Harboring Global Ambitions China's Ports Footprint and Implications for Future Overseas Naval Bases

July 2023

Alexander Wooley, Sheng Zhang, Rory Fedorochko, and Sarina Patterson





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### **Executive summary**

This report, *Harboring Global Ambitions: China's Ports Footprint and Implications for Future Overseas Naval Bases*, explores the potential for China to establish permanent overseas military bases for its maritime forces, specifically the People's Liberation Army Navy (PLAN). As China's military capabilities grow, the establishment of overseas naval bases is a priority for Beijing to project power on the global stage. By analyzing novel data from a forthcoming version of AidData's Global Chinese Development Finance Dataset, and combining it with additional qualitative research, we arrive at a shortlist of potential locations for future Chinese naval bases.

Our analysis focuses specifically on ports and infrastructure financed by Chinese state-owned entities in low- and middle-income countries between 2000 and 2021. Our dataset, <u>China's Official Seaport Finance Dataset</u>, 2000-2021, includes 123 seaport projects worth \$29.9 billion that have funded the construction or expansion by China of 78 ports in 46 countries. While our data is neither exhaustive nor definitive, we suggest a list of port locations—where China has invested significant resources and maintains relationships with local elites—that may be favorable for future naval bases. The establishment of overseas naval bases is a logical next step in China's expanding global interests, exemplified by initiatives like the BRI. Naval bases are also key to safeguarding shipping routes and promoting trade and diplomacy. Currently, China has just one official overseas naval base—a facility in Djibouti—that is adjacent to a commercial port funded, constructed, and operated by China.

China has emerged as a dominant maritime nation, with significant commercial and military influence across the world's seas. It builds most of the world's commercial shoreside infrastructure; is in the top three builders of merchant ships globally; owns the second-largest merchant fleet and a massive fishing fleet; and builds or operates extensive terminal assets in numerous ports worldwide. The Chinese government's control over its maritime assets during times of conflict remains uncertain, but it is likely that its vast merchant and fishing fleets would be requisitioned for military purposes. China's navy, the PLAN, has evolved from a coastal force to a blue-water navy,

signifying its ambition for global power projection. The PLAN's growth has also included the construction of aircraft carriers, indicating long-term ambitions for sustained overseas maritime operations.

As a starting point, we "follow the money" by examining the financing of port development projects by Chinese government agencies and state-owned or majority-owned entities, using a forthcoming version of AidData's Global Chinese Development Finance (GCDF) Dataset. We supplement this review with additional, targeted data collection and analysis including satellite imagery of candidate ports. The resulting dataset, <u>China's Official Seaport Finance Dataset</u>, 2000-2021, provides financial terms and conditions and extensive project implementation details in narrative descriptions for each port project. It also includes geospatial information, latitude-longitude coordinates, and markers to indicate the precision of the geolocation data.

We argue that the financial ties established through port construction and expansion are enduring, with a long-term lifecycle to the relationship. A core assumption of this paper is that Chinese financing and construction of harbor and related infrastructure, either through foreign aid or investment, is one indicator of ports or bases that might serve the PLAN in times of peace or war. There may also be an assumption on Beijing's part that the scale of China's investment should imply a corresponding non-monetary debt: the larger the investment, the more leverage China should have to ask for favors, such as basing options and requirements.

Starting with the top 20 ports that received the most official financing from China between 2000 and 2021, we consider additional criteria that might inform China's decision-making and provide an ocean-by-ocean overview of basing options. Below, we present a shortlist of the top 8 locations where China might establish naval bases in the next two to five years. Our list is based on a combination of factors, including the massive scale of China's development financing in harbor infrastructure; the strategic value and location of ports; strong relationships with host country elites; voting alignment with China in the United Nations General Assembly; and port characteristics suitable for supporting naval fleets.

- 1. <u>Hambantota, Sri Lanka</u>: China's largest port investment, strategically located, with positive relations and voting alignment with China.
- 2. <u>Bata, Equatorial Guinea</u>: Heavily financed by China and strategically located on West Africa's Atlantic coast, China may place a bet here on Africa's future and economic potential.
- 3. <u>Gwadar, Pakistan</u>: A strategic and economic partner for China, with high popularity among the public, and a flagship BRI country.
- 4. <u>Kribi, Cameroon</u>: A strong contender with significant Chinese investment, and aligned voting and geopolitical positioning with China.
- 5. <u>Ream, Cambodia</u>: Although official investment is small, the close ties between Cambodia's elite and China suggest a likely PLAN facility.
- 6. <u>Vanuatu</u>: China may aim to break containment and establish a base in the South/Central Pacific to counter concentric island chains.
- 7. <u>Nacala, Mozambique</u>: A deepwater port with sizable Chinese investment, providing potential for a naval base location on East Africa's coast.

8. <u>Nouakchott, Mauritania</u>: Substantial Chinese investment and proximity to Europe and key chokepoints make it an attractive option.

China's potential plans for establishing overseas naval bases present profound implications and options for both itself and the West. In the wake of Russia's invasion of Ukraine, increased coordination between the Kremlin and Beijing have put the prospect of Chinese naval bases under intense scrutiny from the US and its allies. China may have fewer options to consider, before the West would strenuously push back via economic and diplomatic corridors. Naval bases also come with headaches. China must balance protecting its global maritime interests with avoiding accusations of colonialism—perhaps an impossible needle to thread. An important caveat for China is that none of the ports described above is currently militarily defensible. In a conflict situation, they would become high-value targets for an enemy.

On its part, the West is now playing catch-up on aid, trade, and diplomacy, stirred by China's impressive gains and in response to Beijing's increased global muscle-flexing. The US and allies must be vigilant and allocate resources wisely, fostering alliances and partnerships with countries considering moving toward China. But Western coalitions should not overreact to news or rumors of China establishing a base here or there. A headlong rush by a Western country or alliance to establish new bases overseas as a means of counterbalancing might provide exactly the justification or cover China needs to site a naval base of its own.

Developing countries should not be handed a binary choice. In an era of increased great power competition, elites and policymakers may not want to publicly throw in their lot with one foreign power, or take sides with one suitor over others, and thereby restrict their latitude, freedom of action, and opportunities in terms of trade, aid, and diplomacy. Finally, while concerns abound over China's naval growth and ambitions, there is also room for potential mutual cooperation in areas such as anti-piracy patrols and humanitarian missions, considering shared interests in protecting global sea lanes for trade and economic prosperity.

## Acknowledgements

This report was prepared by Alexander Wooley, Sheng Zhang, Rory Fedorochko, and Sarina Patterson. Our analysis draws upon <u>AidData's forthcoming Global Chinese</u> <u>Development Finance Dataset, Version 3.0</u>, to construct our <u>China's Official Seaport</u> <u>Finance Dataset, 2000-2021</u>.

We owe a debt of gratitude to current and former AidData staff who developed AidData's Global Chinese Development Finance Dataset, including: Ammar A. Malik, Asad Sami, Bradley C. Parks, Brooke Escobar, Joyce Jiahui Lin, Kyra Solomon, Katherine Walsh, Lydia Vlasto, Nara Sritharan, Rory Fedorochko, Sheng Zhang, Thai-Binh Elston, and Yufei Wang.

Research assistants on AidData's Chinese Development Finance Program team provided invaluable support in collecting the underlying data, including: Abena Konadu, Abigail Taylor, Aldrin Yashko, Alec Veit, Alejandro Schnapp Mezerhane, Alex Park, Ally Swindell, Alyson Reynolds, Andrea Phelps, Andy Shufer, Anna Garrett, Annabel Richter, Anne Paxton, Annika Suri, Arianna Lagamma, Audrey Sun, Bailey Garber, Ben Greenberg, Beyoncé Lightfoot, Bree Jiang, Caitlin Connor, Caitlin Noe, Camilla Yeleussizova, Carina Rosenberg, Carolin Helmholz, Caroline Elszy, Changlin (Bob) Zhang, Check King Tay, Christian Moore, Claire Rudinsky, Claire Schlick, Claire Wyszynski, Clara McAllister, Collin Absher, Connor Stanton, David Zhu, Dorothy Gao, Dory Gilmer, Elise Tsao, Elizabeth Ott, Emma Bury, Falan Kifle, Gelila Yonas, George (Teddy) Chunias, Gujie Shen, Gwyneth Smith, Harin Ok, Harrison Abramsohn, Helen Tieder, Henry Tieder, Holi Raparaoelina, Jack Mackey, Jackson Humphreys, Jason Bao, Jennifer Luo, Jiaju Du, Jiayi Xu, Jiexi Lin, Joanne Lee, Joey Lindsay, Joseph Bohley, Juhwan Cho, Kate Hentz, Katelyn Oxer, Kathryn Spurrier, Kathryn Ziccarelli, Kayla Aviles, Kelly Shinners, Kerim Gales, Kien-Tam Elston, Laina Lomont, Laura Lam, Lexi Olsen, Liang Geng, Lillian Butler, Maddie Sharpe, Marianna Bonilla, Mary Trotto, Max Berckmueller, Meveryn Chua, Mia Maccario, Micah Katahara, Michael Olyniec, Mujia He, Nancy Lang, Nate Spiers, Nico Rullo, Noah Tran, Olivia Schlamp, Peter Awabdeh, Pooja Muthuraj, Pooja Tanjore, Prestin Tran, Redeit Hailu, Riely Capece, Riley Companion, Rin Tsujikawa, Rodrigo Arias, Ryan McCormich, Sabrina Levri, Sailor Miao, Sam LeBlanc, Samantha Rofman, Sarah Kennedy, Saranga Bansal, Sean Nguyen, Shannon McGuire, Sophie Adams-Smith, Sophie Alden, Sophie McGehee, Sophie Strauss, Sophie Torres, Susannah Matthews, Taylor Perry, Tom Mooney, Victor Gedeck, Will Wu, Ye Xiao, You Wu, Yufei Tang, Yunlang (Bella) Li, Yuxi (Felix) Tian, Yuxin Qin, Zheyi (Serena) Liu, Zhiying (Cindy) Zhou, Zipu Liu, Zigi (Samuel) Yan, and Zupeng Zeng.

We are grateful for the experts who kindly shared their time and insights at various stages throughout this project, including Bradley C. Parks, Executive Director of AidData; Ammar A. Malik, Senior Research Scientist and Director of AidData's Chinese Development Finance Program; Toshi Yoshihara, Senior Fellow at the Center for Strategic and Budgetary Assessments (CSBA); Jack Bianchi, Research Fellow at the CSBA; and Sam Chambers, Editorial Director at Asia Shipping Media.

The findings and conclusions of this report are those of the authors alone and do not necessarily reflect the views of our funders, partners, reviewers, or other contributors. Any errors are our own.

## Citation

#### Report

Wooley, A., Zhang, S., Fedorochko, R., and S. Patterson. 2023. *Harboring Global Ambitions: China's Ports Footprint and Implications for Future Overseas Naval Bases.* Williamsburg, VA: AidData at William & Mary.

#### Dataset

AidData. 2023. *China's Official Seaport Finance Dataset, 2000-2021*. Retrieved from www.aiddata.org/data/chinas-official-seaport-finance-dataset-2000-2021.

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About AidData's research on China

## 1. Introduction: Where next for China?

As China's global ambitions grow, so does speculation as to where Beijing might establish permanent overseas military bases. We use a forthcoming version of <u>AidData's</u> <u>Global Chinese Development Finance Dataset</u>, supplemented with additional qualitative research and analysis, to generate a prioritized shortlist of overseas locations where China might base its maritime forces—the People's Liberation Army (Navy), or PLAN—in the near future.

A core assumption of this paper is that Chinese financing and construction of harbor and related infrastructure, either through foreign aid or credit, is one indicator of ports or bases that might serve the PLAN in times of peace or war. There may also be an assumption, in Beijing at least, that the scale of China's investment should imply a corresponding non-monetary debt—the larger the investment, the more leverage China should have to ask for favors, like basing options and requirements. But given the scale of Chinese investments globally, that still leaves too many options. To help narrow down the possibilities, we factor in additional criteria that might inform Beijing's decision-making.

For the purposes of our analysis, we seek to identify the universe of seaport projects financed via loan and grants from Chinese state-owned entities in 165 low-income and middle-income countries over a 22-year period. Our analysis does not consider ports solely funded via equity investments by privately-owned or state-owned Chinese entities.

We use a combination of automated and manual techniques to systematically review a forthcoming (3.0) version of <u>AidData's Global Chinese Development Finance Dataset</u>, which captures more than 20,000 projects financed by more than 300 Chinese state-owned entities and implemented between 2000 and 2023. We first apply a string detection technique to identify a subset of port projects that could potentially be used as naval bases. We then conduct a manual review of each of the projects to eliminate false positives. A detailed methodology section is included at the end of the paper.

Our resulting dataset, <u>China's Official Seaport Finance Dataset</u>, 2000-2021, seeks to measure all of China's aid- and debt-financed civilian overseas port construction projects in the developing world since the year 2000. It consists of 123 seaport projects worth USD \$29.9 billion, at 78 ports in 46 low-income and middle-income countries that China has constructed or transformed through significant expansion. Each of these projects was funded by official (government or majority state-owned) Chinese entities between 2000 and 2021 and implemented between 2000 and 2023.

The China's Official Seaport Finance Dataset, 2000-2021 additionally contains GeoJSONs of the geographic boundaries of these ports, enabling geospatial visualization and analysis. We also include the latitude and longitude coordinates for each project location, as well as precision labels for those coordinates to indicate whether the location is precise or approximate. (More on the dataset is available in the methodology section below.) Based upon this dataset, we attempt to "read the tea leaves" and determine which port projects and locations would make the most sense for a permanent Chinese naval base(s) that can accommodate an expanding fleet. We factor in additional criteria (detailed below in the section on our approach) and make use of publicly available satellite imagery and geospatial data and techniques. This is necessary because, as in so many other areas, the inner workings of China's political, military and commercial decision-making (all of which are intertwined) are opaque. The lack of transparency—in this case, in the development finance field—was the prompt for AidData's initial data collection effort, more than a decade ago.

