flight routes, roads, and railways.²⁷

Nearly two-thirds of global container traffic flows through Chinese-owned or -invested ports. China has significant investments in two of the world's top 30 busiest container ports by volume: Colombo, at #24, with 7.05 million TEU,^{*} and Piraeus, at #30, with 4.91 million TEU. In the event of conflict, China could use its control over these and other ports to hinder trade access to other countries. Beijing could provide Chinese vessels preferential berthing rights,²⁸ potentially leading to delays for U.S. companies getting goods in and out of Chinese-invested or owned ports.²⁹ It could also use control over ports to set higher prices and dictate onerous terms of engagement to trade partners.³⁰

Chinese port investment can translate into increased political leverage. Chinese investments in the port of Piraeus in Greece, for example have influenced Athens' response to China's claims and activities in the South China Sea and human rights abuses, with Athens in 2017 blocking an EU consensus by refusing to endorse an EU statement critical of China's human rights record in the UN Human Rights Council.³¹

Even if countries try to reduce their dependence on trade with China in order to lessen their exposure to economic coercion, Chinese ownership of ports worldwide could complicate these efforts. For instance, companies moving operations to Vietnam could still be susceptible to Chinese coercion if a Chinese company controls their ability to ship their goods.³²

Control of ports also could allow for economic and traditional espionage, as China can install surveillance equipment in ports to monitor foreign companies and U.S. military activity or that of our allies and partners.³³ Shortly after gaining control of the port of Piraeus, for example, China replaced the network infrastructure of the port with internet routers, firewalls, and switches for the data center with technology from Huawei.³⁴

V. The Role of Industrial Policy in Advancing China's Shipping Industry

The Chinese economy is not a free market. It is a state-managed economy with an industrial policy. The Chinese government is transparent in its plans and goals. When it identifies strategic sectors, it uses a whole-of-government approach to build them up. The government's toolkit includes subsidies to boost domestic firms; tariff and non-tariff

^{*} TEU (Twenty-Foot Equivalent) is a measurement of a ship's carrying capacity.

barriers to limit foreign access to the Chinese market; and acquisition, licit and illicit, of foreign technology to drive domestic development. The Chinese shipping and shipbuilding industries are the beneficiaries of this policy, to the detriment of the U.S. industries.

Like other industries the Chinese government has focused on and built, China's shipping and shipbuilding firms benefit from industrial subsidies.³⁵ The dominant firms in both industries have undergone a wave of consolidations over the past few years. For example:

- *Shipping:* In 2016, China's two largest shipping corporations, China Ocean Shipping Company (COSCO) and China Shipping Group, merged into a new company, China COSCO Shipping Group. In 2018, the China COSCO Shipping Group acquired Hong Kong-based Orient Overseas (International) Limited,³⁶ and is now the third-largest container shipping company in the world, behind APM-Maersk (Denmark) and Mediterranean Shipping Company (Switzerland).³⁷
- *Shipbuilding:* In July 2019, China's two largest shipbuilding corporations, China Shipbuilding Industry Corp. (CSIC) and China State Shipbuilding Corp. (CSSC), announced plans to merge. This merger would form the second's largest shipbuilding company, after the planned merger of South Korea's Hyundai Heavy Industries Co. and Daewoo Shipbuilding & Marine Engineering Co.³⁸ In addition, the state-run shipbuilding company China Merchants Industry Holdings Co. Ltd. (CMIH) is reportedly in negotiations to merge the shipbuilding and marine engineering operations of shipbuilding firms China International Marine Containers (Group) Ltd. (CIMC) and AVIC International Holding Group (AVIC INTL) under the CMIH umbrella.³⁹

A 2017 study by Myrto Kalouptsi of Harvard University on the impact of industrial subsidies in Chinese shipbuilding found evidence that China had subsidized shipyard costs by between 13 and 20 percent between 2006 and 2012.⁴⁰ The study concluded Chinese government subsidies in the shipbuilding industry "have led to substantial misallocation of global production."⁴¹

U.S. leadership in maritime engineering equipment and high tech maritime vessels is under threat. Ocean engineering and high-tech ships are one of the 10 target areas of Made in China 2025. There is evidence that some of the U.S. companies are being targeted. In July 2019, Shan Shi, a U.S. citizen originally from China, was convicted of stealing trade secrets from a U.S. company by poaching employees of other companies and enticing them to bring to his company data on syntactic foam technology for the benefit of CBM-Future New Material Science and Technology Co., Ltd., a Taizhou-based Chinese company. The U.S. government alleged that Shan did so in order to benefit China as part of China's plan to close its gap in buoyancy technology, which has both military and commercial shipping uses.⁴²

