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ANALYSIS

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The People's Liberation Army in the South China Sea: An Organizational Guide

This report profiles the organizational structure of the People's Liberation Army (PLA) on China's outposts in the South China Sea. The analysis draws heavily from Chinese-language open source materials, including state media reports, government websites, resumes, procurement records, academic writings, and patents, as well as visual materials, such as photographs, videos, and satellite imagery. The report will be of most interest to governments and militaries with an interest in Southeast Asia and the broader Indo-Pacific region, companies seeking to comply with PLA-oriented export controls, and defense analysts focused on the PLA. The author, Zoe Haver, thanks Roderick Lee, Morgan Clemens, and Kenneth Allen for their generous support.

Executive Summary

People's Liberation Army (PLA) units operating from militarized outposts in the South China Sea defend China's expansive maritime and territorial claims while also projecting power into maritime Southeast Asia. To better understand the organization of the PLA in the South China Sea, Recorded Future identified and analyzed 9 specific PLA units that are deployed to Chinese outposts. These units are Unit 91431 (the "Nansha Garrison"), the Xisha Maritime Garrison Command, the 3rd Radar Brigade, the Yongxing Airfield Station, the Sansha Garrison Command, Unit 91531 ("a Navy engineering unit"), the Xisha Satellite Observation Station, Unit 92155 ("a naval aviation air defense brigade"), and Unit 92508. We also examined several other units that have maintained at least a marginal presence on China's outposts at various points, including the PLA Navy Marine Corps 1st Brigade, Unit 92690, Unit 92053, and Unit 91522.

Our report assesses the organizational structures, duties, and facilities, and assets of each identified PLA unit. The majority of these units are regiment leader-, division deputy leader-, or division leader-grade organizations. They are responsible for defending China's outposts in the Spratly Islands and Paracel Islands, operating radar installations, ensuring airfield support for aviation forces, training and commanding maritime militia forces, implementing engineering projects, supporting the launch and orbital management of spacecraft, and providing air defense. All of these units maintain a physical presence in the Paracel or Spratly Islands, but many also have supporting facilities on Hainan or the Chinese mainland.

Key Judgments

- Though China's outposts in the South China Sea have hosted PLA forces for many years, these outposts went through a period of significant militarization over the past decade, with multiple new units being established and existing units undergoing organizational upgrades, building improved facilities, and receiving new assets.
- Several PLA units are present in the South China Sea, including units from the PLA Navy's shore command structure, the PLA Navy's naval aviation branch, China's national defense mobilization system, and the PLA Strategic Support Force.
- The PLA forces in the South China Sea include units that are primarily based in the Spratly Islands and Paracel Islands, such as location-specific garrisons, as well as detachments of units that are primarily based on Hainan, such as battalions under radar and air defense brigades.
- The PLA units present on China's outposts in the South China Sea actively participate in military-civil fusion programs, including engaging in joint operations and exercises with civilian forces, drafting regulations with civilian authorities, and coordinating the construction and use of physical infrastructure with civilian entities.
- PLA units in the South China Sea are positioned to contribute to broader strategic objectives, such as near-seas defense and space situational awareness, in addition to their primary focus on the protection of China's maritime and territorial claims.
- In addition to the PLA forces that have a standing presence in the South China Sea, some units likely maintain a more limited presence on China's outposts, potentially deploying personnel on an ad hoc basis.

Background

The South China Sea is home to a series of overlapping maritime and territorial disputes between China, Vietnam, the Philippines, Malaysia, Brunei, and Taiwan. China's territorial claims include the Paracel Islands, Spratly Islands, so-called Zhongsha Islands (Macclesfield Bank and Scarborough Shoal), and Pratas Islands.¹ Its expansive maritime claims, which cover several million square kilometers of sea area,² involve sovereign territorial seas and internal waters, exclusive economic zone (EEZ) and continental shelf rights, historic rights, and the regulation of military activities.³ China's maritime claims are typically referred to as "maritime rights and interests" (海洋权益), and the defense of these claims is generally called "rights defense" (维权).⁴

1 "Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone" [中华人民共和国领海及毗连区法], China National People's Congress Net [中国人大网], <https://perma.cc/6PS9-R72M>.

2 "Sansha Overview" [三沙概况], Sansha City People's Government Net [三沙市人民政府网], <https://perma.cc/Y229-DKBH>.

3 Andrew Chubb, Chinese Popular Nationalism and PRC Policy in the South China Sea (The University of Western Australia, 2016), p. 89, <https://research-repository.uwa.edu.au/en/publications/chinese-popular-nationalism-and-prc-policy-in-the-south-china-sea>.

4 Zoe Haver, China Maritime Report No. 12: Sansha City in China's South China Sea Strategy: Building a System of Administrative Control (China Maritime Studies Institute, 2021), p.3-4, 9-12, <https://digital-commons.usnwc.edu/cmsi-maritime-reports/12/>.

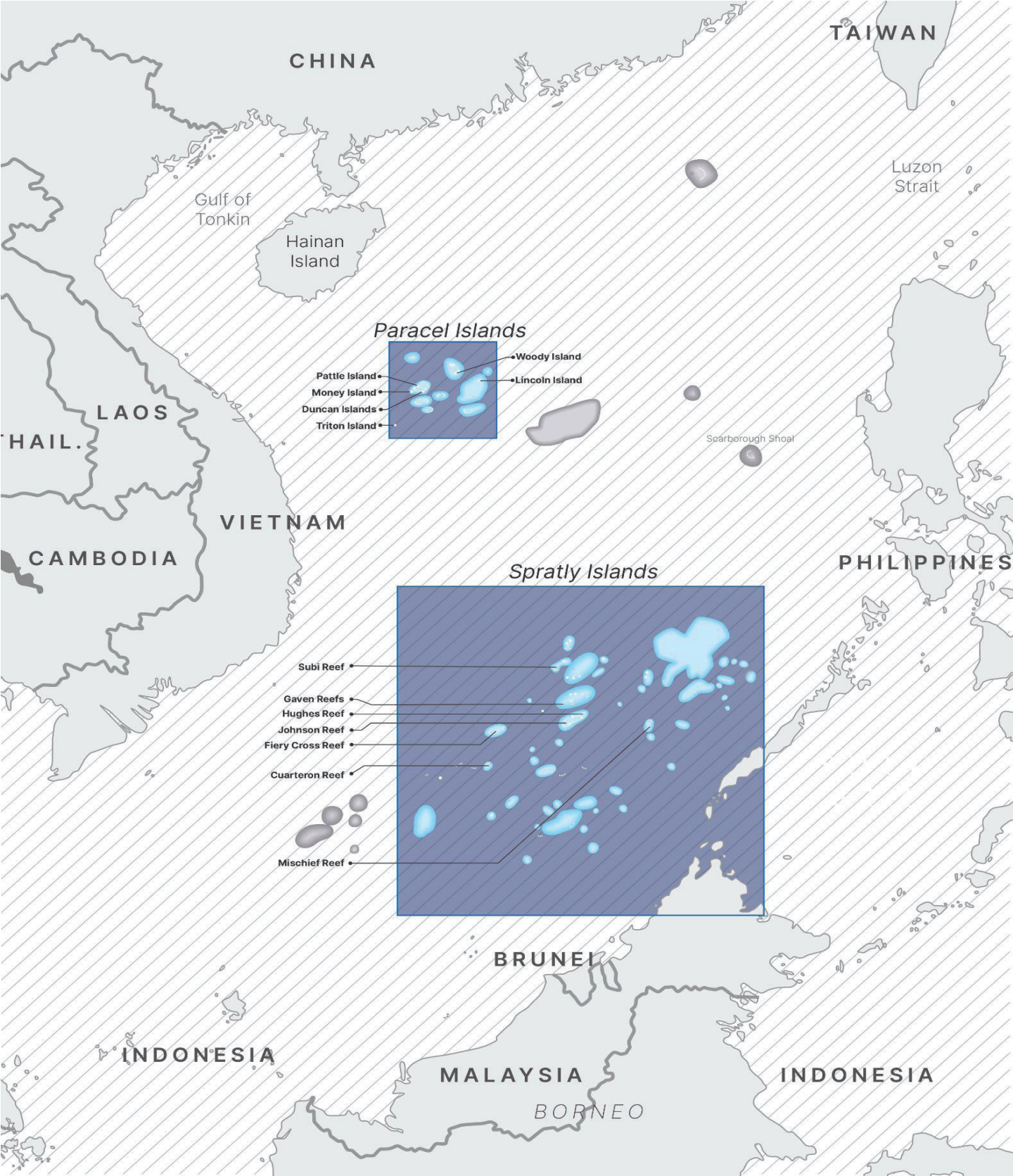


Figure 1: Map showing the South China Sea region and China's main outposts (Source: Recorded Future)

Chinese forces have occupied features in the Paracel and Spratly Islands for several decades.⁵ The civilian administration of the Paracel Islands, Spratly Islands, and Zhongsha Islands—as well as their surrounding waters—is the responsibility of Sansha City, which was established in July 2012 and is headquartered on Woody Island in the Paracel Islands.⁶ The PLA also maintains a sizable presence on these islands and reefs.⁷ Its footprint in the Spratly Islands expanded significantly after China's island-building campaign in the mid-2010s.⁸ Other forces have a presence on China's outposts as well, including Sansha City's maritime militia,⁹ the China Coast Guard (CCG),¹⁰ Sansha Comprehensive Law Enforcement (SCLE),¹¹ and a contingent of the Hainan Province Public Security Department's border defense force, which was recently reorganized into a new coastal police force.¹² Though the exact number of personnel stationed on China's outposts is unclear, a 2016 state media report claims that the forces stationed in Sansha City mobilized over 10,000 officers and soldiers to support a mass tree-planting effort across the Paracel Islands.¹³

The various civilian and military entities present on China's outposts cooperate through military-civil fusion (军民融合), a national strategy broadly aimed at synthesizing civilian and military resources to advance national security and economic development goals.¹⁴ The extent of military-civil fusion in the South China Sea increased significantly following the establishment of Sansha City in 2012.¹⁵ Notable aspects of this military-civil fusion collaboration include joint operations between military and civilian forces, the joint construction and common use of physical infrastructure by military and civilian entities, military and civilian entities supporting each other's personnel, and investments in technologies that serve both military and civilian users.¹⁶ According to a state media report, the troops stationed in Sansha City also “actively contributed to building political power in the Spratly Islands” during China's island-building campaign;¹⁷ in this context, “political power” (政权) refers to the capacity of Sansha City to govern the South China Sea as if it were Chinese territory.¹⁸

Organization of the PLA in the South China Sea

Recorded Future analyzed the organizational structure, duties, and facilities and assets of 9 specific PLA units that maintain a presence on China's outposts in the South China Sea using publicly available Chinese-language sources. We examined units belonging to the PLA Navy (PLAN), the naval aviation branch of the PLAN, the PLA Strategic Support Force (PLASSF), and China's national defense mobilization system. The responsibilities of these units include the physical defense of China's outposts, operating radars, airfield support, training and command of maritime militia forces, engineering support, space launch and orbital management missions, and air defense.

5 “China Island Tracker”, Asia Maritime Transparency Initiative, <https://amti.csis.org/island-tracker/china/>.

6 Haver, Sansha City in China's South China Sea Strategy, p.3.

7 “Chinese Power Projection Capabilities in the South China Sea”, Asia Maritime Transparency Initiative, <https://amti.csis.org/chinese-power-projection/>.

8 J. Michael Dahm, South China Sea Military Capabilities Series: A Survey of Technologies and Capabilities on China's Military Outposts in the South China Sea (Johns Hopkins Applied Physics Laboratory, 2020), <https://www.jhuapl.edu/NewsPublications/ResearchandAnalysis>.

9 Zoe Haver, “Unmasking China's Maritime Militia” Radio Free Asia, May 17, 2021, <https://www.rfa.org/english/news/special/maritime-militia/>.