There is a caveat: the data and analysis here is neither exhaustive nor conclusive. China could build a port at a location currently undeveloped or where economic investment has been limited to date. For example, Ream (near Sihanoukville in Cambodia) is being built up into a potential PLAN base from a sleepy beach town, with initial construction led by the Cambodian military.

But given the extensive time and funds needed to build a naval facility, we believe that ports where China has already sunk resources and effort, in countries where it has nurtured and maintains relationships with elites, have a head start.

#### 1.1 Background

At first glance, it is somewhat peculiar that—besides Djibouti—China does not yet have overseas naval bases. Chinese global interests, a centerpiece of which is the Belt and Road Initiative (BRI), have far outstripped where you might find its navy. It has an increasingly activist foreign policy, including several major foreign policy, security, and development "initiatives" that openly describe the supplanting of the supposedly declining American power. It has growing military capabilities, both qualitatively and quantitatively, enabling it to start offering alternatives to the US in the international security arena. And it has a naval fleet that is bursting at the seams.

As far back as 2016, <u>China's Foreign Minister hinted</u> that there might be more naval bases coming, after Djibouti. The 2020 edition of <u>The Science of Military Strategy</u>, published by China's National Defense University, provides a window into China's thinking. Assembled by noted military experts, it is not official policy or doctrine, but we may assume they have access to and the blessing of the highest levels of China's leadership. It notes, "...The third is to attach importance to the construction of long-distance marine comprehensive supply points. With the increasing number of naval missions in overseas military operations and the expansion of the scope of operations, the requirements for logistics and equipment support are getting higher and higher. To improve the naval force's ocean-going support capabilities, in addition to the development of large-scale accompanying support ships, we must also attach importance to the construction of long-distance maritime comprehensive replenishment points, and multi-channels to ensure naval forces carry out overseas military operations in the ocean."

The hesitation to date may in part reflect a philosophical debate. China seeks to be a global power but also has historically prided itself on a policy of non-intervention in the affairs of other countries. Its foreign policy narrative speaks to its incredible trajectory

from destitution and war to superpower, while remaining a kindred spirit to the world's developing countries. The establishment of military installations in the near future must thread this needle of non-intervention versus the desire for a permanent presence overseas.

Navies are a great threading tool. They are visible, tangible implements not only of warfighting capabilities, but also of diplomacy, assistance, and influence. They can exercise a presence from close inshore to far offshore. Ships spend much of their time at sea and out of sight. Their use can be calibrated from overt uses and shows of force to policing and more restrained offshore presences. They can linger in an area for months.

Establishing an overseas naval base to protect shipping routes between nations at peace is a far less threatening proposition, and in many ways more justifiable, than establishing an army or marine base in a foreign land. Sailors are rarely employed to quell domestic disputes or turmoil. Instead, navies are seen as ensuring the free flow of goods and resources, promoting the mutual wealth and prosperity of nations. The US Navy has played this role for decades.

China's engagement with the world is still heavily—though not exclusively—commercial and trade-driven. But increasingly China is translating that superior trade position into the geopolitical realm. In turn, out of all branches of the military, navies are the most closely associated with trade. This is as true today as it was during the era of mercantilism. An oft-quoted statistic is that <u>90 percent of all global goods are shipped by sea</u>. Many were unaware of this, until supply chains worldwide became snagged during the pandemic and scores of fully-laden container ships floated idly at ports worldwide, waiting to be unloaded.

Short-term warship or submarine visits to a foreign country, no matter how frequent, send a different signal from the establishment of a permanent base. The geopolitical apple cart is not upended no matter how many times a Chinese guided missile destroyer visits Dar-es-Salaam, for example. All navies perform these kinds of visits frequently, and there are a range of valid diplomatic or trade reasons for a ship to visit a foreign country, in addition to the basic vessel needs of food and fuel. Naval visits typically last no more than a few days and can be used to show the flag, signal friendship, participate in fleet reviews and national celebrations, or respond to a humanitarian crisis. But building a naval base signals a different intent and level of commitment, for both the host country and the incoming basing nation. It sends out ripples—rivals and competitors must take notice.

China is catching up to the US in terms of projection capabilities. As fast as it is building warships, it is also constructing a range of types of supply ships for replenishment at sea, to support warships for significant lengths of time and at long distance. But gaps in both these areas remain. Likewise, China is not party to overseas military alliances with maritime powers, parallels to NATO or the bilateral agreements the US has with countries in the western Pacific. All these factors should combine to make overseas naval bases even more of a priority for Beijing.

## 2. China: A dominant maritime nation

Commercially, China dominates the world's seas. It is in the top three builders annually of new merchant ship construction; has the second-largest merchant fleet in the world; <u>owns or operates</u> terminal assets in 96 ports in 53 countries; hosts <u>7 of the 10 busiest</u> <u>civilian ports</u> in the world; boasts <u>an overseas fishing fleet</u> numbering perhaps 17,000 vessels; and <u>builds most of the world's commercial shoreside infrastructure</u>, including 96 percent of all shipping containers and more than 80 percent of port cranes.

As with any aspect of the Chinese economy, it is difficult to tease out which assets afloat the government owns and controls or can call upon in times of conflict, versus what is truly in private, independent hands. It is assumed that in a time of war the Chinese merchant fleet would be requisitioned to supply the Chinese military and navy, while smaller vessels like fishing boats would be pressed into service as seagoing militias or intelligence-gatherers. There is similar uncertainty as to the level of control the CCP might exercise over the overseas ports it runs, though some provisions on this issue are <u>already legally in place</u> to some degree.

In a chapter on overseas uses of the military, in the most recent edition of <u>The Science</u> <u>of Military Strategy from China's National Defense University</u>, there was this passage on page 325: "With a view to improving the military's ability to carry out reconnaissance, replenishment, and support and support in overseas missions, our military should, while improving its overseas accompanying support capabilities, strengthen communication with countries along the coast of the Pacific and Indian Ocean strategic maritime channels, and actively explore the establishment of Chinese characteristics...At the same time, we should give full play to the role of our overseas personnel and enterprises to provide support and guarantee to troops performing tasks overseas."

A trapping of modern great powers is a bluewater, ocean-going navy. This is especially true of nations dependent on trade like China. Major powers have navies to protect their trade and interests. A navy made up of large surface combatants, able to independently remain at sea for extended periods, is also used for power projection, intelligence collection, showing the flag, anti-piracy patrols, and responding to crises. These tasks are in addition to a navy's primary use in war—sinking enemy ships and submarines, executing amphibious invasions, attacking land targets, and more.

China's development into a modern, global sea power is a recent phenomenon. At 14,500 km, <u>China has the fifth-longest coastline in the world</u>, making it historically vulnerable to attacks from the coast. During China's "Century of Humiliation" (the period from the Opium Wars in 1840 to the founding of the PRC in October 1949), China was invaded from the sea more than 470 times.

In January 1949, before the PRC was formally founded, Chairman Mao Zedong ordered the construction of a defensive navy. From 1950-1960, China's naval strategy was developed with a defensive focus on the coastline. According to that strategy, equipment development was focused on shore-based aircraft of the navy's aviation force, submarines, and fast attack boats, such as missile boats. Accordingly, prior to the 1990s, the PLAN was largely a coastal force, though plans for something more ambitious were afoot as far back as the early 1970s.

In 1993, the <u>Yinhe incident</u> saw a Chinese container ship halted by the US on its way to the Middle East, on suspicion that it carried materials for chemical weapons. Ultimately, it transpired that the Yinhe did not have the materials. During the standoff, GPS was cut off to the area, so that the ship could not navigate. One outcome of the incident was that China embarked on building its own satellite navigation system, unwilling to be reliant again on a system developed by the US. Another outcome, one suspects, is that China rued it did not have a major ocean-going fleet it could dispatch to counter American seapower. This incident, along with the Gulf War in 1990-1991 and the Taiwan strait crisis in 1996, likely pushed China's ranking officials and military leaders to consider a transformation of China's naval strategy toward building a blue water navy.

The growth of the PLAN parallels and in some cases pre-dates China's 1999 "Going Out" policy (走出去) and the later and much larger BRI that began in 2013. But China's accelerated fleet expansion—coupled with warship deployments to all points of the globe—now appears to be in lockstep with Beijing's overall and far-reaching foreign and trade policies. According to a <u>white paper</u> titled "China's National Defense in the New Era," issued by China's State Council Information Office in July 2019, China is building 'far seas' forces, developing overseas logistical facilities, and enhancing capabilities in accomplishing diversified military tasks, in order to address deficiencies in overseas operations and support. Today, China has overtaken the US in the race for the world's largest navy, as measured by the number of warships and submarines. And the PLAN is still growing, <u>expected to have 460 ships by the end of this decade</u>. The US Navy, meanwhile, is retiring ships faster than it is building them. By 2045, it expects to have grown to only 373 manned ships.

Successive defense white papers have spoken of protecting China's sea lines of communication (SLOCs), which are extensive and global in nature. As the Center for Strategic and Budgetary Assessments (CSBA) has pointed out, China may pursue a maritime strategy that is unique to it and does not imitate how Western powers grew and evolved. But regardless, the PLAN needs to <u>"close significant gaps in its overseas logistical infrastructure to obtain a credible global military posture."</u>

Further proof of China's naval ambition is its headlong rush to build aircraft carriers. While China has been fascinated with carriers for decades, interest in a sustained building program of very large ships with catapults for launching aircraft is a relatively new development. Aircraft carriers are long-range offensive (rather than defensive) tools that are used for overseas power projection and necessary when beyond the range of land-based air cover. It is hard to imagine China risking a shiny new carrier within the confines of the Taiwan Strait—not only because of the possible loss of prestige from a sinking, but also because China's land-based air and rocket forces would far exceed any airborne assets a carrier could provide. So while Taiwan and the South China Sea may be immediate foreign policy priorities for Beijing, the fact that <u>China could have as many as five large aircraft carriers by 2030</u> is indicative of its wider-ranging and longer-term global maritime ambitions.

At the same time, this building program is puzzling. Aircraft carriers are symbols of national pride. In virtually every sea conflict since 1945, they have been coveted, high-value targets. China, like Iran before it, has even constructed the silhouette of an American supercarrier in the Taklamakan Desert in Southwestern Xinjiang, presumably in order <u>to study how best to sink such a ship</u>. Coupled with increased rumblings about the supposed vulnerability of carriers to sophisticated weapons and sensors, including a new generation of hypersonic missiles, carriers seem an odd and expensive investment for China—unless Beijing's aim is sustained overseas maritime operations, where the PLAN could go toe-to-toe with the likes of the US Navy.

#### 2.1 China's likely priorities in selecting naval bases

Fleets need bases, where they can re-fuel, re-arm, take on stores, effect repairs, and provide leave or recreation to crews. Naval bases can also be home to naval air stations, communications and intelligence intercept and relay stations, and—depending on the agreement with the host country—land-based anti-ship missiles. <u>The US currently has some 750 bases</u> of all kinds, in 80 countries or territories globally.

China, on the other hand, is somewhat new to this game and has been in an extended "feeling out" phase. As <u>China's 2019 Defense White Paper</u> notes, "[t]he PLA actively promotes international security and military cooperation and refines relevant mechanisms for protecting China's overseas interests. To address deficiencies in overseas operations and support, it builds far seas forces, develops overseas logistical facilities, and enhances capabilities in accomplishing diversified military tasks."

Without bases, referred to as the somewhat euphemistic "overseas logistical facilities," the PLAN must rely on its own seagoing supply support, and/or ad hoc port visits. This is less than ideal. Bases are infrastructure, after all, and that is what China does well.

China is shopping. What could it be looking for? To be clear, to control the Taiwan Strait or counter enemies in the South China Sea, China needs an ocean-going navy but not necessarily overseas bases. Operations near Taiwan or in the South China Sea can be conducted entirely from the Chinese mainland and home naval bases. To refuel, re-store, or effect repairs, the PLAN would simply return to home ports.

For China to go further afield, at the top of its wish list would be permanent, secure military installations with support, logistics and repair infrastructure. The ports themselves would be deep water and secure; in countries with which China enjoys good relations; and ideally near strategic choke points (primarily straits that funnel global maritime trade through narrow apertures) or locations that allow China to break perceived US containment and directly challenge the US or one of its allies (for example Australia, or possibly India). This kind of port would include lengthy piers and docks where a number of ships could berth simultaneously. Drydocks and access to specialized fuels are important. Ideally, China would either own, lease, or control the port, with no other tenants or lessees. Alternatively, in times of crisis, China would have sufficient control or leverage to evict or re-locate other occupants.

Less desirable—but still an attractive possibility—would be secure and developed facilities, possibly shared with an allied host navy or nation. For example, the US Navy maintains a limited logistical base at Singapore, but it is not a permanent home to a fleet of ships.

A third option would be an enclave within a commercial port, over which a Chinese entity exercises some rights or control. There are many candidates: we provide thumbnail sketches below of some of the massive container terminal ports that China has built around the world and in many cases currently operates. Kardon and Leutert, in their excellent article "<u>Pier Competitor</u>" in *International Security*, argue that such a dual-use (military-commercial) facility obviates the need for China to build dedicated stand-alone naval bases. Though convenient, navies typically do not like to be based within commercial facilities. A commercial port might fall under a complicated legal or political jurisdiction and provide only limited shoreside infrastructure tailored to military needs—and these specialized needs are many. Such a port will almost certainly be less secure.

Fourth in priority would be a protected anchorage close to shore, with some shoreside facilities. An example of this could be an undeveloped or under-developed island base in the Pacific or Indian Oceans; for instance, an atoll of limited size that is part of a strategically-located island chain.

