

Chapter 6

Military Preparedness of the PLA in the South China Sea

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I. Introduction

“China’s Military Strategy,” a 2015 Chinese defense white paper, states that “Preparation for military struggle (PMS) is a basic military practice and an important guarantee for safeguarding peace, containing crises and winning wars. To expand and intensify PMS, China’s armed forces must meet the requirement of being capable of fighting and winning, focus on solving major problems and difficulties, and do solid work and make relentless efforts in practical preparations, in order to enhance their overall capabilities for deterrence and warfighting.” The white paper stresses that in light of the evolution of warfare and the national security situation, the People’s Liberation Army (PLA) should not only base its military preparedness on winning informationized local wars, but also highlighting maritime military struggle and maritime PMS.¹

In 1968, Richard Nixon declared the Vietnamization of the Vietnam War, which indirectly opened the door to military preparedness for the PLA in the South China Sea. Since defeating the South Vietnamese Navy in 1974 and acquiring all of the

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¹ “China’s Military Strategy,” *Central Government of the PRC*, May 26, 2015, http://big5.www.gov.cn/gate/big5/www.gov.cn/zhengce/2015-05/26/content_2868988.htm.

Paracel Islands, the PLA had been pushing forward its “From Green Water to Blue Water” plan through the Navy’s submarine 252 and the South Pacific Special Surface Fleet, which had stepped out of the first island chain while strengthening its military preparedness in the South China Sea by implementing the “Green Water Defense” strategy formulated by Commander of the PLA Navy Liu Huaqing. In 1988, China capitalized on Vietnam’s preoccupation with withdrawing its troops from Cambodia to capture the Johnson South Reef in the Spratly Islands. In the early 1990s, it took advantage of the retreat of U.S. forces from the Subic Bay Base to Guam to seize Mischief Reef.

The securing of strategic positions in the Paracel Islands and Spratly Islands in the South China Sea is fundamental to the PLA’s military preparedness in the region. With the subsequent establishment of the Sansha Garrison, the creation of the regular combat readiness patrol system in the South China Sea, the expansion of the PLA’s naval fleet, and the reclamation of islands in the waters, the PLA has been able to prepare for military struggles in the region in a diversified manner. As the South China Sea has become a major arena for the U.S.-China competition in the Indo-Pacific, the PLA’s preparations for military struggle in the South China Sea are a matter of concern to the countries with a stake in the region. On the basis of this knowledge, this paper intends to delve into the military preparedness of the PLA in the South China Sea from three perspectives: the extension of military strength and battlefield awareness, the offense and defense on islands and reefs, and the suppression of foreign forces in the waters.

Owing to length constraints, this paper will leave out the topic of military preparedness in the airspace of the South China Sea. The military drills carried out by the PLA and other countries in the South China Sea are in the nature of military diplomacy, regional cooperation, humanitarian relief and disaster assistance, and are therefore not covered in this article.

II. The Extension of Military Strength and Battlefield Awareness in the South China Sea

1. South Sea Fleet Drills in the South China Sea

On May 22, 1983, the Chinese navy made its first patrol to the James Shoal. At the same time that the PLA was confirming its defensive coverage of the South China Sea, Beijing was reinforcing its nominal and substantive control over the islands and reefs by naming them.² Albeit nominally the same as the East China Sea and the North Sea that fell within China's green waters, the PLA's drills in the South China Sea had been far sea training in nature since the beginning, given the vast expanse of the area. In the autumn of 2008, a task force of the South Sea Fleet (SSF) sailed around the South China Sea. According to the Chinese side, the voyage was only marked with the course and turning point, but not the specific time of the operation, and the 10-day voyage was a confrontation throughout the course, the waters and the time.³ The realities of the South China Sea issue from a far sea perspective was also reflected on the difficulties of logistical support on the battlefield in the waters, particularly in light of China's call in the 18th National Congress Report to "resolutely safeguard the country's maritime rights and interests and build a strong maritime nation." From late 2012 to early 2013, the South Sea Fleet was tasked to conduct an exercise on the provisioning of supplies by emergency relief vessels, in order to boost the planning, organization and implementation capabilities of the Base of the South Sea Fleet's far-sea logistic support, and to solve the issues of shore-based emergency loading, long-range storage of supplies and integrated ocean-going replenishment, thereby setting up the South Sea Fleet's integrated ocean-going support system. In the meantime, the PLA was testing its escort mission via the Gulf of Aden in the South China Sea.⁴

² Chung-Ting Huang, "A Comparative Analysis of the Naming of Features by China in the South China Sea in 1983 and 2020," *Proceedings of the 2020 Lecture on Ocean and National Defense* (Taoyuan: National Defense University, 2020), p. 107.

³ "China's Navy Normalizes Distant Voyages, from Sailing Training to Fierce Confrontation Exercises (2)," *ChinaNews.com*, May 11, 2009, <http://www.chinanews.com/gn/news/2009/05-11/1685171.shtml>.

⁴ "South Sea Fleet Establishes Integrated Ocean-going Protection System," *Chinese Communist Party News Network*, January 22, 2013, <http://cpc.people.com.cn/n/2013/0122/c64387-20286574.html>.

From 2013 onwards, the PLA's attempts to establish a formal warfare order had gained momentum. At this point, air reconnaissance and air defense capabilities were still weak on islands and reefs in the South China Sea, so the South China Sea surface fleet paid particular attention to anti-aircraft and anti-submarine training. On March 19, four ships including the amphibious landing platform dock Jinggang Mountains, missile destroyer Lanzhou, missile frigates Yulin, and Hengshui formed the South Sea Fleet for a combat-readiness patrol and far-sea training program with four helicopters, one hovercraft and one marine company on board. The task force was divided into three force groups and went to the South China Sea and the Western Pacific Ocean to undertake training in such programs as setting up command posts, maritime maneuvers, maritime rights maintenance, distant sea escort, rapid response in support of operations and political work. On March 20, a ship-submarine countermeasures exercise, including anti-aircraft and anti-submarine, was carried out in the waters east of Hainan Island.⁵ On April 16, China released a white paper entitled "China's Defense White Paper: The Diversified Employment of China's Armed Forces," which advocated strengthening the infrastructure of combat readiness, conducting targeted combat readiness drills, organizing combat readiness duty and border, sea and air defense patrols, and being ready for combat and non-war military operations. On the other hand, the navy organized and performed regular war preparedness patrols in accordance with the principles of efficient use of troops, diversified patrols and whole-area surveillance, and maintained a military presence in the relevant waters. All fleets ensured that the requisite number of ships were on patrol in their respective jurisdictions throughout the year, stepped up air force reconnaissance patrols, and formed a mobile force to patrol and guard the relevant waters as required.⁶

Driven by the above objectives of regular combat readiness patrols, the PLA

⁵ "Navy Fleet Launches Beach Landing Training in South China Sea," *Central Government of the PRC*, March 21, 2013, http://www.gov.cn/jrzq/2013-03/21/content_2359439.htm; "Military: Normalization of Far Sea Training to Enhance the Combat Capability of China's Navy," *Central Government of the PRC*, March 21, 2013, http://www.gov.cn/jrzq/2013-03/20/content_2358632.htm; "South Sea Fleet Organizes Joint Mobile Patrol Training," *Huanqiu.com*, March 19, 2013, <https://mil.huanqiu.com/article/9CaKrnJzJ4Z>.