10 Hong Yuanyuan [洪媛媛], “Woody Island 2 Units' Newly Built Living Quarters Enters Into Use” [永兴岛两部队新建营房投入使用], Sansha City People's Government Net [三沙市人民政府网], February 18, 2015, <http://www.sansha.gov.cn/sansha/zcqmfmccjdt/201502/f7242bef72c74ee9a55354e8897b85d9.shtml>.

11 Haver, Sansha City in China's South China Sea Strategy, p. 34-38.

12 Wang Huilang [王惠浪], “Hainan Province Public Security Department Zongdui 8th Zhidui Established on Woody Island” [海南省公安厅海岸警察总队第八支队在永兴岛成立], Sansha City People's Government Net [三沙市人民政府网], February 10, 2021, <http://www.sansha.gov.cn/sansha/sysdt/202102/8d94cfa1bddf43ea80cff536728d679c.shtml>; Zhai Xiaogong [翟小功], “Hainan Province Public Security Department Coastal Police Zongdui Each Zhidui Revealed and Established” [海南省公安厅海岸警察总队各支队揭牌成立], Legal Net [法制网], February 9, 2021, http://www.legaldaily.com.cn/index/content/2021-02/09/content_8432168.htm.

13 Gao Peng [高鹏], “Sansha City Implements ‘Double Support 10 Major Projects’, Multiple Acts Create Military-Civil Fusion Development Model” [三沙实施“双拥十大工程”多举措争创军民融合发展典范], Xinhua Net [新华网], February 23, 2016, http://www.xinhuanet.com/mil/2016-02/23/c_128744443.htm.

14 Alex Stone and Peter Wood, China's Military-Civil Fusion Strategy: A View From Chinese Strategists (China Aerospace Studies Institute, 2020), p. 6, <https://www.airuniversity.af.edu/CASI/Display/Article/2217101/chinas-military-civil-fusion-strategy/>.

15 Haver, Sansha City in China's South China Sea Strategy.

16 Zoe Haver, “How Sansha City Implements Military-Civil Fusion in the South China Sea”, Center for Advanced China Research, January 28, 2021, <https://www.ccpwatch.org/single-post/how-sansha-city-implements-military-civil-fusion-in-the-south-china-sea>.

17 Gao, “Sansha City Implements ‘Double Support 10 Major Projects’”.

18 Haver, Sansha City in China's South China Sea Strategy, p. 28.

| Unit | MUCD | Location | Grade | Service (Branch) |
|---|-------------------------|-----------------|---------------------------|--------------------------|
| Nansha Garrison (南沙守备部队) | Unit 91431 (91431部队) | Spratly Islands | Corps Deputy Leader | PLAN |
| Xisha Maritime Garrison Command (西沙水警区) | Unit 91892 (91892部队) | Paracel Islands | Division Leader | PLAN |
| 3rd Radar Brigade (雷达兵第三旅) | Unit 92261 (92261部队) | Woody Island | Division Deputy Leader | PLAN (Naval Aviation) |
| Yongxing Airfield Station (永兴场站) | Unit 91427 (91427部队) | Woody Island | Regiment Leader | PLAN (Naval Aviation) |
| Sansha Garrison Command (三沙警备区) | - | Woody Island | Division Leader | N/A |
| A Navy Engineering Unit (海军某工程部队) | Unit 91531 (91531部队) | Woody Island | Division Leader | PLAN |
| Xisha Satellite Observation Station (西沙卫星观测站) | Unit 63813 (63813部队) | Duncan Islands | Regiment Leader | PLASSF |
| A Naval Aviation Air Defense Brigade (海军航空兵某防空旅) | Unit 92155 (92155部队) | Woody Island | Division Deputy Leader | PLAN (Naval Aviation) |
| - | Unit 92508 (92508部队) | Woody Island | Regiment Leader or Higher | PLAN |

Table 1: PLA entities that maintain a presence on China's outposts in the South China Sea (Source: Recorded Future)

This analysis focuses on PLA units whose South China Sea presence has been explicitly referenced in Chinese-language sources. We do not assume the presence of units based on known PLA capabilities or standard PLA organizational structures. As such, this report does not cover every PLA entity present on China's outposts. For instance, the naval electronic countermeasures brigade under the Southern Theater Command plausibly has a footprint on Woody Island,¹⁹ but we did not encounter any specific references in authoritative Chinese sources to this unit having a presence in the South China Sea, and therefore do not discuss the unit.

When possible, Recorded Future leveraged multiple sources to link an entity's Military Unit Cover Designator (MUCD) to the unit's true identity, also known as its True Unit Designator (TUD). The PLA generally uses MUCDs to obscure the identities of units between the regiment and corps levels.²⁰ In our effort to produce a high-confidence judgment of each unit's MUCD, we searched for overlapping leadership and personnel; shared addresses, facilities, and locations; matching uniforms, grades, and ranks; similar duties, engagements, and research activity; and other such evidence.

19 Li Jinyun [李晋云] Wang Xin [王鑫] Li Junxiong [李俊雄], and Xu Yan [许焱], "Southern Theater Command Navy Electronic Countermeasures Brigade: Theme Education 'Main Position' From Classroom to Training Field" [南部战区海军某电子对抗旅：主题教育“主阵地”从室内搬到训练场], China Military TV Net [中国军视网], June 7, 2020, http://www.js7tv.cn/video/202006_219476.html.

20 Kenneth Allen, "Chapter One: Introduction to the PLA's Organizational Reforms: 2000-2012", in *The PLA as Organization v.2.0.*, eds. Kevin Pollpeter and Kenneth Allen (Defense Group Inc., 2015), p. 33, <https://www.airuniversity.af.edu/CASI/Display/Article/1586201/pla-as-organization-20/>; Xu Ping [徐平], "Bureau Interpretation | Ground Force Group Army New True Designator, Why Start From 71st" [解局 | 陆军集团军新番号，为什么从七十一开始], China Military Net [中国军网], May 18, 2017, http://www.81.cn/theory/2017-05/08/content_7591871_2.htm.

When assessing units' grades, we used the PLA's current grade and rank system, which was established with 15 grades and 11 ranks in 1988 and was later adjusted to 10 ranks in 1994.²¹ Under this system, grades determine vertical command and control relationships, as well as horizontal coordination relationships.²² The system currently appears to be going through major reforms, though specific details remain elusive.²³ Appendix A provides further details about the PLA's grade and rank system.

Unit names that reference a specific region or feature in the South China Sea often use a shortened version of that region or feature's Chinese name. For example, Woody Island becomes "Yongxing" (永兴), the Paracel Islands become "Xisha" (西沙), the Spratly Islands become "Nansha" (南沙), and Sansha City becomes "Sansha" (三沙), hence units with names like "Nansha Garrison", "Xisha Maritime Garrison Command", "Yongxing Airfield Station", and "Sansha Garrison Command".

Unit 91431

Unit 91431 (91431部队), commonly referred to as the Nansha Garrison (南沙守备部队), is responsible for defending China's outposts in the Spratly Islands. The unit is part of the PLAN's shore command structure.²⁴ It has facilities in the Spratly Islands as well as in Hainan and Guangdong. Chinese sources use "Unit 91431" and "Nansha Garrison" to obscure the unit's ever-changing true identity (TUD). The unit is now very likely a corps deputy leader-grade naval base. The expansion of Unit 91431, which was enabled by China's island-building campaign in the Spratly Islands in the mid-2010s, is among the most significant changes to the PLA's organization on China's outposts in the past decade.

Organizational Structure

Name and Organizational Status

Unit 91431 was very likely established after China occupied several reefs in the Spratly Islands during the late 1980s.²⁵ Initially, Unit 91431 appears to have been called the "Nansha Patrol and Defense Command" (南沙巡防区), with the first Chinese media references emerging in the late 1980s and early 1990s.²⁶ Sources continued to mention the Nansha Patrol and Defense Command somewhat regularly through at least 2016.²⁷



Figure 2: Photograph showing 1 of the PLA's original small outposts in the Spratly Islands (Source: PLA Pictorial²⁸)

25 "Taste the Nansha Spirit" [品味南沙精神], People Net [人民网], <http://military.people.com.cn/GB/8221/143100/143101/238275/index.html>.

26 Xu Wenliang [虞文琴], "Using the Body as a Pen to 'Write'—'Busy Supplying on Cuarteron Reef' Collected Writing Experiences" [以身体作笔写出来的——《华阳礁上补给忙》采写体会], News Research [新闻知识], December 27, 1990; Yu Wenqin [虞文琴], "Shenzhou Song Tide—1991 Whole Country Mass Singing Competition Sweeping Image" [神州歌潮——1991年全国群众歌咏大赛掠影], People's Music [人民音乐], December 27, 1991.

27 Guo Shilin [郭诗琳], "The Motherland's 'Southern Gate' Becomes a 'Great Wall of Steel'" [祖国"南大门"筑起"钢铁长城"], Sansha City People's Government Net [三沙市人民政府网], July 30, 2016, <https://perma.cc/S5TJ-YSZS>; "Follow Navy Fleet Nansha Cruise Record" [随海军舰队南沙巡航记], Xinhua Net [新华网], July 23, 2016, http://www.xinhuanet.com/politics/2016-07/23/c_129171586.htm; "Deputy Commander Reveals Nansha Guarding Reefs Life: Dogs on the Reefs Go Crazy After 3 Months" [副军长曝南沙守礁生活：狗上礁三个月就疯了], People Net [人民网], January 25, 2016, <http://military.people.com.cn/n1/2016/0125/c10111-28082407.html>.

28 "Thousands of Miles of Border Station Waves Bubble, Hunting Banner Is Beautiful and Picturesque" [万里边关浪潮涌 猎猎战旗美如画], PLA Pictorial [解放军画报], December 5, 2018, http://www.plapic.com.cn/pub/2018-12/05/content_9368482.htm.

21 Allen, "Introduction to the PLA's Organizational Reforms", p. 16-22; Xu Ping [徐平], "The Evolution of Our Army's Cadre Ranks After the Founding of New China" [新中国成立后我军干部级别的沿革], PRC Ministry of National Defense [中华人民共和国国防部], March 31, 2021, http://www.mod.gov.cn/education/2020-03/31/content_4862889_4.htm.

22 Allen, "Introduction to the PLA's Organizational Reforms", p. 16.

23 Joel Wuthnow and Phillip C. Saunders, "A New Step Forward in PLA Professionalization", China Brief 21, no. 5 (2021), <https://jamestown.org/program/a-new-step-forward-in-pla-professionalization/>; Kenneth Allen, "China Announces Reform of Military Ranks", China Brief 17, no. 2 (2017), <https://jamestown.org/program/china-announces-reform-military-ranks/>.

24 Roderick Lee and Morgan Clemens, China Maritime Report No. 9: Organizing to Fight in the Far Seas, The Chinese Navy in an Era of Military Reform (China Maritime Studies Institute, 2020), p. 7-8, <https://digital-commons.usnwc.edu/cmsi-maritime-reports/9/>.

By the early 2010s, sources had also started referring to a “Nansha Garrison” (南沙守备部队),²⁹ though a handful of earlier mentions also exist.³⁰ Recorded Future observed multiple instances of the same individuals being described as members of the Nansha Patrol and Defense Command, the Nansha Garrison, and Unit 91431,³¹ including the unit’s former commander, Gong Yunchong (龚允冲).³² By the late 2010s, Nansha Garrison appears to have become a preferred term to obscure the unit’s TUD.

After this apparent transition from Nansha Patrol and Defense Command to Nansha Garrison, a pair of August 2018 PLA Daily articles referenced a “Nansha Maritime Garrison Command” (南沙水警区).³³ This suggests that Unit 91431 was, at some point, upgraded to the level of maritime garrison command, which is a specific type (division leader grade) of PLAN shore command organization.³⁴ The upgrade likely occurred after China built, and then militarized, 7 artificial islands in the Spratly Islands in the mid-2010s. These references suggest that Unit 91431 survived post-2015 reforms to the PLAN’s shore command structure that largely abolished maritime garrison commands.³⁵ However, as of late 2021, authoritative sources still rarely mention the Nansha Maritime Garrison Command, instead referring to the Nansha Garrison.