Fifth and least preferred—and an unlikely option—would be anchorages in international waters, where the depth of water is shallow enough to allow ships to anchor (or moor to buoys anchored to the seabed) and where the permission of or relationships with a host country is not needed. While rare, this is not unheard of: <u>during the Cold War, the</u> <u>Soviet Navy had several anchorages</u>, including Hurd Bank south of Malta, Hammamet Gulf off Tunisia, and locations in the Indian Ocean.

## 3. Our approach

As a starting point for this exercise, we "follow the money." We rely on a <u>forthcoming</u> (3.0 version) of AidData's Global Chinese Development Finance Dataset to see which official sector Chinese entities are funding the development of which ports and supplement this review with additional, targeted data collection and analysis. Detailed records for each of the ports described below can be found in the dataset accompanying this report, <u>China's Official Seaport Finance Dataset</u>, 2000-2021. These records include financial terms and conditions and extensive project implementation details in narrative descriptions. Many of the ports have multiple project records, depending on the number and nature of the financial commitments issued in support of construction and expansion activities.

Financial data is an important (but sometimes ignored) component of answering the narrow basing question and understanding China's geopolitical stance more broadly. <u>An IMF report in April 2023</u> on Global Financial Stability noted that "Geopolitical relationships...seem to matter for allocating cross-border capital, with investors generally allocating a smaller share of capital to recipient countries with more distant foreign policy outlooks to their country of origin." In the IMF's case, it was looking at foreign direct investment (FDI), whereas our data covers officially-financed investments. But the principle holds true for both—economics and geopolitics are increasingly intertwined.

AidData has collected comprehensive data on China's overseas development program from official sources for more than 10 years, with all of the data put into the public domain. It has done so because Chinese government agencies and Chinese state-owned banks still do not disclose detailed information about their grant- and loan-financed projects in the developing world . <u>AidData's Global Chinese</u> <u>Development Finance Dataset, Version 2.0</u> is the largest of its kind, a continuously updated, go-to resource on the known universe of Chinese development finance for policymakers, scholars, and the media. The 13,000+ projects captured in Version 2.0 of the dataset (released in late 2021) were financed by more than 300 Chinese government agencies and state-owned or majority-owned entities. The <u>new and</u> <u>expanded global dataset (Version 3.0)</u> will be launched in late 2023.

It is important to remember that China does not merely finance the ports, remaining a distant or silent partner. Instead, there is a long-term lifecycle to the relationship. A myriad of public-private companies construct these ports, and others may step in later to operate them. Among the major players is China Communications Construction Company, Ltd. (CCCC), a majority state-owned, publicly traded, multinational engineering and construction company. One of its port subsidiaries is China Harbour Engineering Company, Ltd. (CHEC). Both are sanctioned by the US Department of <u>Commerce</u> for their involvement in building islands in the South China Sea.

These examples and others raise the question of dual-use. China does big infrastructure on a grand scale, and the practicalities of constructing a dedicated naval base anywhere could be done from muscle memory alone.

A core assumption of this paper is that Chinese financing and construction of harbor and related infrastructure, either through foreign aid or investment, is one indicator of ports or bases that might serve the PLAN in times of peace or war. Others have noted the same: "China's expanding overseas interests provide compelling incentives for Chinese leaders to expand the PLA's operational presence abroad, especially to protect key economic links with developing countries that are Belt and Road Initiative (BRI) members," stated a <u>2022 RAND report on China's basing options</u>. Or as <u>Kardon and</u> <u>Leutert</u> put it: "Yet unlike other navies, the PLAN enjoys privileged access to dual-use facilities that Chinese firms own and operate overseas."

As a <u>2019 Naval War College Review article observed</u>, "The commander of U.S. Pacific Forces warned Congress in early 2017 that China's naval "presence and influence are expanding," thanks in large part to the commercial network created by the BRI. The PRC is using state-owned companies and politically linked private firms to create a network of facilities designed to provide logistic support to deployed PLAN warships, employing a "first civilian, later military" approach to port development across the region."

There may also be an assumption (in Beijing, at least) that the scale of China's investment should imply a corresponding non-monetary debt: the larger the investment, the more leverage China should have to ask for favors, such as basing options and requirements. This is not inherently unreasonable and, in fact, may be welcomed by the host country. Consider that many of these ports support expanded trade with China. Both China and host countries have an incentive to nourish this seaborne trade and, arguably, a right to protect key sea lines of communication (SLOCs). However, China usually has substantially greater naval power to protect this trade than the host countries. Thus, a host country could see a Chinese naval presence

as a cheap means to outsource the protection of its vital SLOC—with "cheap" sometimes meaning "profitable," as leased naval bases lead to revenue from rental payments. At the same time, China strengthens the protection of that particular SLOC and benefits from an enhanced strategic toolkit with the additional naval base. Beijing may also believe—correctly—that a PLAN presence would be a net gain for global trade, as its bases can support anti-piracy efforts that benefit all traffic. For countries with limited naval resources located close to dangerous waters (Djibouti, for instance, close to Somalia and associated piracy), this deal is attractive.

Rather than a dual-use facility, or the PLAN sharing a seaport with commercial shipping, a naval facility might be co-located adjacent to a previously developed commercial port. Djibouti appears to provide one template for this. The multipurpose Doraleh port was supported by <u>a China Eximbank loan</u>, and multiple loans from the same source enabled the building of the Addis Ababa-Djibouti railway that <u>connects directly to the multipurpose Doraleh port and the naval port</u>. China's limited-size naval base was then <u>built adjacent to Doraleh</u>. Once the commercial port and associated infrastructure were firmly established, the naval facility followed.

This is not to say that financial investment and geopolitical leverage are invariably and inextricably linked. But it is a factor to consider. To be sure, China's stakes in the world's ports are a strategic asset. For example, China is the majority owner and operator of the Greek port of Piraeus, the largest in the eastern Mediterranean. What are the implications of this, should NATO and China face off in a diplomatic crisis?

Furthermore, modern ports are largely automated. A potential leverage point is the reliance Chinese-financed ports may have on Chinese technology: systems, hardware, software, communications, etc. It is unclear how vulnerable such a port would be to shutdown by a controlling Chinese entity, either of its own accord or at the behest of the government.

Our analysis examines two primary mechanisms by which China funds ports: loans and grants. (As AidData's forthcoming Global Chinese Development Finance Dataset Version 3.0—that <u>our ports dataset</u> is in part derived from—excludes foreign direct investment, we do the same). Our list does not include instances where China pledges or commits to an infrastructure project, but the project fails to move forward for any number of reasons—a surprisingly common occurrence. For example, in 2018, five Chinese banks pledged a USD \$717 million loan to significantly expand the port at Conakry in Guinea. To our knowledge, that agreement was never finalized. We also do not include for consideration ports where funding was announced more than five years ago but subsequently no disbursement was made or construction never began. There are a not insignificant number of these—adding to China's reputation as a lender, investor, and donor that does not always follow through on its public announcements and pledges.

China funds smaller-value port feasibility and pre-feasibility studies, in partnership with country governments, for harbors which might be developed in coming years. Our ports list does not cover such cases. Chinese entities also own or operate ports not built by China; Kardon and Leutert focused <u>their analysis</u> on Chinese port operators, which we do not cover here. We choose instead to drill down on Chinese financing of port

construction or expansion, and the economic ties this generates between the financed country and China.

Essentially, we are looking at *who pays for shovels in the ground*. In some ways, this may be a better measure of the dyadic ties between China and a developing country. Port operators can buy or bid on a harbor already constructed at relatively short notice. Ports also change owner-operator hands fairly often, which is a much more straightforward commercial transaction. By contrast, the determination to construct a port requires years of patient, multi-level relationship building before, during, and after construction. The resulting financial ties endure for decades.

The top 20 ports that received the most official financing from China from 2000 to 2021 are listed below. (Throughout the report, we use constant 2021 US dollars when we refer to our own dataset). It is apparent that, while national security experts are focused on China's possible military expansion in the Indian and Pacific oceans, the larger commercial emphasis has been elsewhere: in West and Central Africa and the Mediterranean (with the exception of Hambantota). China is also extremely active in Latin America and the Caribbean. China is financing port development in high- and low-income countries, and everything in between (income group definitions are <u>per the World Bank</u>).

Most of the world's high-income countries (HICs) are in NATO, the EU, or are staunch friends of the US and are not included in AidData's Global Chinese Development Finance Dataset, so they will not be the focus of this paper. Some exceptions—a scattering of island nations in the Pacific and Indian Oceans and the Caribbean—are discussed below.

Finally, excluded from the table below but relevant to any discussion on China's most heavily financed ports is the Port of Sabetta in Russia. The Yamal LNG Project, which includes port infrastructure at Sabetta and LNG production assets, received some \$14.9 billion in financing from China. AidData is unable to precisely determine what amount of the total financing went solely to the Sabetta seaport; however, it is almost certainly significantly lower than the \$14.9 billion figure overall. For this reason, we have cordoned the Port of Sabetta from the top 20 list. More on the Russia basing options in a section below.

Rank	Port	Country	Commitment (USD 2021)
	Hambantota International		
1	Port	Sri Lanka	\$2.19 billion
2	Autonomous Port of Kribi	Cameroon	\$1.30 billion
3	Bayport Terminal at Haifa Port	Israel	\$1.25 billion
4	Port of Caio	Angola	\$1.10 billion
5	Port of Ashdod	Israel	\$894 million
6	Autonomous Port of Abidjan	Côte d'Ivoire	\$878 million
7	Queen Elizabeth II Quay, Freetown	Sierra Leone	\$759 million
8	Lekki Deep Sea Port	Nigeria	\$707 million
9	Port of Bata	Equatorial Guinea	\$659 million
10	Gwadar Port	Pakistan	\$577 million
11	Autonomous Port of Nouakchott	Mauritania	\$499 million
12	Doraleh Multipurpose Port and Damerjog Livestock Port*	Djibouti	\$466 million
13	Port of Tema	Ghana	\$443 million
14	José Petroterminal	Venezuela	\$441 million
15	Port of Colombo	Sri Lanka	\$430 million
16	Port of Sudan	Sudan	\$265 million
17	Port of Nacala	Mozambique	\$230 million
18	Nouadhibou Fishing Port	Mauritania	\$165 million
19	Port of Santiago de Cuba	Cuba	\$133 million
20	Beira Fishing Port	Mozambique	\$133 million
		TOTAL	\$13.5 billion

Table 1. Ports receiving the most funding from China, 2000-2021

\*The Doraleh Multipurpose Port and the Damerjog Livestock Port are two separate facilities located approximately 21 kilometers from each other. In 2016, the Export-Import Bank of China provided a USD \$407 million loan to the Government of Djibouti for the construction of both facilities. AidData has been unable to find a breakdown of the loan divided into the portion used for the Doraleh port and the portion used for the Damerjog port. We have therefore combined the two ports together based on this loan agreement, including the 2016 ICBC USD \$59 million loan that solely went to the Doraleh port.

Source: AidData's China's Official Seaports Finance Dataset, 2000-2011, derived in part from AidData's Global Chinese Development Finance (GCDF) Dataset, Version 2.0 and supplemented with the forthcoming Version 3.0.

While our core selection criteria is the universe of port projects financed by official sector institutions in China, this still leaves many options for potential naval basing. To help narrow down the possibilities from 123 candidates, we factor into our analysis five additional criteria that might inform Beijing's decision-making on where to locate an overseas naval base or facility. Where available, we also draw on publicly available satellite imagery as well as geospatial mapping sources and techniques.

#### 3.1 Additional criteria for where China may site naval bases

#### 1. Strategic value

China is likely to select locations where it wants to signal a presence or to counter the presence of a rival. A base might be located near a choke point; where it can form a hub for regional operations; or a strategic location that extends the maximum range of PLAN surface ships and conventionally-powered submarines.

#### 2. Strong relationships

China is more likely to site naval bases in potential host countries with which it has good relationships and a positive image with both the leadership and the public.

#### 3. Country stability

For basing, China would likely favor countries where there has been less turnover of leaderships, officials, and elites, or where regimes have been in power for some time and are expected to remain in office. AidData research has <u>consistently shown</u> that Beijing tends to target its diplomatic and economic overtures to overseas elites more so than the public. Despite this, it is hard to imagine China investing heavily in securing naval basing rights in a country where the public was strongly opposed. As China learned in Samoa and the Philippines, elites in other countries change and are voted out of office as part of the democratic process, and with this turnover, views on relations with Beijing can also alter. One partner administration might welcome a PLAN naval base, the next not. Given the size of financial and political investment needed to build a base, China is more likely to site bases in reliably stable regimes or administrations.

#### 4. Voting alignment

China is arguably more likely to site bases in countries that have high voting alignment with China in the United Nations General Assembly (UNGA). For this measure, we draw on <u>United Nations General Assembly Voting Data</u> by Erik Voeten et al. (2009) in the Harvard University Dataverse. We additionally use a dataset by Yiqin Fu, from her article <u>"Who Votes with China, and Who Votes with the U.S. and Europe at the UN?"</u>. This measure of voting alignment is commonly used to determine geopolitical alignment between states and has been employed previously in <u>AidData research</u> and most recently, for example, in the <u>IMF's new Global Financial Stability Report</u>.

#### 5. Port characteristics

Finally, China must necessarily site naval bases at ports that have sufficient depth of water; the availability of drydocks for repair and maintenance is desirable; piers and wharves should have sufficient length to accommodate groups of ships up to the size of an aircraft carrier.

It should be noted that some, but not all, of the above criteria overlap with <u>a</u> <u>two-dimensional framework on desirability and feasibility developed by RAND analysts</u>. RAND, however, did not factor into its framework the global economic port investment data that is captured in this paper and associated dataset.

At the same time, the case can be made that indicators and numbers alone are not sufficient to accurately predict where and when China will build its bases. Nor, outside of a select few insiders at the highest levels of the CCP, can anyone say with confidence whether the measures we employ here are the ones also being considered by Beijing. At best, we can use the available data, analysis, and environmental scoping and rely on imperfect hunches. But although Beijing can play its cards close to the vest at this stage, it will not be able to do so once it commits to establishing a naval base overseas. It is not something one can hide.