While many of the traditional shipping financiers (largely European banks) are scaling back their exposure, Chinese state-owned banks are ramping up their investments.⁴³ In 2008, no Chinese bank ranked in the top 15 shipping lenders.⁴⁴ As of 2017, Bank of China

is the world's largest shipping lender and China Eximbank the second largest, with China Development Bank also ranking in the top 20.⁴⁵ While entry into the shipping industry was based on market factors, lending has also been used to subsidize Chinese shipyards and expand China's merchant fleet.⁴⁶ Industry experts expect China will control about half of the total financing market for the shipping industry by 2025.⁴⁷

VI. BRI and China's Promotion of its Technology Standards

BRI is intended to advance the adoption of Chinese technology standards. BRI can create new barriers to U.S. exports and investment to the extent that China is able to get participating countries to accept Chinese technical standards, for example in high-speed rail, telecommunication, and energy. If these efforts are successful, they will create long-term reliance on Chinese intellectual property and technology, while disadvantaging U.S. and other foreign companies.

It is critically important for the U.S. to participate actively in standard-setting bodies, including the International Maritime Organization (IMO) and International Organization for Standardization (ISO). In the IMO, China is a 2018-2019 member of the Council, a 40-country body that is elected by the Assembly (the highest governing body, consisting of all members) and serves as the executive body of the IMO. It also serves the Assembly's role between sessions of the Assembly, which generally meets once every two years.⁴⁸ In the ISO, in addition to its leadership position on the Technical Committee on Ships and Maritime Technology, China is currently a member of the 20-member Council, which is the core governing body of the ISO. Membership on the Council rotates (the U.S. is also currently a member).⁴⁹ In 2015-2017 the ISO president was from China (the president is elected by all member countries).⁵⁰

Within the ISO, the Technical Committee on Ships and Marine Technology (ISO/TC8) is responsible for the standardization of design, construction, structural elements, outfitting parts, equipment, methods and technology, and marine environmental matters, used in shipbuilding and the operation of ships, comprising sea-going ships, vessels for inland navigation, offshore structures, ship-to-shore interface and all other marine structures subject to IMO requirements. ISO/TC8's Secretariat is China's Standardization Administration.⁵¹

VII. Conclusion

Through the Maritime Silk Road, China is gaining long-term economic and strategic influence by financing, building, operating, and owning overseas ports. While doing so, it is edging out shipping companies owned by U.S. allies and partners. China's increasing role in shipping finance could result in other shipping companies to relocate to Asia.

Subsidies for Chinese shipbuilding SOEs have harmed the U.S. shipbuilding industry's ability to compete in the global market, and have led to shipyard closings and a reduced U.S. vendor base over the past several decades.⁵²

I have been reading *The Guns at Last Light: The War in Western Europe, 1944-1945*. The prologue to this book by Rick Atkinson describes the extensive level of logistics that went into preparing for D-Day. It was astonishing. Our sailors, merchant marines, longshoremen, and factory workers, as well as our soldiers, were critical to that mission and, indeed, critical to helping to win the war. I hope that we never face a task like that again. I worry that, if we do, we no longer have the manufacturing capacity, the shipbuilding capacity, and the elements of the shipping industry that would be necessary to meet the challenge. The U.S. economy and the U.S. military are vulnerable to disruptions in the global supply chain. We are, for example, 100 percent import-reliant on 18 key mineral commodities, many of which are critical to our defense industrial base.⁵³

China is clearly moving into a stronger position on the global stage and is determined to remake global institutions to reflect its interests and values. The Belt and Road Initiative is a major component of its efforts and the Maritime Silk Road is an important component of BRI. We must develop a whole-of-government approach to addressing the challenges it presents.

Thank you for the opportunity to testify today. I look forward to answering any questions.

Appendix 1: U.S.-China Commission Recommendations on Maritime Security

2018

Chapter 3, Section 1: Belt and Road Initiative

- Congress require the Director of National Intelligence to produce a National Intelligence Estimate (NIE), with a classified annex, that details the impact of existing and potential Chinese access and basing facilities along the Belt and Road on freedom of navigation and sea control, both in peacetime and during a conflict. The NIE should cover the impact on U.S., allied, and regional political and security interests.