⁶ "White Paper Features First Separate Section on 'Maintaining a State of Combat Readiness'," *Chinanews.com*, April 16, 2013, <http://www.chinanews.com/mil/2013/04-16/4734091.shtml>.

began to intensify its patrolling activities on the southern rim of the South China Sea. In March 2013, an amphibious fleet of four Chinese warships held a declaration of sovereignty in James Shoal, much to Malaysia's consternation and rare protest against China.⁷

On January 20, 2014, the far sea training unit for naval war preparedness patrols composed of the South Sea Fleet's amphibious landing platform dock Changbai Mountain, missile destroyers Haikou and Wuhan departed from the port of Sanya with three helicopters, a hovercraft and a marine company on board. The task force then held a joint submarine and ship breakthrough exercise in the South China Sea with a submarine unit. On January 26, the task force again cruised to James Shoal and staged an affirmation of sovereignty.⁸ This, in turn, has prompted Malaysia to quietly ramp up its cooperation with the Philippines and Vietnam in an attempt to get the Chinese government to accept a binding code of conduct in the South China Sea.⁹

With the South China Sea issue taking on an international dimension as a result of the arbitration case, the PLA's exercises and training activities in the region had become increasingly propagandistic. On the 25 of April 2016, a detachment submarine 372 of the South Sea Fleet embarked on a collaborative drill with surface ships and airmen in a certain sea area. With a scenario set up based on the combat-oriented requirements, the exercise was conducted with a data link communication compliance guide, joint strike, crew escape and rescue, submarine vertical supply and submarine rescue towing.¹⁰ On July 7, 2016, China's state media reported that a hovercraft and a land navigation brigade of the PLA Southern Theater Command's 42nd Army Group had launched a WZ-10 attack

⁷ "Navy to Set up Fourth Base in Bintulu-RMN Chief," *The Borneo Post*, March 8, 2018, <http://www.theborneopost.com/2018/03/08/navy-to-set-up-fourth-base-in-bintulu-rmn-chief/>.

⁸ "Navy's South Sea Fleet's Far-sea Training Taskforce Arrives at James Shoal for Cruise," *People's Daily Online*, January 26, 2014, <http://politics.people.com.cn/n/2014/0126/c70731-24234692.html>.

⁹ "Focus: Malaysia Stands with Philippines and Vietnam as China's South China Sea Claims Frowned upon," *Reuters*, February 28, 2014, <https://www.reuters.com/article/malaysia-china-maritime-idCNCNEA1R07920140228>.

¹⁰ "South Sea Fleet Submarine 372 and Surface Ship, Air Force Exercise (Photo)[2]," *People's Daily Online*, April 28, 2016, <http://military.people.com.cn/n1/2016/0428/c1011-28312622-2.html>.

helicopter to the South China Sea to conduct maritime flight training, highlighting the PLA's offense and defense capabilities on islands and reefs in the region. On July 8, four days prior to the announcement of the South China Sea arbitration judgment, in order to convey China's refusal to "swallow the bitter consequences of its sovereignty being undermined" and its confidence in its ability to defend its territorial sovereignty and maritime rights in the South China Sea through military means, the PLA, with the South Sea Fleet as its main unit, and the North Sea Fleet and East Sea Fleet, comprising more than 100 vessels, dozens of warplanes and coastal defense units, was divided into red and blue sides to stage a confrontation drill with ammunition in the waters around the Hainan Island and Paracel Islands. The exercise was carried out against a backdrop of winning a local war at sea under information-based conditions, and the themes set were closely aligned with real combat, focusing on air-to-air strike and other maritime information-based operations under the direction of members of the Central Military Commission of China (CMC), Commander of the PLA Navy Wu Shengli, Deputy Chief of the Joint Staff Department of the CMC Wang Guanzhong, political commissar of the PLA Navy Miao Hua, commander of the PLA Southern Theater Command Wang Jiaocheng.¹¹

To further establish a formal order of warfare in the South China Sea, the PLA had made it a regular routine to carry out exercises with troops, ammunition and combat there. On the 27 of May 2017, Type 052C Haikou frigate, Type 052D Changsha and Hefei frigates and Type 054A Sanya frigate of the South Sea Fleet of the Chinese Navy launched a live-fire exercise in an area of the waters, including the firing of a Yu-7 torpedo from a destroyer and a single barrel 130 gun from a Type 052D destroyer. From March 20 to 22, 2018, a landing dock detachment of the South Sea Fleet hosted the first full training and solo maritime operation examination in the new year. Three landing dock boats rushed to the pre-determined sea area and organized a series of combat-oriented drills.

¹¹ "Navy's Three Major Fleets Drill in South China Sea, Experts: Showcases China's Military Construction Achievements," *People's Daily Online*, July 11, 2016, <http://military.people.com.cn/n1/2016/0711/c101128543175.html>.

In 2018, in line with Xi Jinping's two-pronged strategy of peace and warfare in the South China Sea, the PLA on April 12 held a naval parade in the waters under the inspection of Xi Jinping, Chairman of the Central Military Commission., two days after Xi delivered his keynote speech "Openness for Greater Prosperity, Innovation for a Better Future" at the Hainan Boao Forum for Asia. It is worth noting that the ships on parade were organized into seven battle groups, including strategic strike, underwater attack, open-sea operations, naval strike, amphibious landing, offshore waters defense, and integrated protection, while the aircraft on parade were composed of 10 air echelons, including carrier-based aircraft, anti-submarine patrol operations, early warning command, open-sea operations, air-to-ship strike, long-range cover support, and air-to-air strike,¹² indicating that the South China Sea combat-oriented exercise was another large-scale joint operation comprising shore-based, underwater, surface and air forces.

To curb the political effect of the PLA's actions, the U.S. military sent the USS Theodore Roosevelt CVN-71 to the vicinity of the sea area where the PLA was carrying out military drills, and invited Philippine generals, officials and media to board the aircraft carrier to watch the F/A-18 Hornet jet landing and take-off operations.

To counter the challenge posed to the South Sea Fleet by the U.S. Freedom of Navigation Operation and its vessels and submarines, the PLA has thus expedited the commissioning of a Type 002 aircraft carrier Shandong. On December 17, 2019, China's first domestically built aircraft carrier was delivered to the navy, and Chairman of the Central Military Commission Xi Jinping awarded a banner and naming certificate to the naval receiving unit. On the other hand, it was actively developing an underwater attack system and an air combat system in the South China Sea, thereby strengthening the synergy between the two systems. In September 2018, the South Sea Fleet (SSF) organized an integrated submarine and aircraft countermeasures exercise in an area of the South China Sea, which lasted for several days and nights and was executed in a complex underwater acoustic

¹² "Xi Jinping Attends Naval Parade in South China Sea," *Central Government of the PRC*, April 12, 2018, http://www.gov.cn/xinwen/2018-04/12/content_5282030.htm.