# 4. Ocean by ocean: Where may China site naval bases?

As this report is about the maritime domain, the main body is organized through the lens of bodies of water on which navies operate. We think the ocean view is a better way to look at this question, rather than looking from continental land masses out to sea. Oceans are where fleets spend their time, and the vast distances mean surface ships and even the fastest nuclear-powered submarines take days and weeks to traverse a body of water. It is where the SLOCs are, and how virtually all the world's trade travels.

#### 4.1 The Indian Ocean

The Pacific and the Indian Oceans are <u>China's highest priority maritime environments</u>. The Indian Ocean includes SLOCs from which China draws much of its natural resources, most important of which are the strategic choke points at the Malacca Straits and the Straits of Hormuz. The Indian Ocean provides access to the Suez Canal, the Mediterranean Sea, and European markets. It also resonates in Chinese culture: the 15th-century admiral and national hero Zheng He is believed to have taken his fleet on several voyages across the Indian Ocean, reaching as far as the Red Sea and the east coast of Africa. Zheng He's reputation as a navigator, explorer, reformer, trader, warrior, and ship designer are still taught today in K-12 in China. In the present day, to market to foreign audiences in Asia, China employs the tagline <u>"Asia for Asia."</u>

Having one or more bases in the Indian Ocean would provide Beijing a counter to rival India, as well as US forces deployed in the region. China's first overseas naval base—in Djibouti and operational since 2017—flanks one side of the Indian Ocean, though it is not particularly large. Still, the Djibouti base supports anti-piracy patrols in the western Indian Ocean. Gwadar in Pakistan and Hambantota in Sri Lanka are two, well-documented cases of major ports developed by China in partnership with the host country. They punctuate the upper reaches of the Indian Ocean. Along with other potential bases in the UAE, analysts have coined this collection "the String of Pearls."

Rather than just a single loan or grant, AidData has collected data on repeated tranches of aid and credit over many years to support Gwadar and Hambantota. Beijing has collectively sunk close to \$2 billion dollars into Hambantota—the most of any port anywhere in the world, per our dataset. Sri Lanka's decision in 2017 to lease Hambantota port to a Chinese state-owned entity raised international alarm about China's lending practices. Accusations were made that China had lured Sri Lanka into taking loans it could not pay back, as a strategy to take over the port. In fact, China Merchants Port Holdings Company Limited (CMPort) provided a \$1.1 billion cash payment to Sri Lanka in exchange for an 85 percent ownership stake in its new port and the right to operate and develop it for 99 years.

In Pakistan, Chinese warships are already a fixture: as it modernizes, <u>Pakistan's Navy has</u> <u>become the largest foreign purchaser of Chinese arms</u> and operator of modern Chinese-designed surface warships and submarines. One side benefit is that this facilitates interoperability between the two fleets. Gwadar itself is strategically situated in the far west of Pakistan, providing cover for the Straits of Hormuz. In fact Gwadar is roughly half as close to Dubai as it is to Pakistan's capital, Islamabad. According to AidData's records, China has put some USD \$577 million into the port at Gwadar and related facilities (though this does not include other transport infrastructure like roads to the port).

China has also invested significantly in Mozambique. China is the financial force behind two large port projects in Mozambique: the Port of Nacala (USD \$230 million) and the Beira Fishing Port (USD \$133 million). But both seem to be commercial in nature at this stage, targeting extractives or fishing. Views on China are positive among officials and elites, thanks in part to the groundwork laid by China. As Freedom House has reported, Chinese companies play a major role in Mozambique's media content-distribution infrastructure. Chinese broadcaster *StarTimes* "built a significant portion of the country's digital television infrastructure and upgraded broadcasting equipment for state-owned television and radio stations," and state-owned outlets in Mozambique across platforms have close ties to Chinese media entities, resulting in uniformly positive coverage of the bilateral relationship.

Where else? At the bottom of the Red Sea at the strategic Bab-el-Mandeb Straits, China could look to place a base at Assab or Massawa in Eritrea. The two countries have a long history together, although Eritrea is a relatively recent recruit to the BRI. Inasmuch as Russia may serve as a proxy for its ally China, <u>Eritrea has been among the Kremlin's most clear supporters</u> in its illegal war in Ukraine, repeatedly voting against UN condemnation resolutions.

Well before the official launch of the BRI, China had funded construction, expansion, and dredging at Port Sudan, primarily through three loans (deferred payment agreements) from China Harbour Engineering Co. Ltd (CHEC) to Sudan's state-owned Sea Ports Corporation. This included building extensive piers to accommodate container ships. However, the three phases of building wrapped up more than a decade ago in 2011. And it is unclear what additional benefits a base in Sudan or Eritrea would afford, given their proximity to Djibouti.

There are surprisingly few large, natural harbors on either the Indian or Atlantic Ocean coasts of Africa and an even smaller number that are deepwater. Both Kenya and Tanzania, with port complexes like Mombasa, Dar es Salaam, and Bagomoyo, are possibilities for future Chinese bases. But there are indications that popular opinion in both countries towards Beijing is waning, as Chinese-funded infrastructure projects come under increasing scrutiny and worries grow about what is owed to Beijing. In Kenya, 87 percent of the population feel their government has already borrowed too much from China, according to Afrobarometer (see Figure 13 in <u>Afrobarometer Dispatch No. 489, "Africans welcome China's influence but maintain democratic aspirations"</u>).

While elsewhere in the world a nation might worry about getting caught in the middle between the US and China, or "the West" and China, countries ringing the Indian Ocean are more likely to be concerned with balancing their relations between China and India. An example of this is Bangladesh, where both India and China, after years of speculation, have simultaneously decided to invest in the Port of Mongla. The Indian media for its part regularly covers problem-fraught Chinese infrastructure projects in neighboring Bangladesh, Sri Lanka, and Pakistan. Bangladesh, meanwhile, has been a <u>consistent purchaser</u> of Chinese warships and submarines.

An intriguing option for a Chinese base that would flank both the Atlantic and Indian Oceans is South Africa. To be sure, it is far from the US, the Persian Gulf, and the Suez Canal. Our data finds no investments in South African ports. But the South African Navy <u>held joint exercises</u> in early 2023 with both the Russian and Chinese Navies. Both Durban or Simon's Town (former colonial naval bases under the British and the Dutch before them) would be options for possible co-sharing.

China has funded aid programs in Africa for decades. However, it significantly re-engaged with the continent after 1989 when, in the wake of the Western backlash over Tiananmen Square, <u>Beijing realized it would have to expand</u> its network of trading partners and contacts. As an example, it was only in 1998 that official relations between the PRC and South Africa were established, and as recently as 2010 that Beijing promoted South Africa to the status of Strategic Comprehensive Partner.

Also mooted are island chains strategically located more centrally within the Indian Ocean, which would permit fleet movement in any direction. These include the Maldives, Mauritius, Comoros, and the Chagos Archipelago. Our data does not find significant Chinese development financing for the port infrastructure in any of these countries, including the Maldives, about which there has been Western speculation in the recent past. Besides which, any overtures in these directions would likely be met with resistance by foreign powers—including the US, India, and Britain—who already exert influence within these island nations.

#### 4.2 The Pacific Ocean

Securing a naval base in both the West and South Pacific is more about Beijing's strategic imperatives—breaking the several perceived "island chains" that surround China—than it is trade. If China is trying to build one "String of Pearls" in the Indian Ocean, it likely feels strangulated to some degree by the perception that the US maintains a string of island chains (essentially, several Loops of Pearls) with a mix of allies and forward bases or positions that threaten to hem China in from expanding its vision seaward. (For an explanation of the island chains, see Wilson Vorndick's article, "China's Reach Has Grown; So Should the Island Chains," published by CSIS's Asia Maritime Transparency Initiative).

#### Western Pacific

Tiny in dollar terms—estimated by AidData at perhaps only USD \$18 million to date<sup>1</sup>—Ream, Cambodia is acknowledged as a likely PLAN facility in the near future. Located on the Gulf of Thailand, and so within the US Indo-Pacific Command (INDOPACOM) geography, Ream provides easy access to the South China Sea, Malacca Straits, and Indian Ocean.

On June 22, 2016, China First Metallurgical Group Co., Ltd. (a subsidiary of China Metallurgical Group Corporation) and the Cambodian Ministry of Defense signed a framework cooperation agreement for the Ream Naval Base Expansion Project. The purpose of the project was to expand the base by constructing a 5,000-ton dry dock, extending piers, and reclaiming land.

According to one commercial shipping insider interviewed for this report, port construction is notoriously slow in Cambodia. In October 2020, Vice-Admiral of the Royal Cambodian Navy Vann Bunlieng said that <u>dredging work was being undertaken</u> around the base in order to accommodate larger vessels. It is worth noting the Cambodian Navy operates only smaller patrol boats and is unlikely to need deep channels for its own uses. Satellite imagery shows construction has continued ever since, with new shoreside buildings, roadways, and additional dredging. AidData's project record shows that twenty-eight acres of land—over 15 percent of Ream's total land area—was cleared in the center of the base between July 2022 and October 2022. The construction of a new pier that began in June 2022 was completed in September 2022. <u>Barges seen at the pier in a September 23, 2022 satellite image</u> suggest it was being used to ferry in construction materials and equipment to relieve busy land routes.

#### South Pacific

In fits and starts, China has tried to establish broad commercial and security deals with island states throughout the Pacific. This has included cultivating relationships with elites, conducting government capacity-strengthening activities, and courting publics. <u>Possible basing options in the southwest Pacific</u> have included the Solomon Islands,

<sup>&</sup>lt;sup>1</sup> From the project record: The exact size of the Chinese Government's grant commitment for the Ream Naval Base Expansion Project is unknown. However, according to a Cambodian government official who is directly involved in the project (Chau Phirun), the total cost of the project is between USD \$10 million and \$20 million. This issue warrants further investigation.

Bougainville (currently part of Papua New Guinea, but on the pathway to independence), Vanuatu, and Kiribati.

Obtaining a South Pacific base would allow China to drive a wedge – physically as well as geopolitically and psychologically – between the US and Australia and New Zealand.

Unlike in the Western Pacific, where countries like Thailand and Singapore have blue-water-capable navies, the Pacific Island nations have only tiny coastal forces. Our data finds only limited investment in the region's port infrastructure. One exception is the concessional loan of USD \$97 million to the central government of Vanuatu for the improvement and extension of the main wharf at Luganville. The project was completed in 2017, but the facility is not extensive enough to host a permanent base or a significant number of warships at shoreside facilities. But there is historical precedence for using the sheltered Canal du Segond facing the port—see our section on shortlisted basing options below.

As has been well-documented, <u>China now has in place a relatively recent security</u> agreement with the Solomon Islands. In August of 2022, the government took the unusual step of <u>turning away US and British warships from visiting the country</u>. China has been incremental—cautious, even—in pushing the envelope of its relationship with the Solomon Islands, in terms of whether it will permanently base ships there. This is clearly with an eye to both Australia and the US, but also to domestic audiences in the Solomon Islands. The Islands are democratic, with a parliamentary system and several parties, but also feature fractious politics, corruption, and abuses of power. Later in 2022, <u>the country's government stepped away</u>, ruling out basing the Chinese military, saying instead it would continue to rely on Australia for security assistance.

Globally, China has few overseas naval alliances, or mutual security and defense alliances with a strong naval component. Agreements of this sort provide the basis for establishing a facility, and the substance and appearance of egalitarianism to a basing decision. (They also make it easier for external analysts to estimate where Beijing might establish a base). The US Navy can base ships in Naples, Italy, for example, because both countries are partners in NATO. By contrast, China might be confronted with accusations of neo-colonialism, should it now establish a large base in a country with which it has no alliances and where there are asymmetric power dynamics.

For example, given its long history under first Spanish and later US domination, the Constitution of the Philippines expressly forbids the establishment of foreign bases on its soil. The bilateral Enhanced Defense Cooperation Agreement, signed in 2014, confirms that no permanent US bases will be built.

The presence of a foreign military can be unpopular with the public. In an era of increased great power competition, elites and policymakers may not want to publicly throw in their lot with one foreign power, or take sides with one suitor over others, and thereby restrict their latitude, freedom of action, and opportunities in terms of trade, aid, and diplomacy. It is sometimes forgotten in Western capitals that, over the past two decades, events like 9/11, the Global War on Terror, the 2008 recession, and successive global public health emergencies all tended to have an outsized and painful impact on

poorer countries, who have been sideswiped by larger actors and their actions and responses.

All to say, the host country gets a say. Many developing countries will likely not want to choose a side. Take the case of Vaiusu Bay, near Apia in Samoa, a Polynesian island country south of the equator, about halfway between Hawaii and New Zealand. Samoa enjoys a strategic location, which would allow China to break through two of the perceived island chains of containment that Beijing feels hems it in. On November 3, 2017, the governments of China and Samoa signed an exchange of letters which committed grant funding for a pre-feasibility study of a proposed wharf at the Bay. Further talk of a full feasibility study followed, as well as delays, until in August 2021 incoming Prime Minister Fiame Naomi Mataafa, a former opposition leader, canceled the USD \$100 million Vaiusu Port Project, which never proceeded beyond a feasibility study. She called it "excessive" and noted that the Government of Samoa was already heavily indebted to China. (She was correct: according to World Bank IDS data, in 2021 the country was indebted to China to the tune of USD \$161 million). The project had become a divisive issue in Samoa, playing a part in the April 2021 national election, where long-serving prime minister Tuila'epa Sa'ilele Malielegaoi lost his parliamentary majority. In November 2021, Tuila'epa blamed the port cancellation on tensions between the West and China. He promised that, if his HRPP party returned to power, he would revive the Vaiusu Bay project.

Even a wealthy country will likely not want to pick sides. The UAE tries to maintain good relations with both the US and China, and when the US raised objections to the nature of new Chinese construction at the port of Khalifa, both the UAE and China appeared to retreat. However, subsequently <u>US intelligence officials suspected construction had</u> resumed. There are sound reasons for China to desire a base in the Persian Gulf, but this risks upsetting a delicate regional balance of power and provoking a strong US response.