29 “Navy Officers and Soldiers Greatly Wish a Happy New Year” [海军官兵大拜年], People Net [人民网], 2011, <http://military.people.com.cn/GB/8221/143100/143101/143520/212384/index.html>; “Veteran Nansha Guarding Reef 21 Years: Like a Steel Nail Firmly Riveting in Nansha (Pictures)” [老兵南沙守礁21年：像钢钉一样牢牢铆在南沙(图)], China Net [中国网], May 28, 2012, http://www.china.com.cn/military/txt/2012-05/28/content_25492606.htm; Mu Lianglong [穆亮龙] et al., “Nansha Garrison Commander Xiong Yun: People On Reefs Where the National Flags Are” [南沙守备部队司令熊云：人在礁在国旗在], Sina [新浪], August 2, 2013, <http://news.sina.com.cn/o/2013-08-02/141427845244.shtml>.

30 Li Xuehong [李雪红], “Go to Xisha, Rush to Nansha” [走西沙 闯南沙], China Youth Daily [中国青年报], May 27, 2001, http://zqb.cyol.com/content/2001-05/27/content_229466.htm.

31 “Wen Libo” [李文波], China Civilization Net [中国文明网], September 26, 2013, http://www.wenming.cn/ddmf_296/dsjpxbz/mdfe/tmjmd/jyfx/201309/t20130925_1490030.shtml; “Huang Fulu” [黄福禄], Qinzhou City Qinnan District People’s Government [钦州市钦南区人民政府], June 29, 2021, http://zwgk.gxqn.gov.cn/auto4821/jggk/ldjj/202106/t20210629_3555990.html.

32 Zhu Yuzun [朱玉尊], “Gong Yunchong: The Nansha ‘Guard Reef King’ That Adores Moral Education” [龚允冲：倾心德育的南沙“守礁王”], Guangzhou University News Net [广州大学新闻网], December 10, 2003, <http://news.gzhu.edu.cn/info/1005/5239.htm>; “Guarding Reef King Gong Yunchong Bids Farewell to Nansha” [守礁王龚允冲告别南沙], China Military Net [中国军网], July 31, 2017, http://photo.81.cn/zhuanli/2017-07/31/content_7690098.htm; “Attending National Model Worker Commendation Conference PLA Representatives Honor Roll” [出席全国劳模表彰大会的解放军代表光荣榜], Sina [新浪], April 30, 2005, <http://mil.news.sina.com.cn/2005-04-30/1103284742.html>; “1996 to 1997” [1996年至1997年], China Communist Youth League Net [中国共青团网], April 15, 2007, http://www.gqt.org.cn/695/gqt_tuanshi/gqt_ghtc/workevent/200704/t20070415_18262.htm.

33 Gao Yi [高毅], “Southern Theater Command Commands Air-Sea Joint Protection Force” [南部战区指挥海空和联保兵力], PLA Daily [解放军报], August 10, 2018, http://www.81.cn/jfjbmap/content/2018-08/10/content_213050.htm; Huang Chao [黄超] and Shao Longfei [邵龙飞], “Do Not Forget the Original Intentions, Advance New Great Projects” [不忘初心，推进新的伟大工程], PLA Daily [解放军报], August 23, 2018, http://www.81.cn/jfjbmap/content/2018-08/23/content_214095.htm.

34 Lee and Clemens, Organizing to Fight in the Far Seas, p. 7-8

35 Lee and Clemens, Organizing to Fight in the Far Seas, p. 7-8.



Figure 3: China’s pre-island building outpost on Fiery Cross Reef in the Spratly Islands (Source: Sina³⁶)

For the purposes of this report, Recorded Future uses “Unit 91431” to refer to the unit that sources have variously described as the Nansha Garrison, the Nansha Patrol and Defense Command, the Nansha Maritime Garrison Command, and Unit 91431. The only exception is when we discuss potentially anachronistic characteristics of the Nansha Patrol and Defense Command; in such instances, we use “Nansha Patrol and Defense Command”.

Grade

Recorded Future judges that the Nansha Patrol and Defense Command was very likely at least a regiment leader-grade unit, though the evidence is inconclusive and contradictory. A PLA Daily article from March 2017 indicates that the PLAN’s patrol and defense commands were, in general, regiment-level organizations in the 1970s.³⁷ However, this was before the PLA adopted its current grade and rank system in 1988.³⁸

36 “The Fiery Cross Reef Ocean Observation Station Located in Central Nansha” [坐落在南沙中部的永暑礁海洋观测站], Sina [新浪], April 26, 2010, http://slide.mil.news.sina.com.cn/slide_8_203_3861.html#p=1.

37 Huang Chuanhui [黄传会], “The Xisha of 35 Years Ago, Most Luxurious Dish Was Spicy Fried Pumpkin!” [35年前的西沙，最奢侈的一道菜是辣炒南瓜！], China Military Net [中国军网], March 22, 2017, http://www.81.cn/2017jj90/2017-03/22/content_7669894.htm.

38 Allen, “Introduction to the PLA’s Organizational Reforms”, p. 16-22; Xu, “The Evolution of Our Army’s Cadre Ranks After the Founding of New China”.

The resumes of former Nansha Patrol and Defense Command personnel from the 1990s and 2000s provide further clues. These sources reveal that the patrol and defense command's headquarters department (司令部) had battalion leader- and battalion deputy leader-grade staff officers and branch (股) staff; that it had a political division (政治处) with battalion leader-grade staff officers and branch heads; and that it had a logistics division (后勤处) with subordinate branches and an equipment division (装备处).³⁹ Prior to the latest PLA reforms, regiment leader-grade units typically had a headquarters department paired with political, logistics, equipment divisions as well as subordinate second-level branches.⁴⁰ This pattern would seem to confirm that the Nansha Patrol and Defense Command was indeed a regiment leader-grade unit. However, in regiment leader-grade organizations, battalion leader-grade personnel would normally have served as deputy chiefs of staff in the headquarters department or deputy directors in the political division.⁴¹ A battalion leader-grade political section branch head should have belonged to a division leader-grade unit, though in division leader-grade units this position would have been a political department (政治部) office (科) head.⁴² As such, in the 1990s and 2000s, the Nansha Patrol and Defense Command had a contradictory set of organizational characteristics that defy standard categorization.

By the early-to-mid 2010s, Unit 91431 was very likely at least a division deputy leader-grade unit. The commander of Unit 91431, Xiong Yun (熊云), was photographed in 2013 wearing the insignia of a senior colonel,⁴³ a rank that generally aligns with the division deputy leader, division leader, and corps deputy leader grades.⁴⁴ Moreover, a July 2012 Global Times article described Unit 91431 as a brigade, which is a division deputy leader-grade organization.⁴⁵ Additionally, by 2015, Unit 91431's political department was a department (部) rather than a division (处),⁴⁶ an organizational characteristic typically associated with units at the division deputy leader level and higher.⁴⁷ Photographs

of several Unit 91431 personnel published in 2013 and 2014 show these individuals wearing uniforms with 4 rows of ribbons that have red ribbons located at the top-center position.⁴⁸ One example is "special technical senior colonel" Wen Libo (李文波), whose top-center red ribbon has 2 stars,⁴⁹ a clear indicator that Wen is a level 6 special technical officer.⁵⁰ This special technical officer level is equivalent to a division leader-grade officer.⁵¹ However, because Wen was not the unit's commander or political commissar, his grade did not necessarily correspond to Unit 91431's grade.



Figure 4: Photograph of Unit 91431 Commander Xiong Yun (left) from 2013 showing senior colonel rank insignia (Source: Sina⁵²)

39 "Tian Weimin" [田卫民], Beihai City People's Government Net [北海市人民政府门户网站], May 1, 2019, http://xxgk.beihai.gov.cn/bhstjyjsjw/lidj_102580/201912/t20191228_2128730.html; "Wang Minghui" [王明辉], Foshan City Industry and Information Technology Bureau (佛山工业和信息化局), February 17, 2020, http://fsiit.foshan.gov.cn/gkmlpt/content/3/3632/post_3632385.html#155.

40 Allen, "Introduction to the PLA's Organizational Reforms", p. 35-37, 70-71.

41 Allen, "Introduction to the PLA's Organizational Reforms", p. 71.

42 Allen, "Introduction to the PLA's Organizational Reforms", p. 69.

43 Mu, "Nansha Garrison Commander Xiong Yun".

44 Allen, "Introduction to the PLA's Organizational Reforms", p. 22.

45 "Our Military's Combat Brigade Guards Nansha, Soldiers' Figures Can be Seen Everywhere on Woody Island" [我军一作战旅守备南沙 永兴岛随处可见军人身影], QQ Net [腾讯网], July 16, 2012, <https://news.qq.com/a/20120717/000979.htm>.

46 Gao Yi [高毅] and Yang Bo [杨波], "South Sea Fleet Nansha Garrison Officers and Soldiers Rescue Fishermen Who Fell Into Water During Strong Typhoon" [南海舰队南沙守备部队官兵在强台风中勇救落水渔民], People Net [人民网], October 6, 2015, <http://military.people.com.cn/n/2015/1006/c1011-27665862.html>.

47 Allen, "Introduction to the PLA's Organizational Reforms", p. 64-71.

48 "Did Not Break Record Defending Reef Kings - China Military Net Special" [南沙守备部队干部守礁时间一览], 2014, <http://www.81.cn/2014xwrr/index.htm>.

49 "Wen Libo"; "Did Not Break Record Defending Reef Kings".

50 The source describes this individual as being "technical level 5", which corresponds to the corps deputy leader grade. This mention of technical level 5 is likely inaccurate, considering that the individual is clearly wearing division leader-grade ribbons, which are shared by level 6 special technical officers.

51 Xu, "The Evolution of Our Army's Cadre Ranks After the Founding of New China".

52 Mu, "Nansha Garrison Commander Xiong Yun".



Figure 5: Photograph of Wen Libo, a Unit 91431 engineer, from 2013 showing special technical officer collar insignia, division leader-grade officer ribbons, and senior colonel rank shoulder epaulets (Source: China Civilization Net⁵³)

In the mid-to-late 2010s, Unit 91431 appears to have been upgraded at least once, if not twice—a reflection of the dramatic militarization of China's outposts in the Spratly Islands during this period. By August 2018, having been raised to maritime garrison command status,⁵⁴ Unit 91431 was almost certainly a division leader-grade unit, since maritime garrison commands are division leader-grade organizations.⁵⁵ However, by early 2020, Unit 91431 reportedly had at least 1 subordinate brigade.⁵⁶ In the PLA, brigades cannot be subordinate to divisions,⁵⁷ which suggests that Unit 91431 could have been upgraded once again between August 2018 and January 2020. Given the size of the PLA's presence in the Spratly Islands, Recorded Future judges that Unit 91431 is very likely a corps deputy leader-grade base, which has commanded PLAN near seas defense forces since 2017.⁵⁸

53 "Wen Libo".

54 Gao, "Southern Theater Command Commands Air-Sea Joint Protection Force"; Huang and Shao, "Do Not Forget the Original Intentions".

55 Allen, "Introduction to the PLA's Organizational Reforms", p. 68-69.

56 "New Era, New Atmosphere, New Journey! 'Live Up To Shaohua - We All Are Dream Chasers—020 Sansha City Spring Festival Celebration Evening Party' Passionately Held on Sansha City Woody Island" [新时代新气象新征程！"不负韶华·我们都是追梦人——2020年三沙市春节联欢晚会"在三沙市永兴岛燃情上演], Sohu [搜狐], January 23, 2020, https://www.sohu.com/a/368595121_721575; "New Era, New Atmosphere, New Journey! 'Live Up To Shaohua - We All Are Dream Chasers—2020 Sansha City Spring Festival Celebration Evening Party' Passionately Held on Sansha City Woody Island" [新时代新气象新征程！"不负韶华·我们都是追梦人——2020年三沙市春节联欢晚会"在三沙市永兴岛燃情上演], QQ Net [腾讯网], January 24, 2021, <https://new.qq.com/omn/20200123/20200123A08W6200.html>.