environment. The Red and Blue sides engaged in the exercise involving multiple types of submarines, a number of escort ships and several anti-submarine aircraft. The submarines during the course demonstrated submarine-aircraft confrontation, submarine confrontation and live firing of mines against underwater targets, and fired several types of anti-ship and anti-submarine weapons.¹³ In February 2019, the PLA Southern Theater Command (STC) for the first time joined hands with various military forces to organize the “Zhanlan-2019A” joint distant sea training mission, but intentionally refrained from releasing the relevant content. In July 2020, the PLA STC Naval Air Force conducted a high-intensity day and night exercise in the South China Sea with new fighter aircraft such as the H-6G and H-6J, including day and night take-offs and landings, long-range attacks, and target attacks on the sea. In August of the same year, the PLA's Hong Kong Garrison dispatched the Type 056 corvette Huizhou to undertake training programs in the South China Sea, including live-fire interfering bombs, main gun fire against the sea, sub-gun fire to destroy floating mines, counter-terrorism and anti-piracy, live-fire torpedoes, carrier-based aircraft landing and life-saving, as well as the earlier unannounced “sinking enemy submarine” exercise. On December 28, 2020, the Shandong and the Type 075 amphibious landing helicopter dock were seen together in the port of Sanya.¹⁴

On Jan 2, 2021, PLA submarines held a training exercise 65 km south of the port of Sanya. On January 4, Chairman of the Central Military Commission Xi Jinping issued a mobilization order for the PLA to commence training, calling for the army to be ready to fight and be able to fight whenever needed. All major military branches of the PLA responded to the call and did accordingly. The South Sea Fleet (SSF) on January 6 announced its combat-oriented training content, saying that it would employ the Type 054A frigate Yuncheng, the Type 056A corvette Yongzhou, the J-11B/BH fighter, the JH-7A bomber and the new Type 093A submarine.

¹³ “Liaoning Aircraft Carrier Task Force Finishes Training Program, Combat Capability in Place,” *CCTV.com*, December 22, 2018, <https://reurl.cc/829O1d>.

¹⁴ 2:43 PM · December 28, 2020, [GEOINT@lobsterlarryliu, https://twitter.com/lobsterlarryliu/status/1343447357677924352](https://twitter.com/lobsterlarryliu/status/1343447357677924352).

The SSF also released the first footage of the Z-20F anti-submarine helicopters, which would be deployed on the Type 075 amphibious landing helicopter dock, the first of which was undergoing final testing at the SSF's Sanya base. Although the "Shandong" was inducted into the South Sea Fleet, it did not initially conduct operational exercises with other surface ships, but only carried out tests in the waters around Hainan Island.

In the first half of 2021, the South Sea Fleet's training objectives centered on two areas. On the one hand, it was a landing and combat oriented live-fire drill to mount a military threat against Taiwan. At the end of January 2021, for instance, the PLA Southern Theater Command deployed a number of landing docks, including the Navy ships Wuzhishan, Changbai Mountain and Kunlun Mountain, to conduct combat-oriented military training sessions in an area of the South China Sea. After firing live ammunition from the naval artillery and anti-aircraft artillery, a number of air-cushioned landing craft were detached from the mother ship and proceeded to the mission area for a beach landing exercise. On the other hand, it was a surface ship combat oriented live-fire exercise against the U.S. ships on a freedom of navigation operation. At the end of February 2021, the PLA Southern Theater Command's naval far-sea joint taskforce consisted of the missile destroyer Yinchuan, the frigate Hengyang, the amphibious landing platform dock Wuzhishan and the replenishment tanker Chagan Lake to form a strike team to conduct a live-fire drill against the sea. By simulating multiple waves of intense enemy missile attacks, the warship's close-range weapon system was effectively tested against missiles. In mid-March, for example, the PLA began firing training within a 5-kilometre radius off Weizhou Island, west of the Leizhou Peninsula, to deny U.S. forces access to the Chinese-controlled side of the Gulf of Tonkin. In late March, the PLA Southern Theater Command's Type 056A corvettes, such as Enshi and Hanzhong, formed a task force to carry out combat-oriented military training in various sea zones. The exercise included the deployment of air force to attack enemy frigates, release interference bombs and other disruption measures to protect against interference, as well as organizing various weapons systems to fight against aerial targets, assembling offense and defense, ship and aircraft search and rescue,

main gun fire, secondary gun fire to destroy floating mines and light weapons fire.

From mid to late April 2021, the South Sea Fleet (SSF) carried out landing and surface warfare exercises without interruption. For example, the PLA Southern Theater Command naval destroyer detachment dispatched the missile destroyer Wuhan and the missile frigate Hengyang to hold a live-fire drill in the South China Sea; a landing dock brigade of the SSF organized the Mount Song and Hengshan vessels for several days of combat-oriented military training in the South China Sea; a naval frigate detachment of the PLA Southern Theater Command formed a task force to embark on combat-oriented military training alongside the replenishment tanker Weishan Lake in the South China Sea.

On the 23 of April, the three major PLA warfare ships Changzheng 18, Dalian and Hainan were inducted into the South Sea Fleet under the witness of Xi Jinping, and the integration of the major warships has become an integral part of its recent combat training. On April 28, the aircraft carrier Shandong and the amphibious assault ship Hainan finally left the Sanya Naval Base and entered the South China Sea for sea trials.¹⁵ By the end of May, the Shandong and Hainan warships were regularly conducting training exercises in the waters around Sanya to strengthen the South Sea Fleet's operational system. The first Type 075 amphibious landing helicopter dock called Hainan was the most active. In the same month, the PLA Southern Theater Command (STC) also staged landing drills, with the landing dock Qilian Mountains and its sister ship Wuzhishan being deployed to carry out vertical landing training alongside carrier-based aircraft. It was not until mid-June that the South Sea Fleet's first Type 055 destroyer, the Dalian, left the port and was operating in the northeastern waters of Sanya.

In mid-July, the Shandong and Hainan were operating in the south-eastern and western waters of Sanya respectively. Another point of interest was the naval training. Meanwhile, a PLA STC naval missile brigade held an all-day and all-night training test, which included maritime reconnaissance and evidence collection, vessel damage control training, camouflage and concealment using various tactics,

¹⁵ 8:49 PM · April 28, 2021, GEOINT@lobsterlarryliu, <https://twitter.com/lobsterlarryliu/status/1387388505869807624>.

and firepower strikes. In addition, the PLA STC launched a joint air and sea drill in the South China Sea, with its sister units, including ships and submarines, invited to participate in the event. It seems that the South Sea Fleet (SSF) has also started to strengthen its asymmetrical warfare capability in order to be flexible against the large surface fleets of foreign countries entering the South China Sea when the main warships were inducted into the SSF.

2. Far Sea Training for Combat Readiness Patrols across Regions to the South China Sea

The South China Sea is not only a natural area for the South Sea Fleet's drills, but also an ideal venue for other fleets for cross-regional exercises due to the vast waters off the island chain, the complex hydro-meteorological and electromagnetic environment, and the historical practice of the 18th brigade of the East Sea Fleet frigates supporting the "Battle of the Paracel Islands" in 1974.¹⁶ In 2007, for instance, two battleships of a destroyer detachment of the East Sea Fleet confronted an unidentified electromagnetic signal in the South China Sea on their way to the Indian Ocean for military drills.¹⁷ From late January to early February 2013, the PLA, in response to the Philippines' referral of the South China Sea territorial dispute to the United Nations Permanent Court of Arbitration, dispatched the missile destroyer forces from the East Sea Fleet and the North Sea Fleet to the islands and reefs in the South China Sea to stage high-level armed patrols. The task forces adopted a high and low defense system with one destroyer and two escorts to facilitate air defense, as well as carried out training programs such as offense and defense, anti-submarine, repelling ships infringing on Chinese territorial waters, anti-piracy and complex channel navigation through islands and reefs. The task force's far sea training for combat readiness patrols was done without a

¹⁶ "Expert: China's 054A Ships Sufficient to Deal with Neighboring Enemy Diesel-electric Submarines," *Sina Military*, February 5, 2013, <http://mil.news.sina.com.cn/2013-02-05/0940714930.html>; "In 1974, People's Navy Ship Fleet Passed Through Taiwan Strait for First Time," *Chinese Communist Party News Network*, May 6, 2014, <http://dangshi.people.com.cn/n/2014/0506/c85037-24981328.html>.