Throughout the South Pacific region, China has funded capacity-strengthening activities for local police, law enforcement, and security services. China has also made donations of small vessels for coastal service, mostly as an extension of law enforcement. As an example, in 2018, the Chinese Government officially handed over a donated hydrographic survey vessel—commissioned under the name "Kacau," a Fijian seabird—to the Fijian Navy. The Government of Fiji disclosed that at least RMB 30 million of previously committed grant assistance from Beijing was used to support the vessel acquisition. Chinese experts spent four months training the Fijian naval personnel to operate the survey ship. China has also provided Fiji with fiberglass and rubber boats for rescue and other operations.

These and other aid efforts might be taken at face value—but they could also be viewed as means to ensure the host country's stability so that a future Chinese base would be safe, secure, and navigable. One wrinkle for Beijing in the South Pacific is the closeness of many countries there to the US and its allies in global policy making: <u>the smaller Pacific Islands tend to vote in the UNGA with the US more consistently</u> than any other developing country regions in the world.

Closer to home, a much tougher sell for China will be establishing a base in any country with which it has a territorial dispute—and that number is large. The vast breadth and strategic location of Indonesia, for example, is doubtless tempting, but so far China has had virtually no success in establishing closer security relations with Jakarta. Pacific nations fearing territorial disputes or, for example, Chinese infringements of their fishing grounds may be ripe to be persuaded into closer security arrangements with the US or its allies.

While the Indian and Western/South Pacific oceans are established priorities for China, given the increased tempo and distances of China's maritime operations, it is worth speculating where else one or more naval bases might make sense.

#### Eastern Pacific

At the far southern tip of South America, Ushuaia, in Argentina, is intriguing from a strategic perspective, as it sits on the pinhead of both the Atlantic and Pacific Oceans. According to US Southern Command (SOUTHCOM), <u>it is under consideration as a possible Chinese base</u>. On foreign policy, China has long been a supporter of Argentina's claim to the Falkland Islands/Las Malvinas, a self-governing British overseas territory where a naval-centric war was fought in 1982 between the UK and Argentina.

China has few maritime basing options, however, when it comes to testing the West Coast of the US mainland. Geography is not a friend, but China has invested in commercial ports like Chancay in Peru, where COSCO is also a port operator. Along with the Inter-American Development Bank, it has also financed the Posorja Port Project in Ecuador.

#### 4.3 Russia: A special case

As Russia spans three oceans and a number of seas, it is treated separately here.

The authors speculate—with no evidence to indicate this is a possibility—that China could test the depth of its friendship with Russia by co-locating fleet units at one or more Russian Navy bases. There is a clear upside from the Chinese perspective: it does not have to persuade the Russian leadership that the US and Europe are a threat—it is already there. Beijing also need not worry that the US will counter with a charm offensive of its own.

The PLAN would be unlikely to want to be hemmed in to the Baltic or Black Seas, but what could be attractive to its naval planners would be a base in the North Pacific Ocean. Such a facility—say, the existing <u>Russian base at Vilyuchinsk</u> on the Kamchatka peninsula—would be secure, distant from public scrutiny, make use of existing warship repair facilities, and have the merit of placing the PLAN between Japan, a US ally, and Alaska, a disrupting counterpoint to any base it might secure in the South Pacific. It also likely would not require significant investment in new construction. In both 2021 and 2022, the PLAN and Russian Navy conducted extensive joint exercises in the East China Sea and western Pacific, including circumnavigating the Japanese main islands.

China could also share facilities with the Russian Navy in the Barents Sea, located off the northern coasts of Norway and Russia, or Kola Bay, a natural harbor off the Barents Sea,

providing it access to the North Atlantic. Whether in the high Pacific or Kola Bay, an advantage for China is that Russia has an abundant naval infrastructure already in place to support large fleets, as a legacy from the Cold War. Having a visible infusion of modern Chinese warships could also bolster Russia's geopolitical position in Europe. In maritime affairs, Russia's Navy is generally seen as aging and in poor health. The 2022 sinking of the *Moskva* did little for the Russian Navy's prestige or to reverse the narrative that its fleet is in decline, in both material and readiness terms. (It is worth re-emphasizing, however, that none of these bases have received Chinese financing, to our knowledge.)

China could seek a port somewhere else entirely; for example, further east along the "Polar Silk Road." Flying under the radar of Western analysis, and not usually found on maps of the BRI, is <u>the liquid natural gas (LNG) port at Sabetta</u>, on the Yamal Peninsula along Russia's Arctic coast. The Yamal LNG Project was established as a joint venture between Russia's Novatek (50.1%), France's Total (20%), China National Petroleum Corporation (CNPC) (20%), and China's Silk Road Fund (9.9%). China's total investment in the facility is massive (approximately \$13 billion), but it is difficult to tease out the amount allocated to port construction only; however, Beijing has issued loans worth approximately \$2.5 billion to ferry LNG from the Yamal facility/seaport to China. A groundbreaking ceremony for Sabetta was held in July 2012 and construction was <u>completed around May 2019</u>.

From satellite imagery and desk research, it appears that the Port of Sabetta has six berths accommodating vessels up to 300 meters in length. The maximum draught is 11.3 meters, which is low, though in 2019, plans surfaced to dredge the port further and expand shoreside facilities. Perhaps significantly, in 2018, China Development Bank also provided a USD \$659 million loan for the construction of 15 icebreaker LNG tankers that will support the project. The ships will be Russian-owned and operated.

The Stimson Center and most think-tanks have <u>claimed</u> that Sabetta is entirely Russian government-funded, but it seems improbable that Chinese loans would not have funded some elements of the port. China itself has included the Yamal LNG Project, which includes Sabetta, as part of the BRI, using the moniker "<u>The Arctic's Energy</u> <u>Pearl</u>." (East of Sabetta and the Yamal Peninsula, and outside the temporal scope of this paper, is the <u>Arctic LNG 2 Project</u>. Located on the Gydan Peninsula, on the other side of the Gulf of Ob, it will be one of Russia's largest ever Arctic projects.)

Further south, China could also co-locate at a Russian overseas naval facility, such as <u>Tartus, Syria</u>, or the <u>on-again, off-again small Russian base projected at Port Sudan</u>. Though on the latter, as noted above, China has extensively financed the commercial infrastructure of Port Sudan, and so could presumably go it alone, were it so inclined.

There would be a certain circularity in seeing PLAN ships based at former Soviet bases. In the late 1950s, during a period of close friendship between the USSR and China, Moscow had discussed with China the possibility of developing a joint submarine force, part of a naval "cooperative." China, at the time the weaker power, had rejected the idea, fearing the Russians aimed to control China's coast, as that is where some or most of the submarines would have been based. <u>Mao questioned the Soviet ambassador</u> as to Russia's intentions: "Or, [you] may have all of China's more than ten thousand kilometers of coastline and let us only maintain a guerrilla force. With a few atomic bombs, you think you are in a position to control us through asking for the right of rent and lease. Other than this, what else [do you have] to justify [your request]?" The issue was one contributing factor to the growing Sino-Soviet split. (We discuss the option for a China-Russia co-location in more detail in the conclusion.)

#### 4.4 The Atlantic Ocean

By contrast, accessing the continental United States is much more feasible from the Atlantic coast of Africa. Distances are much shorter, and the basing options, in principle, are numerous. Perhaps best of all, the US and European navies are virtually absent. A Chinese naval base in West or Central Africa would put the PLAN within easy striking distance of the US and NATO member nations. (The distance from Senegal to New York City, for example, is around 4000 miles). The latest Type 055 destroyer—a class of stealth guided-missile destroyers being constructed for the PLAN—has a range of 5,000 miles. Its armament of sub-sonic YJ-18 anti-ship missiles has a range of roughly 300 miles, and the new hypersonic YJ-21 anti-ship/land target missiles have a range of approximately 900 miles and a terminal speed of Mach 10, per official Chinese social media sources in February 2023.

Our data shows a high concentration of Chinese port investments in West and Central Africa. The Atlantic Ocean is also where China has invested mightily in trade-dependent infrastructure, including but not limited to ports. If one factors in Chinese port operators, then China is more active across a greater number of ports on the Atlantic side of Africa, than on the Indian Ocean, where much more geopolitic attention has been focused.

There are more than a dozen coastal countries in West Africa and skirting the Gulf of Guinea. With deep ties in a number of these, China has become a regional force, investing in ports from Mauritania southward around West Africa, through the Gulf of Guinea, and to Cameroon, Equatorial Guinea, and Gabon in the center.

West and Central Africa depend on seaborne trade. As long-range, interstate road and rail line infrastructure within the continent is weak, traveling by sea is most efficient and cost-effective. Africa's coastal countries additionally tend to serve as transportation hubs for their land-locked neighbors further inland. Piracy issues in the Gulf of Guinea also provide a sound basis for a foreign naval presence.

<u>As CSIS noted in 2019</u>, "investments in African ports provide a gateway to the region's trade and economic development, empower China with political leverage and clout on the continent, and provide a foothold for People's Liberation Army Navy (PLAN) activities."

The strategic case for a PLAN presence is that it would allow the Navy to conduct anti-piracy operations, while also protecting significant commercial SLOCs that use the route around the Cape of Good Hope to the Indian Ocean. As an example, <u>China</u> <u>imports close to 10% of its crude oil from Angola</u>, and investment and exploration with the oil-producing countries in the region is likely to increase. In times of conflict, a naval

base would also be a disruptor to trans-Atlantic shipping connecting North America and Europe.

In general, China is popular with Atlantic-bordering African publics, but so is the US. It is unclear if China's popularity would continue to hold true with a permanent or semi-permanent Chinese military presence, given virtually every African country's painful experience with colonialism. This is one reason the US military has tread lightly on the continent to field mostly "non-enduring" or impermanent bases and missions, with the exception of Camp Lemonnier in Djibouti. There would also be a degree of irony for China itself, in building naval bases on West and Central African coasts. One of the defining aspects of <u>China's "Century of Humiliation"</u>—central to its identity and perception of its role in the world, and the sting of which is felt even to this day—is characterized by foreign powers like the US, the UK, Germany, Russia, and Japan building naval bases on its coast and in some cases along its major rivers far inland. Foreign powers patrolled China's coastline and waterways for decades. According to <u>Chinese estimates</u>, from the mid-19-century to the establishment of the PRC, China's coastline was breached by foreign powers 470 times.

By contrast, China's narrative for foreign audiences in developing countries is that it is one of them: a Global South partner determined to create a new model of cooperation that is far different from what the traditional powers, many of them still carrying the whiff of imperial legacies, offer. China's 2019 Defense White Paper, <u>"China's National Defense</u> in the New Era," made precisely this point: "China has grown from a poor and weak country to be the world's second largest economy neither by receiving handouts from others nor by engaging in military expansion or colonial plunder. Instead, it has developed through its people's hard work and its efforts to maintain peace." This narrative could be a tougher sell for Beijing if it establishes a large fleet base in an African country.

Based on precedent, China might split the difference and avoid using the word "base" altogether, and choose instead something with a lighter touch, less bellicose- and permanent-sounding, suggesting also a smaller footprint. At Djibouti and elsewhere, words like "logistics" and "supply facility" have been employed to describe <u>what is a military base</u>. Given that the commercial ports already funded are also all about "logistics," "supplies," and "infrastructure," it would soften the narrative blow to have warships or submarines arriving for, ostensibly, a similar reason.

Below are the ports along Africa's Atlantic coast, presented in the order in which China has most heavily invested. It is also worth noting that, per the data or Kardon and Leutert, China is also the port operator at a number of these locations: Kribi, Lekki, Lome, Abidjan. Dataset Citation: Kardon, Isaac B.; Leutert, Wendy, 2022, "Appendix for "Pier Competitor: China's Power Position in Global Ports," International Security, Vol. 46, No. 4 (Spring 2022), pp. 9–47"

Over the course of a decade, China has financed the port of Kribi, Cameroon, to the tune of more than USD \$1 billion (see Project IDs <u>53396</u>, <u>53116</u> and <u>350</u>). Globally, it trails only Hambantota International Port in Sri Lanka in the amount of Chinese financing it has received. The Kribi Deep Sea Port Project includes a <u>USD \$604 million preferential buyer's credit (PBC) loan</u> for Phase 2, which was completed on March 2, 2018. Kribi

harbor is now deep enough and has a pier length sufficient to accommodate the largest PLAN warships. <u>China's MOFCOM webpage describes Kribi thus</u>: "The scenery here is beautiful, with blue waves, coconut groves and a silver beach full of breeze and birdsong. The fishing boats on the far coastline are part of the scenery, showing the harmony between man and nature."

Second is Caio Deepwater Port in Angola. Developed in fits and starts, official Chinese development financing has provided some USD \$1.1 billion. The first phase involved the construction of a 630-meter seaport wall, a 2 km-long bridge and access pier to the seaport terminal, and a 14 meter-deep docking basin. The second phase involves the construction of a 200 meter-wide, 18 meter-deep access channel and a docking pier that is 1,130 meters long and 16 meters deep, with the capacity to dock 4 large ships simultaneously, including naval ships.

Third is the Port of Abidjan in Côte d'Ivoire, for which China provided more than USD \$878 million to build. The project as a whole was officially completed in 2020, but construction of a second container terminal was not completed until November 25, 2022. China Eximbank funded the modern container terminal, roll-on/roll-off terminal, jetties, and approach channels that were expanded and improved. But the port has been plagued with financial issues, was slow to generate revenue, and the government has scrambled to find ways to pay off its debt to China Eximbank.