2017

Chapter 2, Section 3: Hotspots along China's Maritime Periphery

- Congress require the executive branch to develop a whole-of-government strategy for countering Chinese coercion activities in the Indo-Pacific coordinated through the National Security Council that utilizes diplomatic, informational, military, economic, financial, intelligence, and legal instruments of national power.

2016

Chapter 4: China and the U.S. Rebalance to Asia

- Congress direct the U.S. Department of Defense to include a permanent section in its Annual Report on Military and Security Developments Involving the People's Republic of China on the role and activities of China's maritime militia and the implications for U.S. naval operations.

2015

Chapter 3, Section 2: China and Southeast Asia

- Congress direct the U.S. Government Accountability Office to prepare a report assessing the effectiveness of recent U.S. efforts to enhance the maritime security capabilities of allies and partners in Southeast Asia and identifying the remaining challenges and opportunities.
- Congress urge the Administration to enhance its support for regional information sharing institutions focused on maritime security in Southeast Asia.

2014

Chapter 2, Section 2: China's Military Modernization

- Congress fund the U.S. Navy's shipbuilding and operational efforts to increase its presence in the Asia Pacific to at least 67 ships and rebalance homeports to 60 percent in the region by 2020 so that the United States will have the capacity to

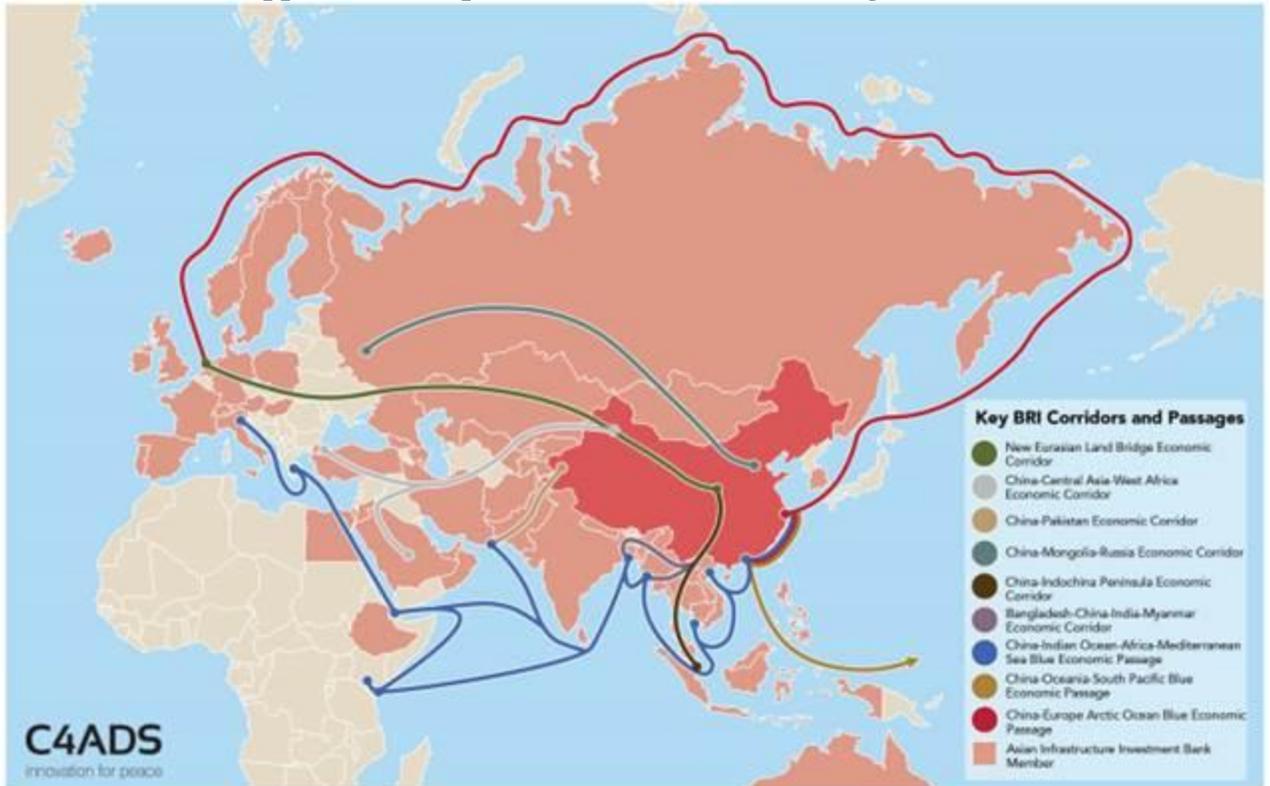
maintain readiness and presence in the Asia Pacific, offset China's growing military capabilities, and surge naval assets in the event of a contingency.