¹⁷ "China's Navy Normalizes Distant Voyages from Sailing Training to Fierce Confrontation Drills (2)," *Chinanews.com*, May 11, 2009, <http://www.chinanews.com/gn/news/2009/05-11/1685171.shtml>.

replenishment tanker in the waters off Woody Island in the Paracel archipelago, and relied on a replenishment tanker from a sister fleet for on-call supply at sea. It is worth noting that the PLA underlined the real-time positioning function of the BeiDou Navigation Satellite System for precise mapping of ships, which offered vital parameters for this mission. Also, the Bashi Channel is an international shipping lane, and under the United Nations Convention on the Law of the Sea, all ships and aircraft have the freedom to navigate and overfly.¹⁸

Driven by the goal of regular combat readiness patrols, the PLA had become more active in seeking the presence of Chinese warships in the South China Sea. On the 26 of November 2013, Liaoning set sail from its homeport the in Qingdao Cruise Terminal, accompanied by missile destroyers Shenyang, Shijiazhuang and missile frigates Yantai and Weifang left for the South China Sea to initiate scientific trials and military training activities. This is the first time that the armed forces had organized cross-sea area long-duration sailing training and fleet sailing training with the Liaoning as the core, and the first time that it had performed a comprehensive trial of operational systems since the Liaoning was commissioned. The PLA Navy units deployed several types of aircraft, surface ships and submarines to support the test and to facilitate combat-oriented military training.¹⁹ In January 2014, the South Sea Fleet's far sea training unit for armed patrols was divided into two groups and went to the South China Sea, the Western Pacific Ocean and the East Indian Ocean to conduct training in such programs as command post establishment, operations assistance, tactical operations and political work.

¹⁸ "Our Naval Fleet Force Enters South China Sea through Bashi Channel as Scheduled," *Central Government of the PRC*, February 1, 2013, http://www.gov.cn/govweb/jrzq/2013-02/01/content_2324972.htm; "Chinese Naval Force Finishes Armed Patrols in South China Sea," *South China Sea Institute, Xiamen University*, February 8, 2013, <https://scsi.xmu.edu.cn/info/1210/4558.htm>; "Chinese Naval Fleet Force Training Round-the-clock in South China Sea," *Sina Military*, February 4, 2013, <http://mil.news.sina.com.cn/2013-02-04/0744714776.html>; "Expert: China's 054A Ships Sufficient to Deal with Neighboring Enemy Diesel-electric Submarines," *Sina Military*, February 5, 2013, <http://mil.news.sina.com.cn/2013-02-05/0940714930.html>; "Philippines Responds to Chinese Fleet Drills in South China Sea: No Infringement of Philippine Sovereignty," *Sina News Center*, February 4, 2013, <http://news.sina.com.cn/w/2013-02-04/060926196403.shtml>.

¹⁹ "Liaoning Returns from Scientific Trial Mission in South China Sea," *Central Government of the PRC*, January 1, 2014, http://www.gov.cn/jrzq/2014-01/01/content_2558512.htm.

In early January 2017, the Liaoning aircraft carrier unit took up a cross-sea area training and trial mission by organizing night landings and take-offs of J-15 fighters, carrier-based aircraft training trials and multiple training programs in the South China Sea, while pushing ahead with tactical drills such as anti-submarine and missile submarine support in the vast expanse of the waters.²⁰

In early February 2017, the “Zhanlan-2017” expeditionary training unit, comprising the North Sea Fleet vessels Qingdao, Yantai and Yancheng, travelled to the South China Sea, where it first conducted longitudinal replenishment in the Paracel islands before cruising to the Spratly waters to carry out armed patrol duties. At the same time, the fleet unit also carried out operational exercises such as maritime law enforcement, counter-terrorism and anti-piracy, and anti-submarine activities.²¹

In early 2018, the Liaoning sailed again to the South China Sea on a cross-region long-distance voyage, but the nature of her mission has shifted from the scientific trials of 2013 to the operational level. In the meantime, the Liaoning carrier group launched a live-fire exercise in the distant sea by sailing, training and confronting all the way. The unit underwent several training sessions in the South China Sea in the areas of reconnaissance and early warning systems building, electronic countermeasures, air operations, sea operations, land strikes and anti-submarine operations, centering on the construction and use of combat systems, breaking through submarine ambush zones, sea-to-sea and air-to-air operations, and command post training to enhance the unit’s operational capability. On March 25, 2018, the Liaoning carrier group departed from the port of Sanya, Hainan, and joined the Type 052D destroyer, Type 054A frigate, Type 056 corvette, Type 071 amphibious transport dock, Type 093 nuclear-powered attack submarine, and the Type 901 ocean-going replenishment tanker Hulun Lake designed for navigational service, among 40 warships, for military drills at the training ground south of

²⁰ “Expert: J-15 Conducts Night Takeoffs and Landings in South China Sea to Boost Combat Capability,” *People’s Daily Online*, January 10, 2017, <http://military.people.com.cn/n1/2017/0110/c1011-29010137.html>.

²¹ “Navy Fleet Force on Armed Patrol in Spratly,” *China Youth Online*, April 21, 2017, http://m.cyol.com/content/2017-04/21/content_15974512.htm.

Hainan Island.

On April 3, 2021, the Liaoning fleet sailed south from the Miyako Strait to the Western Pacific Ocean and then entered the South China Sea from the Bashi Channel for drills. The convoy first stayed from April 11 to 14 in waters east of Hainan Island, then from 16 to 17 moved around the Paracel Islands, and from 21 to 22 arrived in Spratly waters before transiting the Spratly islands and reefs and the South China Sea west of the Philippines. On the 25, the ships left the Bashi Channel and returned to the East China Sea via the Miyako Strait the next day. The Liaoning's cross-regional drills this time were the most extensive of its kind in the South China Sea. In addition, the Liaoning joined forces with the North Sea Fleet's Type 052D destroyer Chengdu and Type 055 destroyer Nanchang for exercises in the South China Sea. The Liaoning was mostly active around Hainan Island until mid-April, then sailed northwest of the Subi Reef on the 22, even running into a U.S. fleet 193km northwest of the Subi Reef.²² According to the satellite photos, the U.S. missile destroyer followed the fleet of the Liaoning around in the South China Sea and even cut into the left side of its formation. The U.S. Navy also released a photo of a U.S. captain looking at the Liaoning with his legs crossed,²³ with the intention of containing the domineering presence of the Liaoning's fleet.

3. Raising the Awareness of the South China Sea Battlefield

This involves the mastery of geographical and hydrological information on the battlefield in the South China Sea and the monitoring of potential enemies in the waters and surrounding areas. Through various drills and exercises as described in the preceding sections, the PLA would be able to heighten its perception of the battlefield in the South China Sea. In addition to naval vessels, marine police vessels and the militia under the jurisdiction of the Central Military Commission can also provide real-time information on the waters. Moreover, the PLA often

²² 9:05 AM · April 22, 2021, GEOINT@lobsterlarryliu, <https://twitter.com/lobsterlarryliu/status/1385037025095471105>.