Sierra Leone, in fourth, would be an intriguing option for a PLAN base. Of Sierra Leone's two main political parties, one (the APC) is closely linked to China. At political rallies, its supporters have chanted phrases like "We are Chinese" and "We are black Chinese." Beijing has successfully insinuated itself into the political life of the country. Currently in opposition, the APC will have the opportunity to retake the government at elections in 2023. Back in 2019, Sierra's Leone's President announced that grant funding from the Chinese Ministry of Defense to Sierra Leone's Armed Forces would be used to finance the enhancement of the Government Wharf in Freetown by constructing a dry-docking and a slipway facility. Earlier in 2015, Sierra Leone's government separately signed a framework agreement with a consortium of Chinese companies<sup>2</sup> for the design and construction of the Queen Elizabeth II Port in Freetown. A formal groundbreaking ceremony took place on November 29, 2017, and construction began in December 2017. This venture has been fraught with controversy, including allegations of corruption. The total value is USD \$759 million (see project IDs 62222, 62223, and 62224), and the IMF has sounded the alarm after learning that Sierra Leone's Ministry of Finance had issued a sovereign guarantee in support of a syndicated loan, which placed an extraordinarily large contingent liability (worth 15 percent of the country's GDP) on the government's books.

In the past several years, a building boom of massive container ports has been underway in West Africa. China has had a significant hand in the <u>competition for</u> <u>supremacy in container ship traffic</u> between three main players: Tema in Ghana, Lekki in Nigeria, and Lomé in Togo.

<sup>&</sup>lt;sup>2</sup> The consortium included Tidfore Heavy Equipment Group Co., Ltd., China Integrity International Oceaneering, Co., Ltd., Tidfore (Tianjin) Oceaneering Equipment Co., Ltd., and Tianjin Jinhao International Trade Co., Ltd.

In July 2022, a Chinese vessel was the first ship to berth at Lekki, a deepwater port financed by the China Development Bank. Formally inaugurated in January 2023, Tema was built by Lekki Port LFTZ Enterprise, a special purpose vehicle owned by a group of investors led by state-owned China Harbour Engineering and Tolaram (a Singapore-based conglomerate) in partnership with the Nigerian government. The total Chinese investment in Lekki is USD \$707 million. In July 2023, a detachment of PLAN surface ships visited Nigeria. Yet it is difficult to imagine Lekki becoming a PLAN base. The US political and economic model is more popular than China's, and ties with the US run deep in Nigeria.

The second major container port player is Tema, in Ghana. A state-of-the-art terminal, Tema was financed by a loan syndicate that included several Chinese financial institutions, including four different overseas branches of the Bank of China (the Shanghai, Luxembourg, Paris, and Stockholm offices), as well as other non-Chinese players. Officially completed in April 2020, construction of the port included dredging a deep access channel, building a new 1.4-kilometer-long quay for four container berths (with a 16-meter draft), and creating a 4-kilometer-long breakwater. China Harbor Engineering Company and AECOM were the primary contractors. Elsewhere in Ghana, China has provided a USD \$55 million grant for the Jamestown Fishing Port Complex in Accra. Despite some illiberal domestic policies, Ghana is an economic and political success story that is closely linked to the US, has welcomed US presidents, and has become something of a tourist hotspot for Americans. It is hard to see Ghana spurning its role as a "golden child."

The third major container player—somewhat under-the-radar as a Chinese naval basing option—is Lomé in Togo. Large investments by multiple funders, including USD \$57 million from China, have been made into the Lomé Container Terminal, and with more in the future expected. A harbor depth of 15 meters means it can safely accommodate the largest warships. It is safe, accessible, and seemingly <u>well-managed</u> (per Dynamar, a Dutch maritime intelligence and consulting firm), with future expansion envisaged. China may see smaller countries in the region like Togo as more vulnerable or dependent, permitting uncommon leverage and influence from Beijing. For example, Togo's GDP in 2021 was roughly USD \$8 billion in total and Sierra Leone's just over USD \$4 billion; by comparison, Ghana's GDP the same year was USD \$77 billion.

While the three ports above are major commercial hubs and well-known quantities in shipping circles, they are not alone. In early 2022, the head of the U.S. Africa Command (AFRICOM) <u>singled out</u> Equatorial Guinea as a possible Chinese naval base location, as <u>reported</u> by The Wall Street Journal. AidData's information shows that China Eximbank has lent USD \$659 million for the <u>rehabilitation and expansion of Bata port</u> in Equatorial Guinea, officially inaugurated July 30, 2019. Earlier work, finished in 2014, saw the building of a new terminal 570 meters long and 163 meters wide, two 50,000-ton berths, two 35,000-ton berths, and a 10,000-ton berth, and a new breakwater, as well as the dredging of the harbor to 14.5 meters.

Another off-the-grid possibility is Nouakchott in Mauritania. The Autonomous Port of Nouakchott has received official Chinese funding of USD \$499 million. China's interest in Mauritania pre-dates the BRI by several years; while the groundbreaking ceremony for the port was held in 2009, the two phases of construction did not finish until 2016. China's sustained interest in Mauretania is worth noting, as Chinese banks extended three loans to finance the Nouadhibou Fishing Port, located some 210 miles north of Nouakchott, on the Ras Nouadhibou (Cabo Blanco) peninsula, which is divided between Mauritania and Western Sahara. Phase 3 of the Nouadhibou port construction wrapped up in 2021. From our analysis of open-source satellite imagery, the wharfage is limited in terms of potential naval use, with the main quay perhaps 160 meters in length. A substantial number of fishing vessels use the port, and indeed the issue of China's rapacious fishing practices are a source of controversy in Mauritania. Interestingly, the borrower for Nouadhibou port was Hongdong International (Mauritania) Fishery Development Co. Ltd, a wholly owned entity of China's Hongdong Fishery Co. Ltd., itself a subsidiary of China Poly Group Corporation Ltd, a Chinese state-owned military enterprise.

#### 4.5 The North Atlantic and Mediterranean

Outside of Asia, the largest cluster of Chinese-operated ports is in Europe, especially in the north and west, as <u>reported</u> by Kardon and Leutert. <u>Well-documented elsewhere</u>, China has invested heavily in Piraeus, Greece, making it one of the busiest commercial ports in Europe. Now under <u>direct Chinese control</u>, Piraeus is the <u>third largest port</u> in the Mediterranean in terms of shipping containers moved each year.

Chinese entities have also made port investments in Israel, Portugal, and Germany. As of 2021, Shanghai International Port Group (SIPG) operates a major part of the port of Haifa (also built by China) in Israel, that staunchest of US allies. China has also invested in Sines port in Portugal. Part of a broader maritime courtship, Chinese state media regularly report on China's relations with Portugal that extend beyond the commercial, to include cooperation in marine science, biology, and offshore technology. Finally, Chinese entities have minority stakes in Rotterdam and, in late 2022, <u>invested</u> in the port of Hamburg.

However, as noted earlier, high-income countries (HICs) are not the focus of this report, as it is difficult to envision any European member of NATO or a strong US ally like Israel accepting the permanent or semi-permanent basing of Chinese warships. If anything, China's cozying up to Russia has only cemented opposition through increased NATO solidarity. The January 2023 NATO-EU joint declaration specifically called out China's policies and assertiveness as a challenge.

#### 4.6 The Caribbean

On the other side of the Atlantic on the doorstep of the US, Latin America and the Caribbean have enthusiastically embraced the BRI, with some 20 countries having signed up. Cuba has hosted PLAN visits, and China provided USD \$133 million in financing for refurbishments to its port of Santiago.

Other countries in the region have purchased Chinese military hardware. Politically isolated, Venezuela is broadly and heavily indebted to China, giving Beijing leverage if it were to press for a base. China Eximbank provided a USD \$441 million loan for the José Petroterminal, its largest port-only investment in the region. Suriname might be another basing option, though China's investments in ports there have been limited.

China is heavily implicated in infrastructure development in Panama, inking port concession agreements at either end of the Canal, despite diplomatic ties being initiated only in 2017. <u>CSIS reported</u> that in 2016, the China-based Landbridge Group acquired control of Margarita Island in the Colón Free Trade Zone, the largest free trade zone in the Western Hemisphere, in a USD \$900 million deal. (As the port was financed by a Chinese private sector commercial entity, it is not included in our accompanying dataset of Chinese officially financed ports). The deal established the Panama-Colón Container Port (PCCP) as a deepwater port for megaships, and the construction and expansion was carried out by the China Communications Construction Company (CCCC), a company also active in China's island-building initiatives in the South China Sea, and the China Harbor Engineering Company (CHEC).

Hutchison and Landbridge, private sector companies, operate parts of three ports in Panama: Balboa, Colón, and Cristóbal (see the Appendix of Kardon, Isaac B.; Leutert, Wendy, 2022, "Pier Competitor: China's Power Position in Global Ports," *International Security*, Vol. 46, No. 4 (Spring 2022), pp. 9–47). Landbridge has <u>a 99-year lease on</u> <u>another strategically located port</u>, in Darwin, Australia.

A number of Caribbean island nations are benefiting from Chinese port investment. The symbolic beachhead is Antigua and Barbuda, where in late 2022 Chinese entities spent USD \$107 million to complete the expansion of wharfage and sea walls at St. John's Port, dredge the harbor, and build shoreside facilities. This is just part of China's investment and presence in the country, as there have been other infrastructure projects and purchases of land—all not without scrutiny from citizens, as well as foreign and regional governments. In 2020, media outlet Axios <u>tracked down</u> the list of countries worldwide that had supported China's harsh new security law for Hong Kong, which had been debated at the UN Human Rights Council in Geneva. Fifty-three countries supported China, including Antigua and Barbuda.

Much further south, China is driving consortia that are financing unknown amounts of money into two ports in Brazil, Porto São Luís and Porto Sul, though both appear to be targeted towards enhancing supply chain movements in the agricultural and mining sectors.

Whether on the Pacific or Atlantic sides of northern Latin America or the Caribbean, the broader question is if China, given its consciousness of spheres of influence within a system of great power competition, would be willing to provoke the US so directly and in such close proximity. To be sure, political regimes come and go in Central and South America that may be more or less ideologically sympathetic to Beijing's politics and development model, in addition to its widely popular economic offerings. But given China's incremental approach to overseas basing, dropping a PLAN base on the US doorstep seems to be a stretch, at least in the near term.

## 5. Reading the tea leaves: A shortlist of ports where China might locate naval bases in the near term

Below is our shortlist and our reasoning for where we might expect to see China locate a naval base in the next two to five years. We find that while the size of China's development financing is not necessarily the only or the decisive factor in our shortlist of basing possibilities, it is an important one. Most of the candidates below have received enormous amounts of Chinese funding, according to our data. As experts have opined previously (some cited above), it is not a stretch to imagine Chinese-funded civilian ports serving a military purpose at some point.

The massive scale of Beijing's investments in harbor infrastructure—which perhaps have not been presented in this fashion before, with the full global reach spelled out—reveal China is a maritime superpower ashore as well as afloat. With the building and operation of ports come extraordinary insights and involvement in the political and economic lives of the countries where China has installed itself. China's port strategy engages with countries over the long term, sometimes through the full lifecycle of financing, construction, operation, and management of the facility. This can only be accomplished with the buy-in of host country elites in politics, the legislature, industry and, in some cases, the military.

As noted in the section above on our approach, we incorporated several additional criteria into our analysis for where China might site naval bases, including: strategic value and location; strong relationships with leaderships and a positive image with the public in potential host countries; the stability of those countries; host country alignment with China in UNGA voting; and ports with characteristics that would support a berthed fleet or detachment of major warships.

China has shown a preference for developing harbors off the beaten path and sometimes quite far from metropolitan areas. Two examples are Beijing's heavy investment in the port of Caio, an exclave province of Angola, and its significant funding of port infrastructure in Mauritania, a massive but sparsely populated country that is not on too many great powers' lists of geopolitical hotspots.

Several factors are behind this preference, including commercial ones (such as wanting to locate harbors close to the source of natural resources or where land may be cheaper). China also likely desires the ability to maintain security of the port infrastructure and operations. According to one shipping executive, Chinese entities in the past have seen their ports exposed to labor strife, public protests, and other disruptions, and so now prefer to distance themselves from these situations. The gridlock traffic of many urban centers in developing countries that delays the movement of goods may also be a powerful disincentive. Chinese entities likely prefer secure new locations where they can ensure majority and unfettered control or avoid host country public opinion backlash.

Another factor influencing Beijing's likely basing choices is specific to Africa. For much of the continent, existing or historic port infrastructure is lacking, limited, or inadequate, providing China with a blank slate from which to work. With fewer natural, sheltered or deepwater harbors in Africa, China does not need to be guided by geography but instead can construct its massive port infrastructure instructed by other needs.

As noted earlier, China will likely favor stable regimes that have aligned in their worldview with Beijing for the locations of future PLAN bases. China can pull various strings—economic, diplomatic, and soft or hard power—should it need to make military

use of a port, leaning on the Chinese entities that have financial stakes or are port operators. But they will be only one part of the equation: the host country might be a wild card. What jurisdictional, legal or economic legs might a host country have on which to stand, should it decide to resist? How weak is its financial position vis-à-vis China, and what are the terms of its loan contract?

Relatedly, China is also likely to prefer countries with publics that hold favorable opinions of Chinese leaders and whose elites are aligned with China's worldview in global fora. AidData compared data from the <u>Gallup World Poll</u>, on countries where the populations prefer the leaders of China over those of the US, with <u>United National General Assembly (UNGA) voting data</u> by Erik Voeten et al. (2009), on countries that align their voting more closely with China. The countries on China's side of the ledger in both categories include Brazil, Cameroon, Iran, Mozambique, Nigeria, Pakistan, Russia, Sierra Leone, and Sri Lanka. Another <u>data source</u> shows that, for the period 1971-2017, Cambodia and Pakistan trail only North Korea in their alignment with China in UNGA voting. Another country with heavy Chinese port investment, Guinea, is 10th most in alignment. Restricting the period to 1992-2017, Pakistan is 6th most aligned and Iran 8th.