57 Allen, "Introduction to the PLA's Organizational Reforms", p. 21.

58 Lee and Clemens, *Organizing to Fight in the Far Seas*, p. 3-8.

Organizational Components

Unit 91431 has the standard set of first-level departments. These include a staff department (参谋部),⁵⁹ formerly a headquarters department (司令部);⁶⁰ a political work department (政治工作部),⁶¹ formerly a political division (政治处) and political department (政治部);⁶² and a support department (保障部),⁶³ formerly a pair of separate logistics (后勤) and equipment (装备) divisions (处),⁶⁴ which were assumedly upgraded to departments before being combined into a support department. The unit's first-level departments have also contained various second-level departments over the years, which have been responsible for tasks such as communications, training, propaganda, and logistics management.⁶⁵

Unit 91431 also appears to oversee a subordinate garrison ("守备部队", 守备队, or "守备") on each of China's 7 outposts in the Spratly Islands, such as on Fiery Cross Reef,⁶⁶ Subi Reef,⁶⁷ and Hughes Reef.⁶⁸ These garrisons have staff, communications,

59 "Announcement on the 2019 Putian City Higher Vocational Education Entrance Acceptance Considering Qualifications Examinee List" [关于2019年莆田市高职招考录取照顾资格考生名单的公示], barrique-wine.com, February 12, 2019, <https://www.barrique-wine.com/QsWZqoWoq/show-161-5749-1.html>.

60 "3G Signal Covers Our Nansha Every Island and Reef, Soldiers Can Make Video Calls (Pictures)" [3G信号覆盖我南沙全部岛礁 战士可视频通话(图)], Sina [新浪], July 30, 2013, <http://mil.news.sina.com.cn/2013-07-30/1034733109.html>.

61 2011 Qingfeng County Public Institutions Publicly Recruiting Work Personnel Written Test Policy Adding Points Personnel Announcement" [2021年清丰县事业单位招聘工作人员笔试政策性加分人员公示], Qingfeng County People's Government [清丰县人民政府], May 27, 2021, <http://www.qingfeng.gov.cn/show.asp?id=18596&class=16>.

62 Gao and Yang, "South Sea Fleet Nansha Garrison Officers and Soldiers Rescue Fishermen Who Fell Into Water During Strong Typhoon"; "Tian Weimin".

63 Yang Jie [杨捷], "Nansha Islands and Reefs Forces Try Wearing and Using New Hot Zone Clothes" [南沙岛礁部队试穿试用新型热区作战服装], PRC Ministry of Veterans Affairs [中华人民共和国退役军人事务部], January 25, 2021, http://www.mva.gov.cn/sy/xx/gfxx/202101/t20210125_44431.html.

64 "Wang Minghui".

65 "3G Signal Covers Our Nansha Every Island and Reef"; "Tian Weimin"; "Wang Minghui".

66 Yang Libing [杨立兵] and Li Youtao [黎友陶], "Good News! Nansha's First Military Area Supermarket Completed and Put Into Use" [好消息！南沙首个军营商超市建成使用], China Military Net [中国军网], January 21, 2021, http://www.mod.gov.cn/services/2021-01/21/content_4877512.htm; Gao "Southern Theater Command Commands Air-Sea Joint Protection Force".

67 "10th Hainan Province Double Support Model Cities (Country, District), Model Units, and Individuals Named and Honored List" [第十届海南省双拥模范城(县、区)、模范单位和个人拟命名表彰名单], Hainan Daily [海南日报], May 9, 2019, http://hnr.b.hinews.cn/html/2019-05/09/content_6_8.htm.

68 Guo Chengqing [郭承清] and Yang Bo [杨波], "Star Unit: Navy Nansha Hughes Reef Garrison" [明星部队：海军南沙东门礁守备队], Xinhua Net [新华网], April 23, 2016, http://www.xinhuanet.com/mil/2016-04/23/c_128922254.htm.

medical, hydrometeorology, radar, and other billets.⁶⁹ Recorded Future found multiple sources that suggest the garrisons on smaller features are organized as companies,⁷⁰ though resumes from the 1990s and 2000s show that these garrison companies are likely at least battalion deputy leader-grade units.⁷¹ A state media report from early 2020 shows that Subi Reef's garrison is organized as a brigade with its own first-level departments, such as a political work department.⁷² A low-confidence blog post with censored photographic evidence claims that Mischief Reef's garrison is also a brigade.⁷³ It is therefore plausible that the garrisons on China's 3 largest artificial islands in the Spratly Islands (Subi Reef, Mischief Reef, and Fiery Cross Reef) are all organized as brigades.

When sources refer to Unit 91431 by its MUCD, they also sometimes reference specific subunits, such as Unit 91431 Subunit 49 (91431部队49分队) and Unit 91431 Subunit 47 (91431部队47分队).⁷⁴ We also observed references to Unit 91431 having subordinate dadui (大队) and zhongdui (中队) units,⁷⁵ which are likely regiment-level and battalion-level surface vessel units, respectively.⁷⁶

69 Li Tang [李唐] and Deng Ping [邓平], "Navy Nansha Garrison Welcomes First Batch of Female Soldiers" [海军南沙守礁部队迎来首批女军人], Xinhua Net [新华网], December 11, 2017, http://www.xinhuanet.com/2017-12/11/c_1122093653.htm; "CMC Chairman Xi Jinping Signs Order Recording Merits of 2 Units, 4 Individuals" [中央军委主席习近平签署通令 给2个单位、4名个人记功], People Net [人民网], August 27, 2014, <http://military.people.com.cn/n/2014/0827/c172467-25552234.html>; Zhang Ziliang [张子良] and Su Mengqi [苏梦奇], "Making 'the First' Become a Business Card" [让"第一"成为一张名片], China Military Net [中国军网], April 22, 2017, http://www.81.cn/2017hjj/2017-04/22/content_7572246.htm.

70 Guo and Yang, "Star Unit"; Wu Qiang [吴强], and Li Youtao [黎友陶], "Nansha 'Sunflower'" [南沙"太阳花"], China Military Net [中国军网], May 20, 2021, <http://military.people.com.cn/n1/2021/0520/c10111-32108635.html>; "How to Catch 'Xiao Yuan San Zhi'" ["小远散直"怎么抓], Sina [新浪], July 6, 2006, <http://mil.news.sina.com.cn/2006-07-06/0625381697.html?from=wap>; "'Spiritual Supply' on Reef Fort" [礁堡上的"精神补给"], Sina [新浪], April 6, 2006, <http://mil.news.sina.com.cn/2006-04-06/0615362109.html>.

71 "Tian Weimin"; "Wang Minghui".

72 "New Era, New Atmosphere, New Journey!".

73 "October 2-5, Mischief Reef Brigade Holds First Beach Volleyball Competition", [10月2日~5日, 美济礁守备旅举行首届沙滩排球赛~], Observer Rumors [观风闻], October 9, 2020, <https://user.guancha.cn/main/content?id=391944>; "'Win the Championship' Warm Reflection, Ignited A Beach Volleyball Court More Than 1000 Kilometers from the Motherland's Mainland" [《夺冠》热映, 点燃了一个距离祖国大陆1000多公里的沙滩排球球], 6parkbbs.com. October 9, 2020, <https://club.6parkbbs.com/military/index.php?app=forum&act=threadview&tid=16023872>.

74 "General Political Department Commends Whole Military Advanced Party Organization Outstanding Party Members and Party Workers" [总政表彰全军先进党组织优秀共产党员党务工作者], CCTV Net [央视网], June 28, 2006, <http://news.cctv.com/military/20060628/104937.shtml>; "South Sea Fleet Holds Commendation Assembly, To Award These Grassroots Building Advanced Models" [南海舰队召开表彰大会, 为这些基层建设先进典型颁奖], January 16, 2019, <https://mil.sina.cn/2019-01-16/detail-ihqfskcn7481654.d.html>.

75 "South Sea Fleet Holds Commendation Assembly"; Jun, Wu, and Li, "Nansha 'Sunflower'"; Li Youtao [黎友陶], "New Year Entering Military Area | Nansha Islands and Reefs, Happiness Arrives With Express Delivery" [新春走军营 | 南沙岛礁, 幸福随着快递到], China Military Net [中国军网], January 29, 2021, http://www.81.cn/2020zt/2021-01/29/content_9976846.htm.

76 Allen, "Introduction to the PLA's Organizational Reforms", p. 52-53; Li "The People's Liberation Army Navy as an Evolving Organization", p. 326.

Duties

Unit 91431 is responsible for the physical defense of China's outposts in the Spratly Islands. This includes detecting and handling responses to foreign ships, planes, and fishing boats;⁷⁷ ensuring the safety of Chinese fishermen operating in the Spratly Islands;⁷⁸ operating weapons and radar installations;⁷⁹ and carrying out armed patrols on occupied features.⁸⁰ For instance, Cuarteron Reef reportedly has a "special situation handling group" (特情处置小组) that deploys on boats to drive away foreign vessels.⁸¹

Beyond this defensive role, Unit 91431 has an assortment of other responsibilities. For example, technical specialists attached to Unit 91431 have collected hydrometeorological data in the Spratly Islands for decades,⁸² which helps the PLAN understand the area's "ocean battlespace environment" (海洋战场环境).⁸³ Likewise, Unit 91431 works with the CCG and other forces to carry out rescue operations in the Spratly Islands.⁸⁴



Figure 6: Unit 91431 officers and soldiers stationed on Hughes Reef in 2016 (Source: Xinhua Net⁸⁵)

77 "Nansha Guarding Reef Model Company" ["南沙守礁模范连"], China Military Net [中国军网], April 20, 2016, http://www.81.cn/2016hjjclqzn/2016-04/20/content_7014782.htm; Zhang and Su, "Making 'the First' Become a Business Card".

78 Guo, "The Motherland's 'Southern Gate' Becomes a 'Great Wall of Steel'".

79 Guo and Yang, "Star Unit"; Zhang and Su, "Making 'the First' Become a Business Card".

80 "Navy Nansha Garrison Tries New Hot Zone Island and Reef Combat Boots" [海军南沙守备部队试穿新型热区岛礁作战靴], QQ Video [腾讯视频], October 22, 2020, <https://v.qq.com/x/page/z3154kwqt59.html>.

81 Zhang and Su, "Making 'the First' Become a Business Card".

82 "Wen Libo".

83 Zoe Haver, "Chinese Navy Harvests Data from South China Sea", BenarNews, March 24, 2021, <https://www.benarnews.org/english/news/philippine/sea-data-03242021173658.html>; Li Youtao [黎友陶], "Nansha Garrison Assistant Engineer Wu Jingquan Takes Root on Islands and Reefs Determined Scientific Research Innovation Record" [南沙守备部队助理工程师吴井泉扎根岛礁锐意科研创新记事], Xinhua Net [新华网], April 27, 2020, http://m.xinhuanet.com/mil/2020-04/27/c_1210591965.htm.

84 Gao, "Southern Theater Command Commands Air-Sea Joint Protection Force".

85 Guo and Yang, "Star Unit: Navy Nansha Hughes Reef Garrison".



Figure 7: Unit 91431 soldiers wearing new camouflage uniforms in December 2020 (Source: QQ Video⁸⁶)

Facilities and Assets

Procurement records reveal that Unit 91431 has facilities in Haikou, Hainan and that it uses an address in Zhangjiang, Guangdong.⁸⁷ The Zhangjiang address is “No. 16 Haibin East Road 1, Xiashan District, Zhangjiang City” (湛江市霞山区海滨东一路16号). Using Baidu Maps and Google Earth, Recorded Future observed a gas station marked with PLAN insignia on Haibin East Road 1 near what appears to be a compound, which is visible at the following coordinates: 21°13'54.89"N, 110°25'11.85"E (UTM: 49 N 439810 2347925; MGRS: 49Q DD 39809 47924). However, we could not confirm the presence of Unit 91431 facilities in this area.