²³ "Headline: Liaoning's South China Sea Drill Revealed, U.S. Ship Cutting into Formation Sparks Netizens' Anger," *Chinatimes.com*, April 28, 2021, <https://www.chinatimes.com/realtimenews/20210428000680-260407?chdtv>.

accesses sensitive waters or tests the performance limits of its vessels on the pretext of emergency relief operations. Equipment installed by China on the occupied islands and reefs, including radar arrays and satellite communication base stations, all contribute to the PLA's ability to enhance its situational awareness in the South China Sea.²⁴

III. Military Preparedness for Approaches of Offense and Defense to Islands and Reefs

Since China's militarization of the occupied islands and reefs in the South China Sea in 2012, the offense and defense capabilities associated with these islands and reefs had quickly risen above the simple notion of "naval mines for offense and defense against the coral reef islands."²⁵ On top of deploying the YJ-12 anti-ship missile and the HQ-9B mid-to-long-range surface-to-air missile system on the relevant islands and reefs, the PLA Navy was also involved in offense and defense missions on the islands and reefs in the South China Sea.

In January 2013, the South Sea Fleet organized a task force of 560 ships to go on a training patrol in the sea area west of Scarborough Shoal. The training content highlighted duty officer training, offense and defense operations at sea, data link communication, and training to support and cover local law enforcement forces. During the training, back-to-back group training was emphasized and 36 hours of successive search and dive training was organized in accordance with the training and security conditions at sea. In mid-March 2013, Jingpo Lake, a combat support ship detachment of the South Sea Fleet, dispatched a new type of replenishment vessel to supply oil and water to the Subi Reef in the Spratly Islands. The vessel featured easy navigation in narrow waterways, high loading speed and the ability

²⁴ "Viewpoint: China's Submarines and Struggles under South China Sea," *BBC Chinese*, July 11, 2016, https://www.bbc.com/zhongwen/trad/china/2016/07/160711_viewpoint_south_china_sea_submarines.

²⁵ "Chinese Naval Mines as the 'Lethal Weapon' of Chinese Navy," *U.S. Naval War College - Chinese Mine Warfare*, No. 3, June 2009, p. 40, http://www.andrewerickson.com/wp-content/uploads/2013/07/Chinese-Mine-Warfare_China-Maritime-Study-3_2009-August_CHINESE_Traditional.pdf.

to cope with Class 4 sea conditions. On the 21 of March, the South Sea Fleet's expeditionary group launched a beach landing exercise targeting D Island in the South China Sea, which involved more than 100 officers and men from the Marine Corps and Air Force of the Jinggang Mountains warfare ship, using an assault boat, an domestically-built amphibious air-cushioned landing craft (the first of its kind) and helicopters to stage a vertical assault to the islands and reefs, thus speeding up the formation of a four-in-one landing force comprising landing dock, hovercraft, main battle vehicle and Marine Corps to meet the need to operate on islands and reefs in unfamiliar waters and complex sea conditions.²⁶

From the 21 to the 22 of January 2014, the South Sea Fleet's unit for armed patrols and far sea training embarked on a cruise in the Paracel waters covering the islands and reefs of Yongxing Island, Lincoln Island, Duncan Island, Triton Island and Money Island. During the cruise, the far sea training team also led the Paracel garrison to conduct offense and defense drills on the islands and reefs. During the exercise carried out "back to back," the fleet employed rubber boats, assault boats, carrier-based aircraft and new hovercraft to carry the landing force and implement multi-modal and multi-method landing, thus accumulating experience for the shift in the new combat force generation mode in the distant sea. From the 23 to the 25, a South Sea Fleet far sea training unit was on an armed cruise to the reefs of the Spratly Islands and the surrounding waters. During the reef patrol by the Changbai Mountain fleet, the Haikou fleet conducted a planned submarine countermeasures exercise under air threat conditions and led offense and defense drills on the Spratly islands and reefs.²⁷

According to radio calls from Chinese naval aircraft received by a U.S. Boeing

²⁶ "South Sea Fleet's Mobile Task Force and Submarines Against Hovercraft Racing at 45 Knots (photo)," *Sina Military*, March 21, 2013, <http://mil.news.sina.com.cn/2013-03-21/0750719217.html>; "South Sea Fleet's New Replenishment Vessel for Islands and Reefs Unveiled at Subi Reef in Spratly Islands (Photo)," *Sina Military*, March 13, 2013, <http://mil.news.sina.com.cn/2013-03-13/1150718369.html>; "Marines in Assault Boat Raid the Beach and Push Their Way to the Island's Stronghold," *Sina Pictures*, March 22, 2013, http://slide.news.sina.com.cn/c/slide_1_2841_31135.html#p=1.

²⁷ "PLA Landing Dock Drills to Capture Islands in Paracel with Female Soldiers in Action," *NetEase Military Affairs*, January 23, 2014, https://war.163.com/photoview/4T8E0001/42283.html?from=tj_xgtj#p=9J8SBH7T4T8E0001; "South Sea Fleet Far Sea Training Unit Ends Cruise Around Spratly Islands," *Central Government of the PRC*, January 23, 2014, http://www.gov.cn/jrzq/2014-01/26/content_2575596.htm.

P-8 Poseidon maritime patrol aircraft in the South China Sea in 2015, China had set up air defense boundaries such as “Chinese turf sky” and “military security area” in the airspace near the occupied islands and reefs, indicating that the islands and reefs were being militarized.²⁸

From the 12 to the 13 of February 2017, the South Sea Fleet (SSF) far sea training team, together with aviation and shore-based air defense forces, launched a joint air defense combat-oriented exercise, which included shore-based air defense on islands and reefs. According to the rehearsal, the PLA has built a three-layer air defense network for the defense of islands and reefs: on the outer perimeter are two fighter planes of a division of the naval aviation force on patrol and prepared for battle; in the middle layer are the Type 052C/D destroyers with long-range air defense capability – the “Changsha” and “Haikou” ships; and at close range are ground-based air defense fires. The shore-based air defense forces involved in the drill might include the HQ-9 air defense battalion on Yongxing Island in Paracel, as well as the 76mm rapid fire artillery and 30mm close-in artillery defensive fire on the newly constructed islands and reefs in Spratly, indicating that the Spratly defense system had acquired its initial operational capability. The airfields on Yongxing Island in Paracel and the newly built islands on reefs in Spratly might also serve this purpose. The air force for the exercise was probably the land-based aviation unit of the South Sea Fleet based on Hainan Island, the J-11BSH.²⁹

According to a video posted on China Central Television’s (CCTV) Defense and Military Affairs Channel on Weibo on June 19, 2021, pilots from a brigade of the PLA Southern Theater Command air force issued a two-stage warning when intercepting a foreign military aircraft. The first accusation was that the foreign aircraft had “entered the airspace where Chinese military aircraft are operating, endangering flight safety” and the second that the aircraft “kept approaching our internal control line despite the first warning.” According to the terminology used

²⁸ “Chinese Navy Issues Angry Warning to U.S. Plane in South China Sea-Audio Recording,” YouTube, May 22, 2015, <https://www.youtube.com/watch?v=OaKbZW0pqrM>.