2013

Chapter 2, Section 3: China's Maritime Disputes

- Congress fund the U.S. Navy's shipbuilding and operational efforts to increase its presence in the Asia Pacific to at least 60 ships and rebalance homeports to 60 percent in the region by 2020 so that the United States will have the capacity to maintain readiness and presence in the Western Pacific, offset China's growing military capabilities, and surge naval assets in the event of a contingency.
- Congress fund Departments of Defense and State efforts to improve the air and maritime capabilities of U.S. partners and allies in Asia, particularly with regard to intelligence, surveillance, and reconnaissance, to improve maritime domain awareness in the East and South China Seas.
- Congress urge the Department of Defense to continue to develop the U.S.-China maritime security relationship in order to strengthen strategic trust. The relationship should be within the bounds of the National Defense Authorization Act for Fiscal Year 2000 (Public Law 106-65) and based on the principles of reciprocity and transparency.
- Congress fund U.S. Coast Guard engagement efforts with coast guard and maritime law enforcement agencies in the Western Pacific to increase understanding among civilian maritime bodies in the Asia Pacific.

Appendix 2: Map of BRI Corridors and Passages



Source: Devin Thorne and Ben Spevack, "Harbored Ambitions: How China's Port Investments are Strategically Reshaping the Indo-Pacific," *C4ADS*, 2017, 13.

<https://static1.squarespace.com/static/566ef8b4d8af107232d5358a/t/5ad5e20ef950b777a94b55c3/1523966489456/Harbored+Ambitions.pdf>