China's outposts in the Spratly Islands are bristling with military and dual-use capabilities. Open-source analysts have identified a range of different capabilities that are (or could be) present in the Spratly Islands,⁸⁸ including undersea fiber optical cables, satellite communications, high-frequency communications, inter-island communications, air and surface radar, counter-stealth radar, electronic warfare and signals intelligence, special mission aircraft, unmanned systems, hardened infrastructure, battlespace environment management, counter-reconnaissance, and offensive and defensive strike capabilities. It is not entirely clear which assets belong to Unit 91431 and which belong to other parts of the PLA.

86 “Like! Navy Nansha Garrison Tries New Starry Camouflage” [赞！海军南沙守备部队试穿星空迷彩], QQ Video [腾讯视频], December 16, 2020, <https://v.qq.com/x/page/j3212pn792c.html>.

87 Source documents held by Recorded Future

88 Dahm, South China Sea Military Capabilities Series.



Figure 8: Photograph from September 2021 showing a Y-20 transport aircraft picking up Unit 91431 personnel from 1 of China's outposts in the Spratly Islands (Source: Huanqiu Net⁸⁹)

Xisha Maritime Garrison Command

The Xisha Maritime Garrison Command (西沙水警区) is responsible for the defense of China's outposts in the Paracel Islands. The maritime garrison command is part of the PLAN's shore command structure and appears to have survived recent reforms that largely abolished maritime garrison commands.⁹⁰ It has facilities in the Paracel Islands as well as on Hainan. Recorded Future judges with high confidence that Unit 91892 is the Xisha Maritime Garrison Command's MUCD.

Organizational Structure

The Xisha Maritime Garrison Command, which is a division leader-grade unit, was established in 1976, replacing the former regiment-level Xisha Patrol and Defense Command (西沙巡逻区).⁹¹ Provincial party-state documents indicate that the Xisha Maritime Garrison Command is likely subordinate to the Yulin base in Sanya, Hainan,⁹² an arrangement that is consistent

89 Guo Yuandan [郭媛丹], “Y-20 Goes to Nansha to Receive Demobilized Veterans, Expert: Shows Nansha Island and Reef Airports Fully Meet Large-Scale Aircraft Takeoff and Landing Conditions” [运-20赴南沙接退伍老兵，专家：表明南沙岛礁相关机场完全满足大型飞机起降条件], Huanqiu Net [环球网], September 18, 2021, <https://world.huanqiu.com/article/440pvg5BP3W>.

90 Lee and Clemens, *Organizing to Fight in the Far Seas*, p. 7-8.

91 Huang, “The Xisha of 35 Years Ago”.

92 “Hainan Province First Batch of Spirit and Civilized Construction Advanced Models Continuing to Retain Honorary Titles” [海南省首批精神文明先进典型继续保留荣誉称号], Hainan Civilization Net [海南文明网], February 8, 2021, <http://www.hiwenming.com/news/202128/2021281518186502332.htm>; “Hainan New National Spirit and Civilization Construction Work Advanced List Announced” [海南新届全国精神文明建设工作先进单位名单], People Net [人民网], September 9, 2020, <http://hi.people.com.cn/n2/2020/0909/c231190-34280601.html>; “Hainan New ‘5 Civilizations’ Candidate List Announced” [海南新一届“五个文明”候选名单公示 | 附名单], Sina [新浪], January 15, 2018, <http://hainan.sina.com.cn/news/hnyw/2018-01-15/detail-ifyqrewi2784816-p5.shtml>; “National Civilization Units and Provincial Civilization Units List” [全国文明单位、省文明单位名单], PRC Ministry of Transport Legal Department [交通运输部法制司], July 2017, <https://zizhan.mot.gov.cn/VURL7c8dfd1b/OTL2026f6bb/OTLdbceda95/tongzhigonggao/201707/P020170727360318789181.doc>.

with the PLAN's shore command structure.⁹³ The maritime garrison command appears to have the standard set of first-level departments and second-level departments organized as offices (科).⁹⁴ Its staff department also has a communications company with various subordinate subunits and squads.⁹⁵ Publicly available sources have referenced a variety of different forces under the maritime garrison command, including tank companies,⁹⁶ anti-aircraft artillery (AAA) companies,⁹⁷ and dadui and zhongdui units,⁹⁸ which are likely regiment-level and battalion-level surface vessel units, respectively.⁹⁹ Mentions of the maritime garrison command by its MUCD, Unit 91892, also sometimes reference subunits, such as Unit 91892 Subunit 40 (91892部队40分队) or Unit 91892 Subunit 86 (91892部队86分队).¹⁰⁰

93 Lee and Clemens, *Organizing to Fight in the Far Seas*, p. 7-8.

94 "Representatives List" [代表名单], Hainan Province People's Congress Standing Committee [海南省人民代表大会常务委员会], <http://www.hainanpc.net/hainanpc/ztzl/ljsc63/index.html>; "City Government Local History Office Division of Leadership" [市政府地方志办领导分工], Zhanjiang City People's Government Local History Office [湛江市人民政府地方志办公室], May 21, 2020, https://www.zhanjiang.gov.cn/dfz/gkmlpt/content/1/1294/post_1294401.html; "Haikou Neighborhood Leading Group Individual Resumes and Division of Labor" [海垦街道领导班子个人简历及分工表 (最新)], Haikou City Longhua District People's Government [海口市龙华区人民政府], December 30, 2016, http://www.haikou.gov.cn/pub/root9/lhqzf/LHQ34/201612/t20161230_1029957.htm; Li Yanbing [李延兵], "Xisha Faraway Sentinel: Guarding South China Sea Blue Territory, Being an Island Reef Nail" [西沙天涯哨兵: 守卫南海蓝色国土 甘做岛礁一颗钉], China Daily [中国日报], August 8, 2015, http://china.chinadaily.com.cn/2015-08/08/content_21535568.htm.

95 "Representatives List".

96 "Xisha Maritime Garrison Command Tank Company Carries Out Tank Anti-Aircraft Machine Gun Live Fire" [西沙某水警区某坦克连进行坦克高射机枪实弹射击], China News Net [中国新闻网], December 6, 2012, <http://www.chinanews.com/mil/2012/12-06/4386849.shtml>.

97 "Wei Jianhua" [韦建华], Zhoushan City Development and Reform Commission [舟山市发展和改革委员会], March 3, 2020, http://zsfwg.zhoushan.gov.cn/art/2020/3/3/art_1297614_6305154.html; "Concerned About National Defense, Emotional About Xisha—Chairman Zhang Jianhong Goes To Woody Island to Greet Xisha-Stationed Officers and Soldiers" [心系国防, 情洒西沙——张建宏董事长近赴永兴岛慰问西沙驻军官兵], Dongyue Group [东岳集团], <http://www.dongyuechem.com/NewsDetail.aspx?CategoryID=246&ID=501&Category=News>.

98 Li, "Xisha Faraway Sentinel"; Xiao Quan [晓泉] and Wu Dengfeng [吴登峰], "Home of the Sunny Sea—Remembering Navy Officer Xiang Wei Who Sacrificed Himself on the Frontlines of a Construction Project" [太阳海里为家——追忆牺牲在某工程建设一线的海军军官向伟], Xinhua Net [新华网], July 12, http://www.xinhuanet.com/mil/2017-07/12/c_129653841.htm; "Lu Xiaolin" [卢晓琳], "Seeing the Sea as Family, Seeing Work as Life—Remembering Navy Engineering Unit Young Officer Xiang Wei" [视大海如家门 视工作如生命——追忆海军某工程部队青年军官向伟], People's Daily [人民日报], July 13, 2017, <http://news.cnjiwang.com/gg/201805/W020180511759607884458.pdf>.

99 Li "The People's Liberation Army Navy as an Evolving Organization", p. 326.

100 "Hainan Province First Batch of Spirit and Civilized Construction Advanced Models Continuing to Retain Honorable Titles"; "Hainan New National Spirit and Civilization Construction Work Advanced List Announced"; "Hainan New '5 Civilizations' Candidate List Announced"; "National Civilization Units and Provincial Civilization Units List".

The Xisha Maritime Garrison Command has subordinate garrisons ("守备队" or "守备") on 6 outposts in the Paracel Islands,¹⁰¹ namely Woody Island,¹⁰² Triton Island,¹⁰³ Lincoln Island,¹⁰⁴ Duncan Islands,¹⁰⁵ Pattie Island,¹⁰⁶ and Money Island.¹⁰⁷ Some sources describe these garrisons as companies when discussing the late 1980s,¹⁰⁸ but references to more contemporary times tend to describe these garrisons as battalions.¹⁰⁹ Such descriptions are also confirmed by video evidence.¹¹⁰ These garrisons oversee lower-level organizations such as communications squads and radar squads.¹¹¹



Figure 9: "Triton Island Garrison Battalion" sign visible on a building in a 2019 state media broadcast (Source: HNNTV¹¹²)

101 "China Navy Xisha Garrison Yearly Handles Over 1,000 Batches of Sea-Air Targets" [中国海军西沙守备部队年处理海空目标上千批次], Sina [新浪], April 24, 2016, <http://mil.news.sina.com.cn/china/2016-04-24/doc-ixfrpvea1146237.shtml>; "Xisha Officers and Soldiers In Multiple Ways Celebrate Navy Day, Coconut Strength Grabs the Lens! Internet Users: Want Same Model" [西沙官兵多种方式庆祝海军节, 椰子实力抢镜! 网友: 想要同款], QQ Video [腾讯视频], April 22, 2020, <https://v.qq.com/x/cover/mzc00200pspu88d/w09557ijlw3.html>.

102 "Defending the Island is Defending the Position, Faraway Sentinel Takes Root In Xisha Guarding South China Sea Frontier" [守岛就是守阵地 天涯哨兵扎根西沙守护南海疆], CCTV, August 1, 2020, <https://tv.cctv.com/2020/08/01/ARTIsjCLDdIAc2S3GHVlwwG8200801.shtml>.

103 "Cruising the Ancestral Sea, South China Sea Island and Reefs Forging Loyalty" [巡航祖宗海 南海岛礁铸忠诚], HNNTV [海南网络广播电视台], August 1, 2019, <http://www.hnntv.cn/video/jishi/dsdrw/2019-08-01/329838.htm>.

104 "Cruising the Ancestral Sea".

105 "City Government Local History Office Division of Leadership".

106 "City Government Local History Office Division of Leadership".

107 "Cruising Xisha, China Navy Guards Treasure Island Like This" [巡航西沙 中国海军这样守护宝岛], QQ Video [腾讯视频], <https://v.qq.com/x/page/w0518b4abed.html>.
108 Untitled Document, Haikou City People's Government [海口市人民政府], <http://www.haikou.gov.cn/pub/root9/xyqzf/XYQ35/201804/P020200422339147391302.doc>; "City Government Local History Office Division of Leadership".

109 "Defending the Island is Defending the Position"; "Cruising the Ancestral Sea, South China Sea Island and Reefs Forging Loyalty".

110 "Cruising the Ancestral Sea, South China Sea Island and Reefs Forging Loyalty".

111 "Cruising the Ancestral Sea, South China Sea Island and Reefs Forging Loyalty".

112 "Cruising the Ancestral Sea, South China Sea Island and Reefs Forging Loyalty".

Duties

According to a People's Republic of China (PRC) Ministry of National Defense spokesperson, the Xisha Maritime Garrison Command is responsible for “defensive combat missions” in China’s jurisdictional waters.¹¹³ In practice, the maritime garrison command is tasked with the defense of China’s outposts in the Paracel Islands. This includes identifying and reporting foreign ships and planes,¹¹⁴ patrolling the waters of the Paracel Islands,¹¹⁵ intercepting foreign ships,¹¹⁶ carrying out armed patrols on occupied features,¹¹⁷ and mobilizing shore-based defenses to prevent unwelcome parties from landing on occupied features.¹¹⁸

The Xisha Maritime Garrison Command also carries out joint operations and exercises with civilian forces in the South China Sea. Personnel from the Xisha Maritime Garrison Command participated in a PLAN, CCG, and SCLE joint patrol in the Paracel Islands in May 2018.¹¹⁹ Whether the patrol’s PLAN surface vessel belonged to the maritime garrison command is unclear. During this joint patrol, 3 ships (1 from each force) reportedly detected and identified over 40 vessels, drove away 10 foreign fishing boats, and inspected each island and reef in the Paracel Islands.¹²⁰ Likewise, during a 2016 “sea-air three-dimensional search and rescue exercise” in the Paracel Islands, leaders from the Xisha Maritime Garrison Command, Sansha Garrison Command, CCG, and Sansha Maritime Safety Administration (MSA) served as deputy commanders under the city’s deputy mayor, who served as commander.¹²¹ This exercise also involved the Yongxing Airfield Station, the SCLE, and Sansha City’s maritime militia, among other units.¹²²

113 “Ministry of National Defense: Sansha Garrison Command Main Leaders Have Been Appointed” [国防部：三沙警备区主要领导已任命], PRC Ministry of National Defense [中华人民共和国国防部], July 26, 2012, <https://perma.cc/GRK4-VXGF>.