²⁹ “South Sea Fleet Organizes Joint Air Defense Drill in Response to U.S. Aircraft Carrier Fleet Cruise,” *Tencent News*, February 15, 2017, <https://news.qq.com/a/20170215/036005.htm>.

by the Chinese air force for air interception, the phrase “airspace where Chinese military aircraft are operating” should refer to its “Air Defense Identification Zone” (ADIZ), while the term “internal control line” should represent the tentative 12-mile limit of China’s occupied Spratly islands and reefs before Beijing announced the baseline of the territorial waters of the Spratly Islands and the scope of the territorial waters and airspace. Once a foreign military aircraft enters the “internal control line,” it can be considered as an infringement of the Chinese airspace.³⁰ Coincidentally, PLA Southern Theater Command (STC) press spokesman Comodoro Mayo on September 8, 2021 responded to a 12-nautical mile entry by the U.S. destroyer into Mischief Reef by saying that “it illegally trespassed into the waters adjacent to Mischief Reef in China’s Spratly Islands without the approval of the Chinese government.” In the anterior part of the sentence, the word “approval” is clearly a reference to China’s discretionary power of “non-innocent passage” in its territorial waters, but in the posterior part, the PLA did not describe the waters accessed by the U.S. ship as territorial waters, but as “adjacent ones.” These examples illustrate that China still sought to deny freedom of navigation to foreign forces with self-declared airspace or territorial waters boundaries, using a vocabulary of sovereignty claims that had no basis in international law, before it had declared the baseline of the Spratly territorial waters.³¹

In addition, the PLA’s operation and management of Mischief Reef or its activities in the waters of Union Banks are of continuing concern. Mischief Reef has a two-armed embrace of the bay, and after the completion of land reclamation on the reef, it can allow the PLA ships to berth there on a long-term basis. In January 2016, The Philippine Star reported that China had built a port of call for submarines at Mischief Reef, which was frequented by PLA ships in late 2020. According to a Planet Labs satellite photo dated December 12, 2020, several Chinese naval vessels were spotted sailing into Mischief Reef and on the 24, a

³⁰ Chung-Ting Huang, “All Criteria Null and Void: The PLA’s Battlefield Operations in the Airspace of the South China Sea,” *National Defense Security Commentary*, July 1, 2021, <https://www.shorturl.at/dmyD3>.

³¹ Chung-Ting Huang, “Area Denial vs. Freedom and Openness: A Look at the China-US Indo-Pacific Debate,” *National Defense Security Commentary*, September 29, 2021, <https://www.shorturl.at/dyzDY>.

suspected PLA fleet was photographed near Mischief Reef. On the 26, a vessel suspected to be heading from the vicinity of Mischief Reef to Union Banks was captured on camera. On the 29, there was again a gathering of warships near Mischief Reef. On January 8, 2021, an assembly of ships was seen around Subi Reef. Meanwhile, satellite photos showed Chinese maritime militia, marine police and engineering vessels stationed near Whitsun Reef, Grierson Reef and Hughes Reef, which are part of Union Banks. On April 8, 2021, while on board a civilian vessel heading to Second Thomas Shoal in Philippine exclusive economic zone, where the Philippine Marine Corps was posted, the Philippine ABS-CBN news team was chased by the vessels of the China Coast Guard and two PLA Type 022 missile boats. The vessel in question was only 90 nautical miles from Palawan. It was alleged that after a chase of more than 20 minutes, the Type 022 missile boat diverted toward Mischief Reef. The Philippine military said it had photographed the missile boat spotted near Mischief Reef on April 3, carrying two short-range missiles with guns on board.

As regards Fiery Cross Reef, it should be a stronghold of the PLA's naval air force in the Spratly Islands. On January 5, 2021, a satellite photo showed a large military aircraft landing on Fiery Cross Reef. Satellite photos of Fiery Cross Reef dated June 5th and 9th both showed the Y-8 Maritime Patrol Aircraft.³² MAXAR satellite photos revealed that the Type 815 spy ship, probably belonging to the South Sea Fleet, appeared on June 9 in the waters northeast of Fiery Cross Reef and southwest of Union Banks, with a large number of Chinese militia fishing boats in the distance to the left of the ship.³³ On March 4, 2021, the PLA was suspected to have conducted joint air and sea training exercises near Mischief Reef.

The waters surrounding Scarborough Shoal in the Macclesfield Bank are currently the focus of a naval tussle between China, the U.S. and the Philippines. On December 21, 2020, for example, the Type 054A frigate was suspected to

³² 4:47 PM · Jun 5, 2021, Duan Dang@duandang, <https://mobile.twitter.com/duandang/status/1401098427920904195?lang=ar>.

³³ "Chinese Military Surveillance Ship, Aircraft Spotted at Contested South China Sea Reef," *USNI News*, June 9, 2021, <https://news.usni.org/2021/06/10/chinese-military-surveillance-ship-aircraft-spotted-at-contested-south-china-sea-reef>.

have appeared in the Mindoro Strait at the exit of the Verde Island Passage, about 240 km southeast of Scarborough Shoal. The ship was also photographed trailing behind the USS John S. McCain (DDG-56), about 270 km southeast of Scarborough Shoal. According to a report by the Asia Maritime Transparency Initiative (AMTI), a combined total of 13 Philippine law enforcement vessels and warships between March 1 and May 25, 2021 carried out at least 57 patrols in the waters of Scarborough Shoal and the Spratly Islands.

Moreover, the AG600, the world's largest amphibious aircraft developed by China, has completed several flight tests. In the future, it may support the PLA's South China Sea garrison in replenishment and enhance the force of guarding the islands and reefs in the South China Sea.

IV. Containment of Foreign Forces: Interdiction, Cruising and Display of Military Power

To assert China's claims in the South China Sea and to deny or deter others from exercising freedom of navigation or related sovereign rights in the region, the PLA may take specific actions such as interdiction, cruises and displays of military strength.

1. Interdiction

The PLA's primary means of containing foreign forces in the South China Sea is through interdiction, such as interfering with surveillance, tailing, and declaring prohibition of navigation.

In terms of interfering with monitoring, for instance, the PLA in 2009 attempted to cut the towed sonar exploration cable of the USNS Impeccable ship near Hainan Island with the aid of maritime militia; in the same year, it rammed the towed sonar detector of a U.S. vessel through a submarine, targeting the USS John S. McCain destroyer operating off Subic Bay. Also, the USS Curtis Wilbur (DDG-54) on May 22, 2021 cut in from the eastern side of North Reef, the northeastern base of Parcel, and then circled out from the northwest of the Crescent Group.

Meanwhile, the PLA dispatched a Type 054 frigate to interfere with the activities of the U.S. ship, which was only 0.9 nm away from the Type 054A frigate at 14.7 nm off the western baseline of Paracel.