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- ¹ Xinhua, "Xi Pledges to Bring Benefits to People Through Belt and Road Initiative," August 27, 2018. http://www.xinhuanet.com/english/2018-08/28/c_137423397.htm; Xinhua, "Xi Jinping: Promote the Successful Implementation of One Belt, One Road to Benefit the People (习近平：推动共建“一带一路”走深走实造福人民)," August 27, 2018. Translation.
- ² National Development and Reform Commission, China's Ministry of Foreign Affairs, and *China's Ministry of Commerce, Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road*, March 28, 2015.
- ³ *China Daily*, "China has Signed 171 B&R Cooperation Documents," March 7, 2019. <https://eng.vidaiyilu.gov.cn/qwyw/rdxw/81686.htm>.
- ⁴ U.S.-China Economic and Security Review Commission, *Hearing on A 'World-Class' Military: Assessing China's Global Military Ambitions*, written testimony of Isaac B. Kardon, June 20, 2019, 5.
- ⁵ Shannon Tiezzi, "Who Is (and Who Isn't) Attending China's 2nd Belt and Road Forum?" *Diplomat*, April 27, 2019. <https://thediplomat.com/2019/04/who-is-and-who-isnt-attending-chinas-2nd-belt-and-road-forum/>.
- ⁶ International Chamber of Shipping, "Shipping Facts." <http://www.ics-shipping.org/shipping-facts/shipping-facts>.
- ⁷ *Economist*, "China's 'Maritime Road' Looks More Defensive than Imperialist," September 28, 2019. <https://www.economist.com/graphic-detail/2019/09/28/chinas-maritime-road-looks-more-defensive-than-imperialist>.
- ⁸ Mathieu Duchatel and Alexandre Sheldon Duplaix, "Blue China: Navigating the Maritime Silk Road to Europe," *European Council on Foreign Relations*, April 2018, 4, 10. <https://www.ecfr.eu/page/-/Blue-China-Navigating-the-Maritime-Silk-Road-to-Europe.pdf>.
- ⁹ Mathieu Duchatel and Alexandre Sheldon Duplaix, "Blue China: Navigating the Maritime Silk Road to Europe," *European Council on Foreign Relations*, April 2018, 14. <https://www.ecfr.eu/page/-/Blue-China-Navigating-the-Maritime-Silk-Road-to-Europe.pdf>.
- ¹⁰ Mathieu Duchatel and Alexandre Sheldon Duplaix, "Blue China: Navigating the Maritime Silk Road to Europe," *European Council on Foreign Relations*, April 2018, 3. <https://www.ecfr.eu/page/-/Blue-China-Navigating-the-Maritime-Silk-Road-to-Europe.pdf>; Xinhua, "China Focus: China's Maritime Economy Expands by 7.5 Percent in Recent Five Years," January 21, 2018. www.xinhuanet.com/english/2018-01/21/c_136913316.htm.
- ¹¹ Mathieu Duchatel and Alexandre Sheldon Duplaix, "Blue China: Navigating the Maritime Silk Road to Europe," *European Council on Foreign Relations*, April 2018, 15. <https://www.ecfr.eu/page/-/Blue-China-Navigating-the-Maritime-Silk-Road-to-Europe.pdf>.
- ¹² Costas Paris, "China Shipping Giants Seek Control of 'Maritime Silk Road,'" *Wall Street Journal*, April 7, 2017. <https://www.wsj.com/articles/chinese-shipping-giants-seek-control-of-maritime-silk-road-1491557405>.
- ¹³ James Kyngge, "Chinese Purchases of Overseas Ports Top \$20 billion in Past Year," *Financial Times*, July 16, 2017. <https://www.ft.com/content/e00fcfd4-6883-11e7-8526-7b38dcaef614>.
- ¹⁴ James Kyngge, Chris Campbell, Amy Kazmin, and Farhan Bokhari, "How China Rules the Waves," *Financial Times*, January 12, 2017. <https://ig.ft.com/sites/china-ports/>.
- ¹⁵ World Shipping Council, "Top 50 World Container Ports." <http://www.worldshipping.org/about-the-industry/global-trade/top-50-world-container-ports>.
- ¹⁶ James Kyngge, Chris Campbell, Amy Kazmin, and Farhan Bokhari, "How China Rules the Waves," *Financial Times*, January 12, 2017. <https://ig.ft.com/sites/china-ports/>.
- ¹⁷ World Bank, "Port Reform Toolkit: Alternative Port Management Structures and Ownership Models." https://ppiaf.org/sites/ppiaf.org/files/documents/toolkits/Portoolkit/Toolkit/module3/port_functions.html.
- ¹⁸ World Bank, "Port Reform Toolkit: Alternative Port Management Structures and Ownership Models." https://ppiaf.org/sites/ppiaf.org/files/documents/toolkits/Portoolkit/Toolkit/module3/port_functions.html.
- ¹⁹ Joanna Kakissis, "Chinese Firms Now Hold Stakes in Over a Dozen European Ports," *NPR*, October 9, 2018. <https://www.npr.org/2018/10/09/642587456/chinese-firms-now-hold-stakes-in-over-a-dozen-european-ports>; George Georgiopoulos, "China's Cosco Acquires 51 Percent Stake in Greece's Piraeus Port," *Reuters*, August 10, 2016. <https://www.reuters.com/article/greece-privatisation-port/chinas-cosco-acquires-51-pct-stake-in-greeces-piraeus-port-idUSL8NIAR252>.
- ²⁰ Costas Paris and Joanne Chiu, "China's Cosco Puts Long Beach Container Terminal Up for Sale," *Wall Street Journal*, November 20, 2018. <https://www.wsj.com/articles/chinas-cosco-puts-long-beach-container-terminal-up-for-sale-1542736508>.
- ²¹ Eleanor Albert, "China's Global Port Play," *Diplomat*, May 11, 2019. <https://thediplomat.com/2019/05/chinas-global-port-play/>; Journal of Commerce, "CMA CGM Sells Stake in Ports Unit to China Merchants," January 25, 2013. https://www.joc.com/maritime-news/container-lines/cma-cgm/cma-cgm-sells-stake-ports-unit-china-merchants_20130125.html.
- ²² Chester Yung, "Cosco Shipping Units to Sell U.S. Long Beach Container Terminal for \$1.78 Billion," *Wall Street Journal*, April 30, 2019. <https://www.wsj.com/articles/cosco-shipping-units-to-sell-u-s-long-beach-container-terminal-for-1-78-billion-11556595995/>; Costas Paris and Joanne Chiu, "China's Cosco Puts Long Beach Container Terminal

Up for Sale,” *Wall Street Journal*, November 20, 2018. <https://www.wsj.com/articles/chinas-cosco-puts-long-beach-container-terminal-up-for-sale-1542736508>.