114 “Cruising the Ancestral Sea, South China Sea Island and Reefs Forging Loyalty”; Wang Tianyi [王天益], Xiong Yongxin [熊永新], and Xue Chengqing [薛成清], “Xisha Guardian: Rushing to Drive Away Foreign Ship” [西沙卫士：冲上去驱离外籍船], China Military Net [中国军网], April 10, 2016, http://www.81.cn/2016xsjx/2016-04/10/content_6998989.htm.

115 Wang, Xiong, and Xue, “Xisha Guardian”.

116 Wang, Xiong, and Xue, “Xisha Guardian”.

117 “Cruising the Ancestral Sea, South China Sea Island and Reefs Forging Loyalty”; “Navy Xisha Maritime Garrison Command Officers and Soldiers on Xisha Woody Island Patrol” [海军西沙某水警区官兵在西沙永兴岛巡逻], China Military Net [中国军网].

118 “Defending the Island is Defending the Position”.

119 Xue Chengqing [薛成清], “Military, Law Enforcement, and Civilian Joint Biandui First Patrol in the Xisha Islands and Reefs, Duration of 5 Days and 4 Nights” [军警民联合编队首次巡逻西沙岛礁，历时 5 天 4 夜], 新华网 [XinhuaNet], May 20, 2018, <https://perma.cc/F89G-VHWP>.

120 Xue, “Military, Law Enforcement, and Civilian Joint Biandui First Patrol in the Xisha Islands and Reefs, Duration of 5 Days and 4 Nights”.

121 “Sansha Sea Area Successfully Holds First Sea-Air Three Dimensional Joint Search and Rescue Exercise” [三沙海域成功举行首次海空立体联合搜救演练], Sohu [搜狐], July 14, 2016, https://m.sohu.com/n/459225187/?wscrid=32576_5.

122 “Sansha Sea Area Successfully Holds First Sea-Air Three Dimensional Joint Search and Rescue Exercise”.

The Xisha Maritime Garrison Command is involved in developing physical infrastructure in the Paracel Islands in line with military-civil fusion priorities. In 2014, the Xisha Maritime Garrison Command coordinated with Unit 91531 and the government of Sansha City to create a military-local government work coordination mechanism and draft the “Sansha City Double Support Projects Management Provisional Measures” (三沙市双拥项目管理暂行办法), which standardized the management and operation of military-civil fusion projects.¹²³ In 2017, the Xisha Maritime Garrison Command worked with Huawei, local authorities in Sansha City, the Chinese Academy of Sciences (CAS) Guangzhou Institute of Energy Conversion, and other organizations on a National Energy Administration-approved Internet of Things (IoT) project on Woody Island.¹²⁴ The project, which was to be an upgrade to Woody Island’s smart microgrid, reportedly aimed to build an “island-wide energy internet” that would integrate distributed photovoltaics, diesel generators, energy storage, a distribution network, and loads like seawater desalination equipment and smart charging piles.¹²⁵

Facilities and Assets

Based on our analysis of video footage and satellite imagery,¹²⁶ Recorded Future believes that the Xisha Maritime Garrison Command is likely headquartered in a 4-story, off-white building marked with PLA insignia near a flag square at the center of Woody Island, which is visible at the following coordinates: 16°50'8.22"N, 112°20'6.42"E (UTM: 49 N 642248 1861850; MGRS: 49Q FU 42248 61850). Satellite imagery from Google Earth confirms that this building has been present since at least 2005, though it is likely older. The maritime garrison command also maintains an office on Hainan, which the maritime garrison command reportedly uses to train PLAN and other PLA personnel deploying to the Paracel Islands.¹²⁷ Using video footage and satellite imagery,¹²⁸ we uncovered the facility’s likely location in Sanya, which is visible at the following coordinates: 18°13'1.27"N, 109°31'50.85"E (UTM: 49 N 344643 2014819; MGRS: 49Q CA 44643 14818). A slogan associated with the Xisha Maritime

123 “Military-Civil Fusion Jointly Writes Sansha Development New Chapter” [军民融合共谱三沙发展新篇章], Sansha City People’s Government Net [三沙市人民政府网], January 23, 2015, <https://web.archive.org/web/20150418083647/http://www.sansha.gov.cn/page.php?xuh=2791>.

124 Haver, Sansha City in China’s South China Sea Strategy, p. 46-48.

125 Haver, Sansha City in China’s South China Sea Strategy, p. 46-48.

126 “‘Our Day’ Special Plan Vlog: Guarding Xisha, Island Officers and Soldiers’ Day ‘Our Holiday’ | Military Fans World” [“我们的一天”特别策划Vlog：守护西沙 海岛官兵的一天「我们的节日」| 军迷天下], YouTube, August 11, 2021, <https://www.youtube.com/watch?v=6vlyNy5PZl>.

127 “From Xinjiang to Xisha, Uyghur Female Soldier Takes the Initiative to Apply for Border Defense” [从新疆到西沙 维吾尔族女兵主动申请戍边], QQ Video [腾讯视频], <https://v.qq.com/x/page/g0815d3ajdg.html>.

128 “From Xinjiang to Xisha”.

Garrison Command,¹²⁹ “Love the Country and Love the Island, Happily Guard the World’s End” (爱国爱岛 乐守天涯), is visible on or near both the Woody Island and Sanya buildings. Notably, basketball courts attached to apparent Xisha Maritime Garrison Command facilities on Woody Island, Triton Island, Duncan Islands, Pattle Island, Lincoln Island, and Money Island as well as in Sanya all have unique white, red, and blue center circles adorned with an anchor and the aforementioned slogan.¹³⁰



Figure 10: Likely Xisha Maritime Garrison Command headquarters on Woody Island, which has the “Love the Country and Love the Island, Happily Guard the World’s End” slogan on the facade (Source: YouTube¹³¹)



Figure 11: A basketball court with the “Love the Country and Love the Island, Happily Guard the World’s End” slogan printed in the middle, which is very likely located in front of the Xisha Maritime Garrison Command’s office in Sanya (Source: QQ Video¹³²)

The Xisha Maritime Garrison Command operates a hospital,¹³³ likely on Woody Island. As part of broader military-civil fusion efforts, this hospital and the Sansha City People’s Hospital on Woody Island coordinate to provide care to military and civilian patients,¹³⁴ including fishermen.¹³⁵

129 Cao Ruilin[曹瑞林], “Love the Country and Love the Island, Happily Guard the World’s End” [爱国爱岛 乐守天涯], Sina [新浪], December 20, 2012, <http://mil.news.sina.com.cn/2012-12-20/0419710176.html>.

130 “From Xinjiang to Xisha”.

131 “Our Day’ Special Plan Vlog”.

132 “From Xinjiang to Xisha”.

133 Gao, “Sansha City Implements ‘Double Support 10 Major Projects’”; Chen Xianling [陈显龄] and Shao Longfei [邵龙飞], “Navy Xisha Hospital Urgently Provides Care for Gravely Endangered Fisherman” [海军西沙医院紧急救治重症遇险渔民], China News Net [中国新闻网], October 2, 2013, <http://www.chinanews.com/gn/2013/10-02/5343488.shtml>.

134 Gao, “Sansha City Implements ‘Double Support 10 Major Projects’”.

135 “Navy Xisha Hospital Urgently Provides Care for Gravely Endangered Fisherman”.

The observation and communications station on the northeastern tip of Woody Island may also belong to the Xisha Maritime Garrison Command. This station is called the Rocky Island Observation and Communications Station (石岛观通站),¹³⁶ as Rocky Island was previously a distinct islet before it was incorporated into Woody Island in the mid-2010s.¹³⁷ Some state media reporting has explicitly described the Rocky Island station as part of the Xisha Maritime Garrison Command.¹³⁸ However, the station could also plausibly fall under the Southern Theater Command’s naval communications and observation brigade, which has various subordinate battalions and stations.¹³⁹ The station is visible at the following coordinates: 16°50′40.36″N, 112°20′48.25″E (UTM: 49 N 643480 1862847; MGRS: 49Q FU 43479 62846).

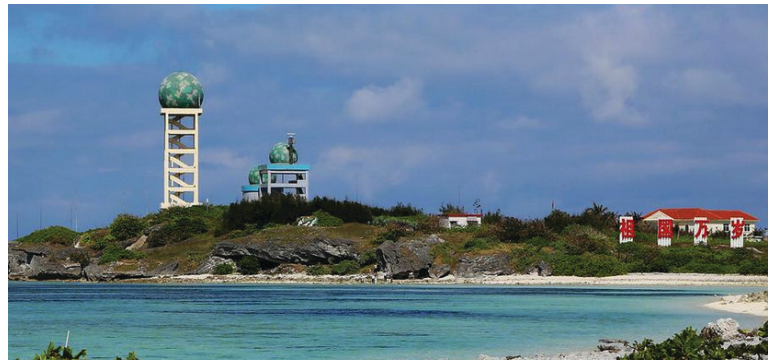


Figure 12: The Rocky Island Observation and Communications Station (Source: Hummingbird Net¹⁴⁰)

The Xisha Maritime Garrison Command has access to various surface vessels. State media reporting indicates that the maritime garrison command has corvettes,¹⁴¹ likely organized as zhongdui units under a dadui unit.¹⁴² After reportedly being stuck with old 100-ton-displacement “gunboats” for a number of years,

136 Zhao Xianghu [赵向虎] and Shao Longfei [邵龙飞], “Xisha Maritime Garrison Command Rocky Island Observation Station: Sentinels at the World’s End Tread Waves to Guard the Island” [西沙某水警区石岛观通站：天涯哨兵踏浪守海岛], China Military Net [中国军网], April 8, 2016, http://www.81.cn/2016xsxj/2016-04/08/content_6998861.htm.

137 “UPDATE: China’s Continuing Reclamation in the Paracels”, Asia Maritime Transparency Initiative, August 9, 2017, <https://amti.csis.org/paracels-beijings-other-buildup/>.

138 Zhao and Shao, “Xisha Maritime Garrison Command Rocky Island Observation Station”.

139 Yi Wenhao [易文豪], Li Haoyu [李浩宇], and Lin Jiacheng [林嘉诚], “Air Express Delivery | Southern Theater Command Navy Observation and Communications Battalion Brigade Support New Method” [“空中快递” | 南部战区海军某观通旅后勤保障新方式], China Military TV Net [中国军视网], December 28, 2020, http://www.js7tv.cn/news/202012_237683.html; Pan Di [潘迪], “Traveling to Fulfill Dreams | 19 Langhuabai First Time on a Ship Voyage” [圆梦之旅 | 19名浪花白首次随舰踏浪远航], PRC Ministry of National Defense [中华人民共和国国防部], December 3, 2019, http://www.mod.gov.cn/power/2019-12/03/content_4856149.htm.

140 “Hainan South China Sea-----Xisha Woody Island, a Glimpse of Rocky Island” [《海南 南海-----西沙永兴岛，石岛一瞥》], Hummingbird Net [蜂鸟网], January 10, 2015, http://bbs.fengniao.com/forum/3594763_3.html.