Regarding tailing and surveillance, in February 2018, the SSF's far sea training unit conducted a visit and search and arrest exercise in which the ship Hengyang was tasked to board and inspect a merchant vessel of an unknown registry carrying prohibited cargo. Also, in June 2018, HMS Sutherland, a British Royal Navy frigate, was followed and monitored by 16 Chinese warships while on a cruise in the South China Sea.³⁴ In July 2018, Chinese state media reported that the South Sea Fleet's Type 052C destroyer Haikou had been ordered to tail a large fleet of ships of a certain country and carry out identification and warning of evictions in accordance with the law. On July 1, 2020, the USS Gabrielle Giffords (LCS-10), a U.S. ship sailing in the South China Sea, was suspected to have been followed by a Type 054A frigate. On July 4, the USS Nimitz and USS Ronald Reagan fleets launched a drill in the South China Sea. Besides sending warships for close surveillance, China also dispatched "fishing boats" to operate in the vicinity of the U.S. fleets.³⁵ For example, on October 9, 2020, the destroyer USS John S. McCain (DDG-56) was shadowed by the Type 054A frigate 59 nm southeast of Yongxing Island.³⁶ Another example was the entry of the USS John S. McCain (DDG-56), a destroyer, into the waters of the Paracel Islands in the South China Sea on February 5, 2021, which was tailed by a PLA warship. On June 15, 2021, the Type 054A frigate was north of the North Danger Reefs watching the USS Theodore Roosevelt CVN-71 exiting the Verde Island Passage at a distance of about 320 nm, but the Shandong was returning to Sanya.³⁷ On July 12, 2021, the USS Kidd DDG-100 destroyer appeared to be under surveillance by a Type 052D destroyer. Also, the

³⁴ "British Warships Followed by Our 16-ship Fleet in South China Sea, Performance Lags Behind 054A," *Sina Military*, July 3, 2018, <http://mil.news.sina.com.cn/jssd/2018-07-03/doc-ihvevauxi8041233.shtml>.

³⁵ "U.S. and Japanese Warships Rehearse Together in South China Sea Amid PLA's Paracel Exercises," *HK01*, July 9, 2020, <https://www.shorturl.at/fALR7>.

³⁶ 11:14 AM · October 10, 2020, GEOINT@lobsterlarryliu, <https://twitter.com/lobsterlarryliu/status/1314766159435100161>.

³⁷ 4:56 PM · June 15, 2021, GEOINT@lobsterlarryliu, <https://twitter.com/lobsterlarryliu/status/1404724379842355201>.

sister ship USS Benfold (DDG-65) was accused of trespassing in the territorial waters of the Paracel Islands on the day of the rendezvous with the USS Kidd. On July 13, 2021, the USS Benfold (DDG-65) was followed by the PLA frigates with only 7.8 nm between them.³⁸

In terms of declaring a ban on navigation, for example, against the backdrop of U.S. vessels active in the South China Sea last summer and military aircraft repeatedly approaching the mainland's coast for reconnaissance, the PLA Unit 95180 on July 23, 2020 issued a sea closure notice, stating that the unit would stage live-fire target shooting in the waters west of the Leizhou Peninsula from July 25 to August 2, when all marine navigation and fishing operations in the relevant waters would be prohibited and vessels should be berthed in port and forbidden to set sail. The PLA's declaration of a ban on navigation under the pretext of military drills may appear to be provocative, but its original intention in announcing the prohibition was to discourage the U.S. military from taking a step further into the "minefield." Specific cases in point are the three military drills organized by the PLA Southern Theater Command in July 2020, including one in the Paracel waters between July 1 and 5, one in Hainan between July 15 and 16, and one in the Gulf of Tonkin between July 25 and August 2. The gradual retreat of these military exercises towards the mainland has sent a message to the U.S. that it is unwilling to confront the U.S. military. Additionally, for three months in March, April and May 2021, the Chinese authorities issued successive prohibition notices against sailing through the western entrance to the Qiongzhou Strait, in an attempt to deny access to the Strait by the French naval vessels carrying out the "Mission Jeanne d'Arc 2021." In late April of the same year, China promulgated a draft amendment to the Maritime Traffic Safety Law of the PRC, asserting its discretionary right of "non-innocent passage." This paper suggests that China's proclamation of a ban on navigation has the same purpose as declaring the right of non-innocent passage, which aims to preclude foreign warships from routinely encircling China's coastal waters, islands and reefs, and then using the right of transit passage or freedom of

³⁸ 9:16 PM · July 13, 2021, GEOINT@lobsterlarryliu, <https://twitter.com/lobsterlarryliu/status/1414936764943273989/photo/3>.

navigation to cross the straits of any of China's claimed territorial waters.³⁹ Another example was the PLA's large-scale military training in the South China Sea from August 6 to 10, 2021, after announcing a military drills area of up to 100,000 square kilometers linked by eight coordinates. This was partly in response to the Large-Scale Global Exercise 21 (LSGE21) that the U.S. and its allies launched between the 3rd and 16th of the same month.⁴⁰

2. Underwater Cruise

The PLA is able to carry out combat readiness patrols in the South China Sea not only by means of distant sea training, but also with individual submarine cruises. Underwater cruises by submarines may not reveal their exact location, but their concealment carries an intimidating effect that is beyond the reach of surface fleets. The PLA submarines patrolling the South China Sea, even at depths of 200 meters, are sufficient to eliminate the threat of satellite detection, and the natural noise in some waters can mask the noise of the submarines. In addition, since there are many obstacles such as sunken ships and abandoned derricks in the South China Sea, it seems that the PLA's submarines should have established cruising routes, and these routes will not only allow the PLA to cross the first island chain from the perimeter of the South China Sea, but also facilitate the PLA's deployment of naval mines at the channels to block the shipping lanes,⁴¹ as well as cruising to the deep waters above 4,000 meters at the edge of the waters, so as to spy on the activities of foreign vessels and prepare for tactical ambushes in times of war.

The PLA is also preparing for the military struggle in the South China Sea by going on cruises in the extended waters and expanding the depth of defense. For example, the Indian Navy has accused the PLA's missile submarine of carrying out

³⁹ Chung-Ting Huang, "China's Newly Amended 'Maritime Traffic Safety Law' Implies Message of Maritime Rights Maintenance and Great Power Play," *Up Media*, May 25, 2021, <https://reurl.cc/j8x7vD>; Chung-Ting Huang, "South China Sea 'Navigation Ban' not just Provocation," *Up Media*, September 4, 2021, https://www.upmedia.mg/news_info.php?SerialNo=123372.

⁴⁰ "China Announces '100,000 sq km' of Military Drills in South China Sea," *Radio Free Asia*, August 5, 2021, <https://www.rfa.org/cantonese/news/drill-08052021065432.html>.

⁴¹ "South Sea Fleet Submarine Detachment Practices Blocking Shipping Lanes with Distant Sea Mines," *Sina Military*, January 21, 2013, <http://mil.news.sina.com.cn/2013-01-21/1718713361.html>.

secret cruises in the Indian Ocean for years. In 2013, the South Sea Fleet's Type 093 missile submarine headed into the Indian Ocean via the Ombai Strait on the eastern flank of the Lesser Sunda Islands in Indonesia, followed by several months of underwater navigation near Pakistan, the Gulf of Aden and the Indian Ocean.⁴² Another example is that in January 2017, the North Sea Fleet's Type 039 Regular Power Submarine and the ocean-going salvage lifeboat "Changxing Island" called at the port of Kota Kinabalu, the capital of Sabah in Malaysia. The submarine was on its way back from the Gulf of Aden and Somali Sea, when it docked at Kota Kinabalu for rest and replenishment. The call was the first time a PLA submarine had visited Malaysia. The port of Kota Kinabalu, facing the South China Sea, is an important military port for Malaysia and is another submarine replenishment port confirmed by the PLA after Sri Lanka in 2014.⁴³

3. Display of Military Power

The PLA is also building up its deterrent power in the South China Sea by relying on relevant sea-based, shore-based or submarine-launched missiles. In July 2016, Chinese state media deliberately hyped the presence of Type 093B nuclear-powered attack submarines at Yulin Harbor, stressing that the submarine constituted one of the cornerstones of China's resistance to U.S. hegemony, and suggesting that it carried an improved version of the JL-2A intercontinental ballistic missile or the JL-3 submarine-launched ballistic missile, which could both threaten U.S. military strongholds west of the east coast of the Pacific Ocean. Also, in March 2020, it was noted that the PLA had set up a HQ-9 surface-to-air missile base in Ningming County, Guangxi, on the China-Vietnam border,⁴⁴ to deter U.S. military aircraft attempting to gain access to the mouth of the Northern Gulf to spy on the military. Another case in point is the high-profile entry and exit of a

⁴² "In-depth: India Concerned about China's Nuclear Submarines Entering Indian Ocean, Leasing Russian Nuclear Submarines," *Sina Military*, November 3, 2015, <http://mil.news.sina.com.cn/2015-11-03/1656842957.html>.