²³ Mathieu Duchatel and Alexandre Sheldon Duplaix, “Blue China: Navigating the Maritime Silk Road to Europe,” *European Council on Foreign Relations*, April 2018, 13-14. https://www.ecfr.eu/page/-/Blue_China_Navigating_the_Maritime_Silk_Road_to_Europe.pdf.

²⁴ Mathieu Duchatel and Alexandre Sheldon Duplaix, “Blue China: Navigating the Maritime Silk Road to Europe,” *European Council on Foreign Relations*, April 2018, 14. https://www.ecfr.eu/page/-/Blue_China_Navigating_the_Maritime_Silk_Road_to_Europe.pdf.

²⁵ U.S.-China Economic and Security Review Commission, *Hearing on A ‘World-Class’ Military: Assessing China’s Global Military Ambitions*, written testimony of Isaac B. Kardon, June 20, 2019, 10; U.S.-China Economic and Security Review Commission, *Hearing on A ‘World-Class’ Military: Assessing China’s Global Military Ambitions*, oral testimony of Isaac B. Kardon, June 20, 2019, 132, 188; People’s Republic of China National Defense Transportation Law, 2017.

²⁶ U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2019*, May 2019, 11. https://media.defense.gov/2019/May/02/2002127082/-1-1/2019_CHINA_MILITARY_POWER_REPORT.pdf.

²⁷ Mathieu Duchatel and Alexandre Sheldon Duplaix, “Blue China: Navigating the Maritime Silk Road to Europe,” *European Council on Foreign Relations*, April 2018, 16. https://www.ecfr.eu/page/-/Blue_China_Navigating_the_Maritime_Silk_Road_to_Europe.pdf.

²⁸ Costas Paris, “China Shipping Giants Seek Control of ‘Maritime Silk Road,’” *Wall Street Journal*, April 7, 2017. <https://www.wsj.com/articles/chinese-shipping-giants-seek-control-of-maritime-silk-road-1491557405>.

²⁹ Tony Padilla, Senior Advisor, U.S. Department of Transportation Maritime Administration, briefing to Commission, Washington, DC, February 14, 2018.

³⁰ Mathieu Duchatel and Alexandre Sheldon Duplaix, “Blue China: Navigating the Maritime Silk Road to Europe,” *European Council on Foreign Relations*, April 2018, 13-14. https://www.ecfr.eu/page/-/Blue_China_Navigating_the_Maritime_Silk_Road_to_Europe.pdf.

³¹ *Reuters*, “Shanghai Port Teams up with Greece’s Piraeus to Boost Container Traffic,” June 12, 2018; Thorsten Benner et al., “Authoritarian Advance: Responding to China’s Growing Political Influence in Europe,” *Global Public Policy Institute and Mercator Institute for China Studies*, February 2018, 16; Theresa Fallon, “The EU, the South China Sea, and China’s Successful Wedge Strategy,” *Center for Strategic and International Studies Asia Maritime Transparency Initiative*, October 13, 2016.

³² Christopher R. O’Dea, “How China Weaponized the Global Supply Chain,” *National Review*, June 20, 2019. <https://www.nationalreview.com/magazine/2019/07/08/how-china-weaponized-the-global-supply-chain/>.

³³ Christopher R. O’Dea, “How China Weaponized the Global Supply Chain,” *National Review*, June 20, 2019. <https://www.nationalreview.com/magazine/2019/07/08/how-china-weaponized-the-global-supply-chain/>.

³⁴ Christopher R. O’Dea, “How China Weaponized the Global Supply Chain,” *National Review*, June 20, 2019. <https://www.nationalreview.com/magazine/2019/07/08/how-china-weaponized-the-global-supply-chain/>.

³⁵ Myrto Kalouptsidi, “China’s Shipbuilding Industry: Measuring the Effect of Industrial Policy,” *LSE Business Review*, April 15, 2019. <https://blogs.lse.ac.uk/businessreview/2019/04/15/chinas-shipbuilding-industry-measuring-the-effect-of-industrial-policy/>.

³⁶ Brenda Goh, “COSCO Shipping’s Takeover of OOCL to Complete by End-June: Vice Chairman,” *Reuters*, April 3, 2018. <https://www.reuters.com/article/us-oocl-m-a-cosco-ship-hold-idUSKCN1HA0VB>.