141 Li, “Xisha Faraway Sentinel”; Xiao and Wu, “Home of the Sunny Sea”.

142 Li, “The People’s Liberation Army Navy as an Evolving Organization”, p. 342-327.

the Xisha Maritime Garrison Command received the Luzhou (泸州), a new Type 056 Jiangdao-class corvette, in the mid-2010s.¹⁴³



Figure 13: The Luzhou, a Type 056 Jiangdao-class corvette, hull number 592 (Source: Xinhua Net¹⁴⁴)

3rd Radar Brigade

The 3rd Radar Brigade (雷达兵第三旅) operates radar installations on Woody Island. The brigade is part of the PLAN's naval aviation branch and is based in Hainan. Recorded Future judges with high confidence that Unit 92261 is the 3rd Radar Brigade's MUCD.

Organizational Structure

The 3rd Radar Brigade is almost certainly a division deputy leader-grade unit, as brigades are division deputy leader-grade units.¹⁴⁵ A likely 3rd Radar Brigade leader was photographed in 2019 wearing senior colonel rank shoulder epaulets and a set of officer ribbons that would correspond to either a division leader or division deputy leader grade.¹⁴⁶ However, the picture is not high enough resolution to precisely determine the individual's grade. The 3rd Radar Brigade has the standard set of first-level departments as well as various subordinate battalions.¹⁴⁷

143 Wang, Xiong, and Xue, "Xisha Guardian"; Dai Chenwei [代陈伟], "Type 056 Light Corvette 'Luzhou' Will Officially Enter the Chinese Navy" [056型轻护卫舰“泸州舰”即将正式入列中国海军], Sichuan Online [四川在线], June 4, 2014, https://luzhou.scol.com.cn/xw/content/2014-06/04/content_51570073.htm?node=154463.

144 "High Resolution: Inventory Already 20 of the Type 056 Corvettes Have Been Numbered" [高清图：盘点已经刷号的20艘056护卫舰], Xinhua Net [新华网], February 5, 2015, http://www.xinhuanet.com/mil/2015-02/05/c_127460135_15.htm.

145 Allen, "Introduction to the PLA's Organizational Reforms", p.69-70.

146 "Meilan District Holds '8-1' Visit to Forces Activities" [美兰区开展“八一”走访慰问部队活动], Haikou City Meilan District People's Government Net [海口市美兰区人民政府门户网站], July 25, 2019, http://mlqzf.haikou.gov.cn/ztlz/sygz/202004/t20200401_1499152.html.

147 "Provincial Double Support Work Assessment Group Arrives in Meilan District to Inspect Creating 11th National Double Support Model Work" [省双拥工作考评组到美兰区检查考评创建第十一届全国双拥模范城工作], Haikou City Meilan District People's Government Net [海口市美兰区人民政府门户网站], June 3, 2020, http://mlqzf.haikou.gov.cn/ztlz/sygz/202009/t20200930_1539155.html; "Party Committee Member and Deputy Investigator: Ye Fengyu" [党委委员、副调研员：叶逢宇], "Haikou City Distribution Cooperative Society" [海口市供销合作社联合社], September 9, 2016, https://www.bjzyh.com/html/jgznlbzb.201210t20121008_538473.html; Liu Zhenling Resume" [刘振岭简历], Haikou City Medical Support Bureau [海口市医疗保障局], February 25, 2021, <http://ybj.haikou.gov.cn/jgjs/ldxx/detail?id=418>.

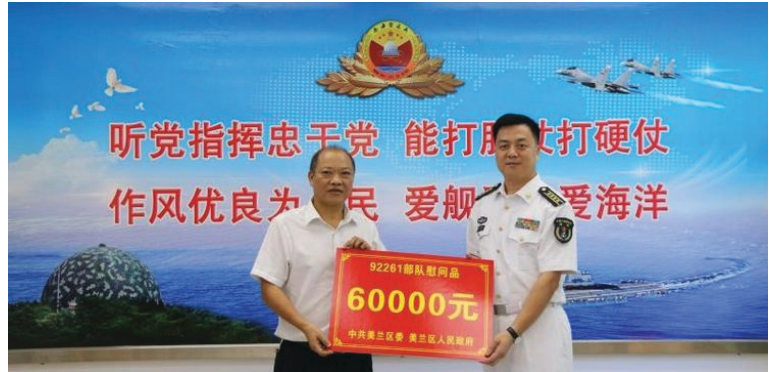


Figure 14: Likely 3rd Radar Brigade leader pictured in 2019 (Source: Haikou City Meilan District People's Government Net¹⁴⁸)

The 3rd Radar Brigade's presence on Woody Island is likely organized as a battalion. The resume of Liu Zhenling (刘振岭), a former 3rd Radar Brigade officer, reveals that between February 2007 and May 2010 Liu served as a battalion leader-grade political instructor for the "Navy Radar 3rd Brigade 4th Battalion Woody Island Central Radar Station".¹⁴⁹ Likewise, various bulletins posted to the website of Sansha City have referenced a "Yongxing Radar Battalion" and a radar battalion on Woody Island.¹⁵⁰ A procurement document from late 2020 suggests that the 3rd Radar Brigade's presence on Woody Island might be known as Unit 92261 Subunit 66 (92261部队66分队).¹⁵¹

Duties

During our review of publicly available Chinese-language sources, Recorded Future did not observe any specific descriptions of the 3rd Radar Brigade's activity in the South China Sea. The brigade's battalion on Woody Island, like other PLAN radar brigades, presumably carries out ground-based air surveillance.¹⁵²

Facilities and Assets

Procurement records indicate that the 3rd Radar Brigade is based out of Haikou, Hainan and that it maintains stations

148 "Meilan District Holds '8-1' Visit to Forces Activities".

149 "Liu Zhenling Resume".

150 Hong Yuanyuan [洪媛媛], "Our City 8-1 Military Greeting Group Greets Forces Stationed on the Island" [我市八一拥军慰问团慰问驻岛部队], Sansha City People's Government Net [三沙市人民政府网], July 28, 2016, <http://www.sansha.gov.cn/sansha/zcqmfcjdt/201607/2b0d4fbb2b874f81a3ac1ef81a5ccf9a.shtml>; Wang Beibei [王蓓蓓], "Xiao Jie: Promote Military-Civil Deep Fusion-Style Development, Build A Firm South China Sea Great Wall" [肖杰：推进军口深度融合式发展 筑牢南海长城], Sansha City People's Government Net [三沙市人民政府网], October 19, 2015, <http://www.sansha.gov.cn/sansha/ssscjgqmfhdzt/201510/8c9aef2959144a3084564e4fb879eea7.shtml>; Hong Yuanyuan [洪媛媛], "Military-Local Government United Working Together, Strongly Build South China Sea Great Wall of Steel" 军地戮力同心 筑牢南海钢铁长城], Sansha City People's Government Net [三沙市人民政府网], February 7, 2016, <http://www.sansha.gov.cn/sansha/sysdt/201602/ca860cbadfb422fa5ffa9c590bc21ff.shtml>.

151 Source documents held by Recorded Future.

152 Mark Stokes, "China's Air Defense Identification System: The Role of PLA Air Surveillance", Project 2049 Institute, May 9, 2014, <https://project2049.net/2014/05/09/chinas-air-defense-identification-system-the-role-of-pla-air-surveillance/>.

in other areas of Hainan, Guangxi, and Hunan.¹⁵³ In addition to describing the brigade as a unit deployed to Woody Island,¹⁵⁴ Chinese government websites have referenced both a “Woody Island Central Radar Station” and a “Yongxing Radar Station”.¹⁵⁵ It is unclear which specific radar facilities on Woody Island belong to the 3rd Radar Brigade and which belong to other PLA units. Recorded Future did not observe any explicit references to the 3rd Brigade having a presence elsewhere in the Paracel or Spratly Islands, though previous analyses have identified extensive radar installations on China’s outposts in the Spratly Islands.¹⁵⁶

Yongxing Airfield Station

The Yongxing Airfield Station (永兴场站) supports the aviation forces that operate from Woody Island. The airfield station is part of the PLAN’s naval aviation branch. Recorded Future judges with high confidence that Unit 91427 is the Yongxing Airfield Station’s MUCD.

Organization

The Yongxing Airfield Station, which is also sometimes called the Xisha Airfield Station (西沙场站),¹⁵⁷ is a regiment leader-grade unit.¹⁵⁸ It was almost certainly established in 1991 upon the completion of Woody Island’s airstrip.¹⁵⁹ It has standard first-level departments and divisions.¹⁶⁰ The airfield station also has subordinate entities like a communications company, oil

transportation branch, and security company.¹⁶¹ Additionally, the airfield station can flexibly organize emergency dispatch teams.¹⁶²

Duties

The Yongxing Airfield Station supports the aviation forces operating from Woody Island’s airstrip. This includes managing flight dispatch, commanding and coordinating support mechanisms, facilitating military-civilian communication, receiving radar signals, aircraft refueling, and meteorological support.¹⁶³ For instance, in late 2013 the Yongxing Airfield Station facilitated a continuous 4-day-long search and rescue effort that involved 8 different kinds of aircraft and 59 flights.¹⁶⁴ During this “high-density” operation, the airfield station dispatched high-altitude aircraft to serve as airborne command bridges for low-altitude aircraft, which had trouble maintaining their communications and radar connections when flying at an altitude of 20-30 meters.¹⁶⁵ To what extent the aviation forces operating from the Paracel Islands, such as naval aviation shipborne helicopter regiment subunits and aviation regiments,¹⁶⁶ maintain a permanent presence or deploy to the area temporarily is not clear.

The Yongxing Airfield Station also engages in activity oriented toward military-civil fusion. For instance, in July 2014 the Sansha City government and the Yongxing Airfield Station completed a 375-cubic meter “military-civilian jointly built preservation warehouse” that can preserve enough fresh fruits,

153 Source documents held by Recorded Future.

154 Hong Yuanyuan [洪媛媛], “Zhang Jun Greets Sprint Festival Holding Fast to Posts Cadre Staff and Officers” 张军慰问春节坚守岗位的干部职工和官兵, Sansha City People’s Government Net [三沙市人民政府网], February 5, 2019, <http://www.sansha.gov.cn/sansha/sysdt/201902/87414f7fdbb644a487c741896b981b07.shtml>.

155 “Liu Zhenling Resume”; Hong Yuanyuan [洪媛媛], “Our City Spring Festival Greeting Group Greets Forces Stationed on the Island” [我市春节慰问团慰问驻岛部队], Sansha City People’s Government Net [三沙市人民政府网], October 19, 2015, <http://www.sansha.gov.cn/sansha/ssscjgqmfhdzt/201510/a47025bfe1a34e53a910742ca3506449.shtml>.

156 Dahm, South China Sea Military Capabilities Series.

157 “Civil Aviation Administration Deputy Director Li Jian Visits Xisha to Greet Sanya Air Control Station Guard Station Personnel” [民航局副局长李健赴西沙慰问三亚空管站守站员工], China Government Net [中国政府网], January 10, 2012, https://china.gov.cn.admin.kyber.vip/gzdt/2012-01/10/content_2041081.htm; Li Xiaomin [李小敏] and Liu Shiping [刘世平], “Sanya Air Control Station and Xisha Airfield Station Troops Military Civil Fusion 1 Family” [三亚空管站与西沙场站部队军民融合一家亲], CAAC News [中国民航报], February 9, 2017, <http://114.251.214.233:81/pdf/files/zgmhb2017/zgmhb20170209/news-zgmhb-5367-20170209-m-003-300.pdf>.

158 “Hainan Province Committee Organization Department Publishes Cadre Before Appointment Announcement” [海南省委组织部发布干部任前公示], People Net [人民网], February 5, 2018, <http://renshi.people.com.cn/n1/2018/0205/c139617-29806016.html>.

159 “Liu Huaqing and Xisha Repaired Airport, Xisha Fortifications, and Nansha Reef Seizure” [刘华清与西沙修机场、西沙设防、南沙夺礁], China Military Net [中国军网], April 8, 2016, http://www.81.cn/2016xsxj/2016-04/08/content_6997685.htm; “Fan Chaogang” [范超纲], Hainan Province Development and Reform Commission [海南省发展和改革委员会], August 9, 2021, <http://plan.hainan.gov.cn/sfgw/0103/202108/12739947c6f9479fa1261cd9cb94c658.shtml>.