Unsurprisingly, countries like China, Cuba, Iran, North Korea, Syria, and Venezuela have the <u>lowest coincidence of voting with the US in the UNGA</u>, typically in the 15-20 percent range on contested votes. But many of the world's developing countries are <u>not</u> <u>much closer</u> to aligning with the US, landing in the 20-30 percent range in any given year on all contested votes and in the 35-50 percent range on what the US Department of State deems "important votes."

Compare this with the list of countries who voted in support of China's harsh new security law for Hong Kong, which had been debated at the UN Human Rights Council in Geneva. Media outlet Axios <u>found</u> that fifty-three nations supported China, including several mentioned previously in this report as receiving port investments: Antigua and Barbuda, Cambodia, Cameroon, Equatorial Guinea, Guinea, Mozambique, Pakistan, Sierra Leone, Sri Lanka, and Togo.

A final element to be considered is the potential leverage that China has gained in recent years, as more and more countries along the BRI default on their loan repayment obligations or teeter on the edge of default. Beijing has already extended USD \$240 billion of rescue lending to financially distressed borrower countries that are having problems servicing their debts to China. These "bailouts" are opaque and difficult to track, yet they are rapidly increasing in volume. Through a new, primary data collection effort, a team of researchers from AidData, the World Bank, Harvard Kennedy School, and the Kiel Institute for the World Economy uncovered 128 Chinese rescue lending operations spread across 22 countries. Among the beneficiaries are a number of maritime nations, including Argentina, Ecuador, Suriname, Venezuela, Angola, Kenya, Sudan, Tanzania, Pakistan, and Sri Lanka. Financially distressed countries that are highly indebted to China might be more open to the possibility of hosting a Chinese naval base, if they think that doing so might result in some type of financial relief (for example, an easing of repayment terms, an additional bailout loan, a cash infusion through an equity investment, or direct revenue from rental payments and investments associated with facilities).

#### 5.1 Eight leading options for future Chinese naval bases

Below we provide our shortlist of the most likely basing options, in the order in which they might be prioritized or sequenced by Beijing.

#### 1. Hambantota, Sri Lanka

China's single largest port investment anywhere is at Hambantota, and Beijing exercises direct control over the facility. Coupled with its strategic location, the popularity of China among elites and the population, and Sri Lanka's alignment with China in UNGA voting, Hambantota is our top candidate for a future base. Naval cooperation was further cemented in 2018, when China gave a Type 053 frigate to the Sri Lankan Navy as a gift, rather than a foreign military sale (FMS).

#### 2. Bata, Equatorial Guinea

To some, it may seem a stretch that China would develop a naval base on West or Central Africa's Atlantic coast. But indications—economically, at least—are that China is betting on Africa's promising future, including continued trade growth with the region, demand for imports from Africa's young and growing population, and rising exports to China. These all tend towards busier SLOCs to protect. As noted, China has no shortage of options for a potential base, of which Bata is just one. Sources in the US Defense Department raised concerns about Chinese interest in a base at Bata, which were then picked up by mainstream media. The absence of any official statement by Beijing on a base is not necessarily conclusive—there were <u>repeated denials from China</u> about any such intentions for Djibouti, right up until the time an announcement was made that a base was coming. The commercial investment was used as the entree, but within months <u>construction had begun</u>.

China has heavily financed Bata port, which is strategically located. Politically, Equatorial Guinea (as well as Cameroon, and Togo) all have the "virtue" of being family dynasties or authoritarian regimes in power for years with succession plans in place or mooted. Per the Economist Intelligence Unit's Democracy Index in 2022, all three rank towards the very bottom of <u>global democracy rankings</u>: Togo at 130th, Cameroon at 140th and Equatorial Guinea at 158th.

#### 3. Gwadar, Pakistan

The China-Pakistan relationship is both strategic and economic. Pakistan is the BRI's flagship country and Beijing's single largest customer for military exports. A RAND study of <u>China's Global Basing Ambitions</u> landed on four countries (Pakistan, Bangladesh, Cambodia, and Myanmar) as likely bases, with two nations (Pakistan and Myanmar) having been listed in studies by the PLA itself as

promising potential hosts, as reported by RAND.<sup>3</sup> China is significantly more popular (87 percent) than the US (27 percent) with the public in Pakistan, with a whopping 60-point difference in China's favor. It is the highest differential in the world. Gwadar is out of the way, and a relatively small city, potential selling points. China Overseas Port Holdings operates part of the port. Though troubled, Pakistan is a democracy, and so China cannot necessarily permanently count on a leadership friendly to the notion of a naval base, were it to be mooted. Much could hang on the fate and perceptions in Pakistan of the massive CPEC project, of which Gwadar is one important component. The stakes and scrutiny are high, and success or otherwise of CPEC could impact receptiveness to a PLAN base.

#### 4. Kribi, Cameroon

Kribi port trails only Hambantota in terms of the size of Chinese investment. It is Bata's most likely competitor, but the ports are only about one hundred miles apart. China may decide to choose only one. Cameroon's UNGA voting and overall geopolitical positioning aligns well with China. Elsewhere, Caio in Angola, Freetown in Sierra Leone, and Abidjan in Cote d'Ivoire would all be basing possibilities, based on the size of Beijing's investments there.

#### 5. Ream, Cambodia

While the official investment to date has been small, Ream, Cambodia, is very likely to be a PLAN facility in one form or another. While the US and the West are popular with the Cambodian citizenry, prime minister Hun Sen is a long-time ally of Beijing, and it is he who matters. The elites of Cambodia have done well under BRI and are aligned closely with China. In 2020, <u>Cambodia's voting in the UNGA</u> mirrored that of China and coincided with the US on just 19 of 100 contested votes that year, a rate only slightly higher than Iran, Cuba and Syria. Hun Sen denies Ream will be hosting the PLAN anytime soon, but the evidence indicates otherwise.

#### 6. Luganville, Vanuatu

Beijing is strongly motivated to break containment from the weight of the perceived concentric island chains hanging around China's neck. A PLAN base, perhaps not very large, makes sense somewhere in the South or Central Pacific. While our data shows only small Chinese investments in port infrastructure in the regions thus far, Vanuatu is one location where construction has been funded, at Port Luganville, on the island of Espiritu Santo. An investment of USD \$97 million is not small, as it puts Vanuatu in the top 30 globally. And there is precedence: in World War II, the strategically-located island was home to one of

<sup>&</sup>lt;sup>3</sup> See Li Jian [李剑], Chen Wenwen [陈文文], and Jin Jing [金晶], "The Structure of Indian Ocean Maritime Rights and the Indian Ocean Expansion of China's Maritime Rights" ["印度洋海权格局与中国海权的印度洋拓展"], Pacific Journal [太平洋学报], Vol. 22, May 2014, pp. 68–76. See as well Wang Tianze [王天泽], Qi Wenzhe [齐文哲], and Hai Jun [海军], "An Exploration of Transportation and Projection Support for Overseas Military Bases" ["海外军事基地运输投送保障探讨"], Traffic Engineering and Technology for National Defence [国防交通工程与技术], Vol. 16, No. 1, 2018, pp. 31–35.

the largest US Navy advanced naval bases and repair facilities in the Pacific. The Canal du Segond in front of Luganville was a massive, sheltered anchorage, home to floating drydocks as well as flotillas of vessels, while ashore the US built a number of air bases.

#### 7. Nacala, Mozambique

While China's port investments in Mozambique have not been on the same scale as in other locations, neither have they been insignificant. Mozambique also has not seen the backlash to Chinese loans and investments witnessed in other countries in East and Southern Africa. The question is: where to site a base? Maputo is the largest port, but it is run by the government and Dubai Ports World. Beira is likely too shallow for large warships, as it requires regular dredging. Nacala would make most sense—it has seen sizable Chinese investment and is a deepwater port.

#### 8. Nouakchott, Mauritania

China has invested USD \$499 million in a port in a country where the total GDP is around \$10 billion, presumably giving Beijing extraordinary leverage. Mauritania is also removed from the logjam of PLAN options in West and Central Africa, Nouakchott sitting more than 2,000 miles from Bata, for example. The West African nation is also significantly closer to Europe and chokepoints like the Straits of Gibraltar—roughly only two days' steaming at 20 knots. The PLAN also has a second option in Mauritania, the port of Nouadhibou to the north.

## 6. Conclusion: Options and implications

#### 6.1 For China

The Russian invasion of Ukraine and subsequent Sino-Russian tokens of mutual friendship did China a disservice, in terms of keeping its basing plans under the radar. The US and its allies are now more vigilant. Western analysts will likely increasingly conflate the two powers in terms of assessing intentions and responses. Russian foreign policy in Africa increasingly <u>echoes the narrative and lexicon</u> that China uses to talk to developing country audiences, featuring claims that it is an anti-colonial power and a historic victim too. Doubtless, Russia's anti-imperialist pedigree would come as a surprise to the nations and peoples that fell under the centuries-long rule of the Russian Empire, the Soviet Union and the Warsaw Pact.

In the wake of the renewed resolve and unity of NATO, it is worth considering how aggressively China might now pursue permanent overseas bases. Elsewhere, the terms of the <u>new AUKUS security partnership</u>, launched in September 2021, are a clear response to China's more aggressive geopolitical stance. China might have fewer options to consider, even at the discussion and development stage, before the US would strenuously push back via economic and diplomatic corridors. This might effectively force China to seek bases with countries that the West has already deemed problematic (more on this below).

As noted at the outset of this report, China must thread a needle. Its value proposition to the world's developing and non-aligned countries is that it is disrupting the liberal international order of the past few centuries. At the same time, it has the world's largest navy and global maritime interests. It does not want to appear colonial by establishing naval bases. In the short term, having PLAN ships visit for supplies or light repairs at Chinese-built or operated commercial ports overseas may provide some cover—Beijing can claim these are not naval facilities. But militarily this is not ideal, for reasons outlined earlier. Plus, given Beijing's increasing pursuit of hard, centralized control in all spheres of life, it may be unsettling to have so many factors associated with the PLAN's naval dispositions ultimately left in the hands or jurisdictions of foreign, sovereign nations.

Naval bases come with headaches. <u>As the CSBA noted in a recent report</u> on the allied strategy for competing with China's globalizing military, "Each new base or facility and its host nation would generate their own unique political, diplomatic, economic, and legal demands as well as operational requirements. A basing network would multiply new commitments and liabilities."

History may play a role too. In China, developments in strategic thought on maritime affairs have paralleled physical growth of the fleet. Though primarily a continental power, Chinese military leaders have become students of Western naval strategists <u>Mahan and Corbett</u>. They have also tried to <u>examine the mistakes</u> made by Japan in its brutal invasion during WWII. (At its furthest extent, Japan was strategically halted or turned back by Pacific sea battles at Coral Sea and Midway, while choosing not to capitalize, for example, on its successful maritime forays into the Indian Ocean.)

Another consideration for China is that none of the ports described above is currently militarily defensible. In a conflict situation, they would become high-value targets for an enemy. China would need to establish defenses to protect its ports and resident ships from attack from the air, surface and underwater by missiles, torpedoes, gunfire, and special forces operating underwater or on landward approaches. Given that many of the current basing options are in countries with relatively small militaries, much or all of this burden would fall on China itself. A further vulnerability is that many of the ports not built within natural harbors or at the mouths of rivers are also along fairly exposed and open coastlines.

As noted earlier, the PLAN to date has tended to go it alone when it comes to formal naval alliances. Beijing has issued broad "initiatives" or statements and has in place agreements of friendship with a number of countries, but there is scant evidence of mutual and binding naval treaties. There are small exceptions, such as the recent security agreement with the Solomon Islands.

But this might change in the near future, for the reasons just noted. One or more naval-focused mutual alliances would provide China the cover to base its ships with a partner country on a long-term basis. It would allow China to test the waters with such an arrangement and gauge regional reactions.

Alliances are typically hastened by the shared, perceived threat of aggression from a foreign power, throwing together like-minded countries or countries that feel they are under a common threat. In China's case, it cannot realistically make the argument to

many of the developing countries it is courting and in which it is invested—for example, nations in West Africa, Southeast Asia, or the Pacific—that the US, the UK, Europe or Australia have evil designs against them. These countries are not under existential military threat from the West, and they know it.

In some ways, what would make more sense for China would be a security and naval treaty with a country like Iran, Russia, Syria, or Venezuela—all nations that have <u>the</u> <u>lowest coincidence of UNGA voting alignment</u> with the US of any in the world. An agreement with one of these countries could have as its centerpiece a basing component.

China's port investments in Russia have largely flown under the radar of Western analysis. But significantly, <u>China and Russia have increasingly exercised their ships</u> <u>together</u> in the Western Pacific, including around the main islands of Japan. Both powers' navies also <u>worked with the South African Navy</u> in February 2023 and <u>drilled</u> <u>with the Iranian Navy</u> in the Gulf of Oman in March 2023. In some ways, these are naval allies thrown together by necessity.

While symbolic and strategic, one or more naval bases in Russia—for example, on the Pacific at Vilyuchinsk—would be far from trade routes, unless the ice-free, commercially viable maritime corridors of the Polar Silk Road actually materialize in the near term. Russia will want to counter NATO expansion, and having the PLAN co-located would boost its own order of battle and be an important show of solidarity. Russia's selling points for China will be resources and land. But Russia is unlikely to be rehabilitated in the eyes of most of the world's high-income, influential countries any time soon.

Mutual hubris might also scupper a Chinese base on Russian soil: with the two powers seemingly trending in opposite directions, China may not want to be seen as having hitched its wagon to Russia. At the same time, given Russia's carefully cultivated self-image as a world power, it may not stomach hosting Chinese warships. Russia is concerned that other countries perceive it as less influential than previously. For example, China's extensive BRI investments in Central Asia have alarmed some in Putin's inner circle, who worry about the decline within Russia's "backyard" as compared to China's level of activity and call for more Russian investments and trade with the region. But Russia might still consider a Chinese naval base, if it came with broad economic support and incentives that could offset Western sanctions. Meanwhile, a base in Iran would likely not be necessary if Gwadar was in hand.