⁴³ "Defense Ministry Confirms First Submarine Visit to Malaysia as South China Sea Situation Eases," *Sohu News*, January 8, 2017, <http://news.sohu.com/20170108/n478090863.shtml>.

⁴⁴ "Vietnam Holds off for Opportunity as PLA Deploys Missiles along Border," *HK01*, March 10, 2021, <https://www.shorturl.at/wDMS5>.

PLA Type 093 attack submarine into and from the underground base of the Yulin Naval Base in Hainan in mid-August 2020, amidst successive military drills by the U.S., Japan, Australia, India and Southeast Asian countries. On the 26 of the same month, the PLA executed a ballistic missile test launch in the waters between Hainan Province and the Paracel Islands. It is alleged that China launched a DF-26B missile with a range of about 4,000 kilometers from the inland province of Qinghai, targeting an old merchant ship sailing unmanned, and a few minutes later launched a DF-21D missile with a range of over 1,500 kilometers from Zhejiang province in eastern China. It was reported that the two missiles almost simultaneously sank the target ship, which was adequate to threaten the U.S. ships operating in the South China Sea.

Three test firings around the Qiongzhou Strait between the 26 and 31 of July 2021 preceded a military drill off the Pearl River Estuary from the 27 to the 29. Chinese state media reported that a satellite image of the South China Sea taken on July 28 revealed that the British Queen Elizabeth-class aircraft carrier had made its way into the waters and was within striking range of the J-15 (with a combat radius of about 1,500 km) when it was just 580 nm (1,000 km) from the Shandong. Given that China was very concerned about British ships traveling within 12 nm of the islands and reefs in the South China Sea,⁴⁵ especially in the territorial waters of the Paracel Islands, the firepower display since the end of July should also have implied a high degree of area denial.

On August 6, the PLA embarked on a five-day military drill in the South China Sea, covering an area of 100,000 square kilometers southeast of Hainan Island, including the Paracel Islands. In addition to the Shandong, the participating ships included a Type 075 landing helicopter dock, three Type 055 destroyers and nearly 30 ships of various types, a scale and firepower rarely seen before. Analysts

⁴⁵ “British Navy’s ‘Queen Elizabeth’ Enters South China Sea waters, U.S. Media Urges Her to Enter 12 Nautical Miles of Chinese Islands and Reefs as Provocation,” *huanqiu.com*, July 27, 2021, <https://news.sina.com.cn/c/2021-07-27/doc-ikqciyzk7815840.shtml>; “Military Buzz: British Carrier Fleet Enters South China Sea, J-15 Wants to Contribute,” *The Epoch Times*, August 5, 2021, <https://www.epochtimes.com/b5/21/8/3/n13136607.htm>.

noted that of the three Type 055 destroyers deployed in the exercise, apart from the Dalian, which was already part of the South Sea Fleet, the other two were the Anshan and Yenan, which had not yet been publicly revealed and were likely to be assigned to the South Sea Fleet.⁴⁶

V. Conclusion

The South China Sea lies in a vast area, far from the mainland of China, and is therefore difficult for the PLA to conduct offensive and defensive operations as well as maintenance tasks. This has led the PLA to give priority to the development of an “ocean-going integrated security system” at the beginning of its preparations for military struggle in the waters. Under Xi Jinping’s rule, reinforcement of operational infrastructure has taken center stage in the military preparedness in the South China Sea. Against this backdrop, the PLA has been setting up a base by reclaiming land on reefs, while at the same time making “connections” through operational patrols, thereby building up its military presence in the region.

Looking at the PLA’s combat-oriented programs of near-shore exercises and distant sea training sessions, both in terms of its armament (e.g. with the hovercraft, the Type 075 landing helicopter dock, and the Z-20) and its collaborative training units (e.g. the joint drills by underwater and overwater vessels and other naval and air forces), or its familiarity with the waters of distant islands and reefs and mastery of complex sea conditions for military preparedness, it is clear that China is placing greater emphasis on strengthening the two major operational systems of landing on islands and reefs and joint multi-services operations. Moreover, the PLA’s recent efforts to bolster the synergy between its new warships, such as the Shandong, Dalian and Hainan, and its existing forces have revealed China’s subjective need to step up its deterrence and intimidation of foreign forces, while exposing the objective predicament of the South Sea

⁴⁶ “Military Drills in South China Sea by Shandong Carrier Pose Challenge to Resistance to U.S. and Allies,” *Radio France Internationale*, August 10, 2021, <https://www.shorturl.at/yQRUX>.

Fleet's insufficient capacity to back up the region's battlefield on its own and the requirement for the Liaoning fleet to travel across for assistance, given the huge threat posed by the U.S. twin ships.⁴⁷

Examining the relevant satellite photos, it can be assumed that the PLA has not only upgraded the military facilities of the occupied islands and reefs in the Spratly Islands, but also pushed the islands and reefs to further function as a regional military stronghold. Since the end of 2020, Mischief Reef has been frequented by ships that seem to be operating in the waters of Whitsun Reef in the Union Banks to the west, at the exit of the Verde Island Passage on Luzon Island, and in the Balabac Strait channel at the southern tip of Palawan Island. In other words, the Mischief Reef garrison should have the West Philippine Sea as its defense area of responsibility when Fiery Cross Reef is suspected of presiding over the southwest corner of the Spratly Islands. As the PLA's surveillance cruises in the Spratlys are on the rise, it is possible that China will further announce the base points and baselines of the territorial waters in the Spratly Islands and even declare the designation of the ADIZ in the region.

The confrontation between the U.S. and Chinese naval forces in the South China Sea has escalated over the past two years, but it is sufficient to notice the PLA's tendency to avoid aggravating the standoff with the U.S. military or even clashing with it. The PLA often sends ships or maritime militia to tail and monitor individual foreign vessels or units operating in the South China Sea, occasionally approaching to issue a warning or obstruct foreign military activities. The PLA's declaration of a ban on sailing in the name of military drills is not sufficiently effective in preventing the U.S. military from remaining active in the South China Sea, while underwater cruises and demonstrations of military strength have limited effect in curbing foreign military activities in the region. However, the PLA's greater mastery of the limited underwater waterways in the South China Sea gives it a degree of "home turf advantage." In addition, "telling the story of the PLA's

⁴⁷ Chung-Ting Huang, "South China Sea 'Navigation Ban' not just Provocation," *UP Media*, September 4, 2021, https://www.upmedia.mg/news_info.php?SerialNo=123372.

deterrence in the South China Sea” has apparently served to be a primary avenue for the PLA to demonstrate its military strength in the area.