³⁷ “10 Largest Container Shipping Companies in the World,” *Marine Insight*, July 8, 2019. <https://www.marineinsight.com/know-more/10-largest-container-shipping-companies-in-the-world/>.

³⁸ Costas Paris, “Merger of Yards in South Korea, China Will Control Global Shipbuilding,” *Wall Street Journal*, August 1, 2019. <https://www.wsj.com/articles/merger-of-yards-in-south-korea-china-will-control-global-shipbuilding-11564653601>; Yujie Bai, Bao Zhiming, Jason Tan, and Tang Ziyi, “Exclusive: Three More Chinese Shipbuilders in Merger Talks,” *Caixin*, July 10, 2019. <https://www.caixinglobal.com/2019-07-10/exclusive-three-more-chinese-shipbuilders-in-merger-talks-101437571.html>.

³⁹ Jon Grevatt, “China’s AVIC in Talks to Merge Shipbuilding Business,” *Janes Defense Weekly*, July 10, 2019. <https://www.janes.com/article/89813/china-s-avic-in-talks-to-merge-shipbuilding-business>; Yujie Bai, Bao Zhiming, Jason Tan, and Tang Ziyi, “Exclusive: Three More Chinese Shipbuilders in Merger Talks,” *Caixin*, July 10, 2019. <https://www.caixinglobal.com/2019-07-10/exclusive-three-more-chinese-shipbuilders-in-merger-talks-101437571.html>.

⁴⁰ Myrto Kalouptsidi, “Detection and Impact of Industrial Subsidies: The Case of Chinese Shipbuilding,” *VoxEU*, September 9, 2017. <https://voxeu.org/article/chinas-hidden-shipbuilding-subsidies>.

⁴¹ Myrto Kalouptsidi, “Detection and Impact of Industrial Subsidies: The Case of Chinese Shipbuilding,” *VoxEU*, September 9, 2017. <https://voxeu.org/article/chinas-hidden-shipbuilding-subsidies>.

⁴² U.S. Department of Justice, “Texas Man Convicted of Conspiracy to Commit Theft of Trade Secrets,” July 29, 2019. <https://www.justice.gov/opa/pr/texas-man-convicted-conspiracy-commit-theft-trade-secrets>; Spencer S. Hsu, “Houston Businessman Convicted of Conspiring to Steal Trade Secrets, Acquitted of Economic Espionage for China,” *Washington Post*, July 29, 2019. <https://www.washingtonpost.com/local/legal-issues/houston-businessman-convicted->

[of-conspiring-to-steal-trade-secrets-acquitted-of-economic-espionage-for-china/2019/07/29/92418df2-b245-11e9-8f6c-7828e68cb15f_story.html](https://www.reuters.com/article/iso-conspiring-to-steal-trade-secrets-acquitted-of-economic-espionage-for-china/2019/07/29/92418df2-b245-11e9-8f6c-7828e68cb15f_story.html).

⁴⁸ International Maritime Organization, “Structure of the IMO.” <http://www.imo.org/en/About/Pages/Structure.aspx#2>.

⁴⁹ International Organization for Standardization, “ISO Council.” <https://www.iso.org/committee/55010.html>;
International Organization for Standardization, “ISO Structure.” <https://www.iso.org/structure.html>; ISO, “ISO/TC8 Ships and Marine Technology.” <https://www.iso.org/committee/45776.html>.

⁵⁰ International Organization for Standardization, “Past Principle Officers of ISO.”

https://isotc.iso.org/livelink/livelink/fetch/-/15620321/15620323/15620665/ISO_past_Officers.pdf?nodeid=18595424&vernum=-2.

⁵¹ ISO, “ISO/TC8 Ships and Marine Technology.” <https://www.iso.org/committee/45776.html>.

⁵² U.S. House of Representatives Committee on Transportation and Infrastructure, *Hearing on U.S. Maritime and Shipbuilding Industries: Strategies to Improve Regulation, Economic Opportunities and Competitiveness*, oral testimony of Mark H. Buzby, March 6, 2019. <https://www.transportation.gov/content/us-maritime-and-shipbuilding-industries-strategies-improve-regulation-economic-opportunities>.

⁵³ U.S. Department of the Interior and U.S. Geological Survey, “Mineral Commodity Summaries 2019,” February 28, 2019, 7-8. https://prd-wret.s3-us-west-2.amazonaws.com/assets/palladium/production/atoms/files/mcs2019_all.pdf.