#### 6.2 For the West

The US and to some degree its allies (the UK, the EU, NATO, Japan, South Korea, and Australia) concede that over recent decades less attention on security, diplomacy, and trade was paid to certain regions of the globe. This includes sub-Saharan Africa, the Pacific Islands, Latin America, and the countries Russia considers within its orbit. In some ways, this deficit of attention continues. In May, 2023, President Biden abruptly pulled out of a visit to Papua New Guinea, which would have been <u>the first time a US president visited a Pacific island country</u>. National security experts roundly criticized the move.

Limited geopolitical focus has been paid to the potential ties between the commercially-intended maritime investments by China over the past 15-plus years and their possible national security intentions or application. The brightline that Western countries tend to apply—separating private sector and foreign direct investment (FDI) and ownership from official government funding and lending—is blurred in the Chinese context where, for example, companies can be traded on the Shanghai Stock Exchange but also be an official government entity, with varying degrees of independence from government regulation.

The West is now playing catch-up on aid, trade, and diplomacy, stirred by China's impressive gains and in response to Beijing's increased global muscle-flexing. Plans are underway for more robust Western investment and focus in developing countries, including funding infrastructure and other forms of development finance. But in the commercial maritime sector of the globalized economy, the established and major port builders and operators are based in China, Singapore, and Dubai—they are firmly dominant worldwide. It is unrealistic to imagine the West making a major dent in the commercial market. Of China's three major maritime firms (China Ocean Shipping Company, China Merchants Group, and CK Hutchison), the first two are owned by the government and the third is in private hands in Hong Kong. This model is not unusual: the main operator-competitors (Dubai Ports World and Port of Singapore Authority) to the Chinese triumvirate are both ultimately in state hands as well.

Turnabout is fair play. If China can calculate on using overseas commercial ports in times of peace or war, then might not Western partners do likewise? For example, the US and its allies could make use of admittedly more modest offerings, such as existing overseas ports owned by Japan's Mitsui OSK Lines in places like Thailand and Vietnam.

The Russian invasion of Ukraine has spurred NATO, the US, and Indo-Pacific allies to look again at security policies, postures, and defense budgets. Navalists had been clamoring for this for several years, but as a result of China's fleet growth, not Russia's. Yet, in some ways, the result is the same. During that time, China's fleet grew but its portfolio of overseas bases did not. It is hard to say what held it back, but any move now would be under a level of scrutiny which did not exist before.

Our analysis shows that size of port investment does not always translate into appeal or likelihood as a location for an overseas naval facility, but it can be an important indicator. Indeed, China's main overseas initiatives—the Belt and Road Initiative (BRI), the Global Development Initiative (GDI) launched in 2021, the Global Security Initiative (GSI) launched in 2022, and the new Global Civilization Initiative (GCI) launched in 2023—primarily target the world's developing countries, with an increasingly geopolitical angle to these appeals.

In addition to the countries that will host a PLAN base, there are the fence-sitters: countries seeking to preserve their independence of movement and choice or nations that may now be having second thoughts. Given Pakistan's economic and geopolitical ties with China, it might be assumed that Islamabad is "all in" with Beijing. But developing countries should not be handed a binary choice. The culture of Pakistan's Navy, for example, is pro-Western. Even if the platforms (warships) are increasingly Chinese, much accumulated goodwill exists. This is not aided by Washngton's distancing from Pakistan and its affairs. Pakistan's military and political leadership may assume that the US cozying up with India (as a means to offset China) automatically entails abandoning or ignoring Pakistan. US leadership should avoid giving this impression. Moreover, India's continued close ties to Russia should give any Western-led alliances pause. Instead, the US and its allies should continue to seek opportunities to exercise with the regionally-powerful navies of South Africa and Pakistan. They should also continue to work with the smaller navies of East, West and Central African countries, in areas like coastal, environmental and fishery protection – given the predatory nature of China's overseas fishing fleet, this last activity is unlikely to be one of the areas of cooperation offered up by the PLAN.

Geopolitically, it is fanciful to imagine the US can match or counter China everywhere, especially if Beijing determinedly pursues the building of one or more major overseas naval bases. The BRI counts as many as 140 member countries, 49 of which contain seagoing ports funded by Chinese entities.

The West should not overreact to news or rumors of China establishing a base here or there. A headlong rush by a Western country or alliance to establish new bases overseas as a means of counterbalancing might provide exactly the justification or cover China needs to site a naval base of its own (for example, in a neighboring country or a country that is a rival to the one where the US or a Western alliance builds). However, there is no evidence yet that this is happening. Recent developments such as small, temporary US bases in the northern Philippines and the American use of the Greek port of Alexandroupolis for transshipments to Ukraine are bounded, limited in scope, and for contingencies only.

The US and its allies need to allocate scarce resources wisely. They should assess where potential PLAN bases would be a serious threat, requiring some form of countermove—be it diplomatic, economic, or a disposition of forces—versus those that would be merely unpalatable.

There are signs this is already happening—the recent announcements of light-footprint military "sites" in the Philippines, a new defense cooperation agreement with Papua New Guinea, and <u>a possible ship repair/logistics arrangement with India</u>.

Meanwhile some countries moving toward China have reversed course, leaving an opening for the US and its allies. In the South Pacific, Fiji suspended its police training program with China in January 2023 and is apparently reviewing it with views to a possible cancellation. In June 2023, <u>it signed a defense cooperation agreement with New Zealand</u>.

Whether other countries in the region also respond to renewed courtship by the likes of Australia, Japan, South Korea, and New Zealand remains to be seen. Unlike during the Cold War, the US does not need to prod or persuade these friends in the region as to the seriousness of the challenges posed by the opposing superpower. Australia, Japan, South Korea, and New Zealand recognize for themselves the current environment and likely trends, albeit in circumstances unique to each country.

The <u>allyshoring</u> or <u>friendshoring</u> strategy of encouraging the build-up of the defense budgets and naval capabilities of allies (for example, Japan and South Korea) seems smart. The US should, of course, also significantly invest in and strengthen the public and private dockyards and shipyards it already owns or funds, including forward facilities at Pearl Harbor and Guam. More drydocks (fixed and floating), more repair facilities, and more slipways for commercial builders of new ships are needed.

The AUKUS agreement is significant. A collective defense alliance that shares resources, technology, and training, it also provides basing and rotations for American, British, and Australian submarines in Australia. Submarines based there would be able to pivot between Pacific and Indian Oceans as needed to counter China and to access key chokepoints in mere days. AUKUS is a clear response to the growth of China's bluewater navy and its ambitions. For historians, it will likely also recall echoes of WWII, when dozens of US submarines were based on both the West and East Coasts of Australia, effectively putting a stranglehold on Japan's imports of natural resources from its far-flung conquests. This was an enormous contributor to the eventual defeat of Japan, and China is doubtless aware of the significance.

The jury is still out on what kind of maritime power China will be. Its views on the Taiwan Strait, its building of artificial islands, and its use of a <u>"distant water fishing fleet"</u> are all troubling if not alarming to Western powers. But there are reasons for some optimism. While the US and China have clear, conflicting interests on the high seas, they also share a vital interest. The major international sea lanes that the US Navy and its allies protect now-and have protected for centuries-are the same ones used by China for global trade. The oceans, spanning the vast majority of the world's surface, are not and cannot be owned by one country or another. Seas are not the same as land or territory, where boots on the ground determine who is in charge. The world's waterways are a shared global resource, and protecting them is a public good. To that end, there is potential for mutual cooperation between China and the West in some key areas: for example, anti-piracy patrols and humanitarian missions. Given the interconnectedness of the Chinese, Asian, and Western economies, incentives are well-aligned to protect the free flow of trade on the high seas. Natural resources that flow along one set of sea lanes to China are transmogrified by Chinese industry into finished products that travel by other sea lanes to US, European, and global markets.

## 7. Methodology

For the purposes of our analysis, we sought to identify the universe of seaport projects financed by Chinese state-owned entities in 165 low-income and middle-income countries over a 22-year period. <u>Our data</u> and analysis does not encompass ports funded through strictly private sector investment (FDI) from China, but it does include entities that are state-owned or majority-state-owned. Our data collection process involved three steps.

First, using a forthcoming version of <u>AidData's Global Chinese Development Finance</u> (<u>GCDF</u>) <u>Dataset</u> that captures more than 20,000 projects financed by Chinese state-owned entities between 2000 and 2021, we applied a string detection technique to identify the subset of projects that could potentially be used as naval bases.<sup>4</sup> We did so by compiling a list of keywords ("strings") related to ports and naval bases—including port, terminal, wharf, harbor, pier, dock, jetty, naval, and variations thereof—and automatically identifying all projects in the GCDF dataset with a "description" field containing one or more of these pre-specified keywords. This search procedure yielded 229 positive matches.

Then, in a second step, we manually reviewed each of the corresponding project descriptions to eliminate false positives (i.e., those projects not directly related to seaport infrastructure). We eliminated all inland port ("dry port") projects; all port projects located along lakes or inland seas; and all ocean-facing piers too small to accommodate modern warships of frigate size or larger. This pruning procedure left us with 123 projects.

The third step involved a group of internal experts reviewing the preliminary dataset of seaport projects financed by Chinese state-owned entities for errors of omission and commission. With support from these experts, we triangulated additional information from official and non-official sources (such as government websites and media reports) and visually inspected open-source satellite imagery of candidate ports.

Our final dataset, <u>China's Official Seaport Finance Dataset</u>, <u>2000-2021</u>, consists of 123 seaport projects to construct or expand 78 ports in 46 low-income and middle-income countries. Thirteen Chinese lenders and donors provided USD \$29.9 billion in loans and grants for these projects between 2000 and 2021, and 30 Chinese companies and 42 non-Chinese companies were responsible for implementing the projects between 2000 and 2023. Our dataset contains GeoJSONs of the geographic boundaries of these ports, enabling geospatial visualization and analysis. We also include the latitude-longitude coordinates of the project location, as well as a precision marker for those coordinates to indicate whether the geolocation is precise or approximate.

#### About the authors

<u>Alexander Wooley</u> is Director of Partnerships and Communications at AidData. He chaired AidData's internal Africa Task Force, a project to identify and build relationships with strategic research partners across Africa. He previously worked as Vice President for Communications and Development at Washington, DC-based InterMedia. He has contributed to <u>Foreign Policy</u> and wrote one of the cover stories for the Fall 2021 issue of the magazine, on <u>US Navy shipbuilding woes</u>. In 2022, he wrote a story for Foreign Policy on the implications for the South China Sea of the <u>sinking of the Russian cruiser</u>

<sup>&</sup>lt;sup>4</sup> With respect to temporal coverage, the forthcoming (3.0 version) of the GCDF dataset tracks projects over twenty-two commitment years (2000-2021), with details on the timing of project implementation over a twenty-four year period (2000-2023). At the time of analysis, only data for commitment years 2000-2021 was available, so for the purposes of our analysis, we only included formally approved, active, and completed projects from those commitment years. We exclude: (i) projects that secured official financial or in-kind commitments from China but were subsequently suspended or canceled; (ii) projects that secured pledges of financial or in-kind support from official sector institutions in China but never reached the formal approval (official commitment) stage; and (iii) so-called "umbrella" projects that are designed to support multiple, subsidiary projects.

<u>Moskva</u>, which was an FP "most read" story. He wrote an essay on the port of Dar-es-Salaam for <u>Foreign Affairs</u>; an essay in 2023 for <u>The Globe and Mail</u> on Russian and Chinese narratives for African audiences; and has contributed to the US Naval Institute's magazine <u>Proceedings</u>. Alex is a former section editor of the <u>Georgetown</u> Journal of International Affairs and a former officer in the British Royal Navy. He holds an MA in Security Studies from Georgetown University.

<u>Sheng Zhang</u> is a Research Analyst in the Chinese Development Finance Program at AidData. His primary role involves tracking underreported financial flows by leading geospatial data collection and conducting data analysis. Sheng is experienced in various analytical techniques, including social network analysis, sentiment analysis, and machine learning. He is the co-author of an AidData report on China's global development footprint, *Banking on the Belt and Road: Insights from a new global dataset of 13,427 Chinese development projects*. He holds an MA in Public Management from Johns Hopkins University and a Bachelor's degree in Economics from Zhongnan University of Economics and Law.

<u>Rory Fedorochko</u> is a Junior Program Manager in the Chinese Development Finance Program at AidData. In this role, he manages the student research assistants that conduct data collection and supports data analysis. His focus is on expanding AidData's data collection to high-income countries. He spent two years working on the Chinese Development Finance Program as a student research assistant before joining as a full-time staff member. He holds a 2022 BA in History and International Relations from William & Mary.

Sarina Patterson is Communications Manager at AidData, having served previously as a Communications Associate and Specialist. Sarina works to increase the lab's reach and visibility by publicizing and promoting its unique activities. She writes and edits AidData's blog and creates content for its web and social media presence. She helps shepherd AidData's last-mile publication process and has edited dozens of its studies, flagship reports, and journal articles. She also produces report covers, data visualizations, maps, and interactive dashboards. Sarina holds a BA in Government from Harvard University with a secondary in East Asian Studies and a Spanish citation, and language coursework in Spanish and Korean; she also studied abroad at Seoul National University for Korean. Previously, Sarina worked as Managing Director of Marketing for Harvard Student Agencies, the largest student-run corporation in the world.

#### About AidData's research on China

For more than a decade, AidData has filled an evidence gap by bringing greater transparency about China's global overseas development program. AidData has enabled rigorous, comparative research through data standardization, provided decision makers with a clear-eyed view of the changing global development landscape, and raised the bar in the collection, aggregation, and analysis of high-quality data on global development. AidData is also developing new tools for improved decision making through evidence-based insights on development financing and its impacts. This includes analyzing objective and comparable measures of emerging challenges and opportunities from China's overseas lending program through one-to-one comparisons with established bilateral and multilateral donors.