160 “Fan Chaogang”.

161 “Fan Chaogang”; “Announcement (2019 No. 2)” [公告 (2019年2号)], Ledong Party Building Net [乐东党建网], March 4, 2019, <http://www.lddj.gov.cn/blog/article/11607>; Zhai Xiangkun [翟向坤] and Chen Jiajie [陈佳杰], “A Naval Aviation Xisha Unit: ‘The Vast South China Sea Writes Loyalty, Woody Island Adds New Green’” [海军航空兵西沙某部：浩瀚南海写忠诚 永兴岛上添新绿], China Military TV Net [中国军视网], June 24, 2021, http://www.js7tv.cn/news/202106_250868.html.

162 Gao Hongwei [高宏伟] and Li Xuefeng [李雪峰], “Navy South Sea Fleet Aviation Fully Supports Airborne Search and Rescue Safety” [海军南海舰队航空兵全力保障空中搜救飞机安全], People Net [人民网], October 3, 2013, <http://politics.people.com.cn/n/2013/1004/c70731-23102454.html>.

163 “Navy South Sea Fleet Aviation Fully Supports Airborne Search and Rescue Safety”.

164 “Navy South Sea Fleet Aviation Fully Supports Airborne Search and Rescue Safety”.

165 “Navy South Sea Fleet Aviation Fully Supports Airborne Search and Rescue Safety”.

166 Shang Xiaoxiao [商晓晓] and Yu Yan [余岩], “Xisha Sea Area Fishermen Suddenly Becomes Sick, Stationed on Island Navy Helicopters Urgently Rescue” [西沙海域渔民突发疾病 驻岛海军直升机紧急救援], PRC Ministry of National Defense [中华人民共和国国防部], www.mod.gov.cn/action/2018-05/24/content_4814902.htm; He Jiyuan [何继元], “Navy Aviation Flight Regiment 2 Helicopters Relay Transport Xisha Seriously Sick Soldier” [海军航空兵飞行团两架直升机接力转运西沙重病战士], People Net [人民网], March 4, 2018, <http://military.people.com.cn/n1/2018/0304/c1011-29846580.html>.

vegetables, and meat for over 800 people for 15-20 days.¹⁶⁷ This warehouse is intended to improve the quality of life for soldiers stationed on the island, war preparedness training, and local emergency response capabilities.¹⁶⁸ The airfield station also reportedly coordinates flight safety with the Civil Aviation Administration's Sanya Air Control Station on Woody Island.¹⁶⁹ In July 2016, the Yongxing Airfield Station participated in a joint search and rescue exercise that involved the Xisha Maritime Garrison Command, the Sansha Garrison Command, the CCG, Sansha City's maritime militia, the SCLE, and other participants. Likewise, the Yongxing Airfield Station has participated in joint rescue operations with the Xisha Maritime Garrison Command and civilian entities in Sansha City.¹⁷⁰



Figure 15: A PLAN transport helicopter and a refueling truck on Woody Island's airstrip (Source: PRC Ministry of National Defense¹⁷¹)

Facilities and Assets

The Yongxing Airfield Station likely operates numerous facilities on and near Woody Island's airstrip, such as the hangars lining the airship that house fixed- and rotary-wing military aircraft.¹⁷² Recent state media reporting suggests that the cluster of facilities adjacent to the airstrip on northeastern

Woody Island, which were finished around early 2016, are a distinct military area belonging to the Yongxing Airfield Station.¹⁷³



Figure 16: Satellite image from June 2019 showing the likely Yongxing Airfield Station facilities on the northeastern side of Woody Island (Source: Google Earth)

The Yongxing Airfield Station also has a bookstore. The airfield station jointly opened Sansha Phoenix Xinhua Yongxing Bookstore (三沙凤凰新华永兴书屋) on Woody Island with Hainan Phoenix Xinhua Publishing Co., Ltd. (海南凤凰新华出版发行有限责任公司) in 2018.¹⁷⁴ Corporate records list the bookstore's registered location as the "grassroots company classroom" of the Yongxing Airfield Station.¹⁷⁵



Figure 17: PLAN personnel gathered for a presentation inside the Sansha Phoenix Xinhua Yongxing Bookstore (Source: Sohu¹⁷⁶)

167 Li Xueshan [李学山], "People Net: Sansha Military-Civilian Jointly Built Preservation Warehouse Enters Into Use, Supports Military-Civilian Life Supply" [人民网: 三沙军民共建保鲜库投入使用 保障军民生活补给], Sansha City People's Government Net [三沙市人民政府网], October 19, 2015, <http://www.sansha.gov.cn/sansha/mtbd/201510/d8a2acdf98b641ee973a7e921328fd89.shtml>; Ma Yuefeng [马跃峰] and Zhang Haiyan [张海燕], "Hainan Sansha Xisha Islands and Reefs First Fledgling Town Born" [海南三沙西沙岛礁首个城镇雏形诞生], People Net [人民网], July 27, 2014, <http://politics.people.com.cn/n/2014/0727/c1001-25348639.html>.

168 Li, "Sansha Military-Civilian Jointly Built Preservation Warehouse Enters Into Use".

169 "Sanya Air Control Station and Xisha Airfield Station Troops Military Civil Fusion 1 Family"; "Civil Aviation Administration Deputy Director Li Jian Visits Xisha to Greet Sanya Air Control Station Guard Station Personnel".

170 Zhu Yong [朱永], "Sansha City Coordinates Multiple Departments to Successfully Turn a Patient Away From Danger" [三沙市协调多部门成功使一名患者转危为安], China National Radio Net [中国广播网], April 4, 2014, http://news.cnr.cn/native/city/201404/t20140404_515226087.shtml.

171 Shang and Yu, "Xisha Sea Area Fishermen Suddenly Becomes Sick".

172 Satellite imagery available on Google Earth shows fixed- and rotary-wing military aircraft entering and exiting these hangars.

173 "A Naval Aviation Xisha Unit".

174 Ni Wei [倪伟], "Sansha Phoenix Xinhua Yongxing Bookstore Unveiled" [三沙凤凰新华永兴书屋揭牌], Hainan Phoenix Xinhua Publishing Co., Ltd. [海南凤凰新华出版发行有限责任公司], May 22, 2018, <http://www.hnbookstore.com.cn:8080/Item/Show.asp?m=1&d=3899>.

175 Source documents held by Recorded Future.

176 "[Important News] People's Press Director Huang Shuyuan, Etc. Unveil Sansha Phoenix Xinhua Yongxing Bookstore" [【要闻】人民出版社社长黄书元等为三沙凤凰新华永兴书屋揭牌], Sohu [搜狐], May 21, 2018, https://www.sohu.com/a/232375690_249364.

Sansha Garrison Command

The Sansha Garrison Command (三沙警备区) is the focal point of China's national defense mobilization system in the South China Sea. The garrison's most important duties are training and commanding Sansha City's maritime militia, a paramilitary force that masquerades as civilian fishermen. It has facilities on Woody Island and Hainan, including in Haikou, Wenchang, Sanya, and Danzhou. The establishment of this garrison in 2012 is among the most significant changes to the PLA's organization on China's outposts in the past decade. Recorded Future did not identify an MUCD associated with the Sansha Garrison Command.

Organizational Structure

China's Central Military Commission (CMC) approved the establishment of the PLA Hainan Province Sansha Garrison Command as division leader-grade organization on Woody Island in July 2012.¹⁷⁷ Garrisons in prefecture-level cities are subordinate to provincial military commands,¹⁷⁸ meaning that the Sansha Garrison Command is subordinate to the Hainan Province Military Command (海南省军区),¹⁷⁹ which was initially under the Guangzhou Military Region and is now under the CMC National Defense Mobilization Department.¹⁸⁰

At the same time, prefectural garrisons also answer to their city's Chinese Communist Party (CCP) committee and government.¹⁸¹ The leadership of the Sansha Garrison Command often overlaps with the leadership of Sansha City. Garrison commanders and political commissars have, at times, served on the standing committee of Sansha City's CCP committee,¹⁸² which

is the highest decision-making body in the city. Moreover, Sansha City's party secretary and mayor generally serves as the first secretary of the Sansha Garrison Command's party committee,¹⁸³ a standard arrangement for local PLA commands.¹⁸⁴

Publicly available sources have referenced several departments and offices under the Sansha Garrison Command over the years, including a headquarters department (司令部),¹⁸⁵ political work department (政治部),¹⁸⁶ political work division (政治工作处),¹⁸⁷ mobilization division (动员处),¹⁸⁸ support division (保障处),¹⁸⁹ and war preparedness building division (战备建设处).¹⁹⁰ Recorded Future observed recent evidence of other garrison commands in prefecture-level cities having first-level departments named as divisions (处), such as political work divisions,¹⁹¹ rather than departments (部) despite clearly still being division leader-grade organizations.¹⁹²

177 Wang Hongshan [王洪山] and Ceng Zhengxiong [曾政雄], "Central Military Commission Approves and Agrees to Organize Sansha Garrison Command, Is a Division-Level Unit" [中央军委批复同意组建三沙警备区 为正师级单位], China Net [中国网], July 23, 2012, <https://perma.cc/XT74-6WWB>.

178 China's National Defense in 2006, china.org.cn, <http://www.china.org.cn/english/features/book/194483.htm>.

179 "Ministry of National Defense: Sansha Garrison Command Main Leaders Have Been Appointed".

180 Wang and Ceng, "Central Military Commission Approves and Agrees to Organize Sansha Garrison Command"; Conor M. Kennedy and Andrew S. Erickson, China Maritime Report No. 1: China's Third Sea Force, The People's Armed Forces Maritime Militia: Tethered to the PLA (China Maritime Studies Institute, 2017), p. 6-7, <https://digital-commons.usnwc.edu/cmsi-maritime-reports/1/>; Huang Xianguo [黄献国] and Zhang Guofu [张国富], "Provincial Military District System Examination Civilian Personnel Interview Work Successfully Finished" [省军区系统招考文职人员面试工作圆满结束], China Military Net [中国军网], November 22, 2018, http://www.81.cn/jwgz/2018-11/22/content_9353414.htm.

181 China's National Defense in 2006.

182 "Comrade Zhu Mingjiang Resume" [朱明江同志简历], Sansha City People's Government Net [三沙市人民政府网], July 1, 2019, <https://perma.cc/KTE7-ACS4>; Wang Xiaobin [王晓斌], "Sansha City Promotes Military, Law Enforcement, and Civilian Joint Defense Mechanism, Constructs Three-Line Maritime Rights Defense Structure" [三沙市推动军警民联防机制 构建三线海上维权格局], People Net [人民网], November 22, 2014, <https://perma.cc/CD6V-UL7J>; "Comrade Zha Mingfa Resume" [查名发同志简历], Sansha City People's Government Net [三沙市人民政府网], March 22, 2021, <http://www.sansha.gov.cn/sansha/sssrmljds/202103/7b3d623073af400dbe50822463607e70.shtml>.

183 "Sansha Maritime Militia Company Established, Male and Female Militia Members' Shoulders Carry 56 Rifles and Swear Oaths" [三沙海上民兵连成立 男女民兵肩挎 56 步枪宣誓], Observer [观察家], July 23, 2013, <https://perma.cc/V2VP-7QP9>; Peng Zi'e [彭子娥], "Zhang Jun Goes to Sansha Garrison Command for Investigation" [张军赴三沙警备区调研], Sansha City People's Government Net [三沙市政府网], April 18, 2019, <https://perma.cc/WH4L-DAZD>.

184 Dennis J. Blasko, "Chapter Eight: The PLA Army/Ground Forces", in The PLA as Organization v.2.0., p. 273.

185 Zhang Baoyin [张宝印] and Jia Qilong [贾启龙], "Sansha Garrison Command Uses Mission and Unyielding to Forge the Rights Defense Vanguard for the National Guarding Sea" [三沙警备区用使命和血性锻造为国守海的维权尖兵], People Net [人民网], October 11, 2016, <https://perma.cc/Y2NY-GPP5>.

186 "Foreign Fishing Boats Break Into Sansha Garrison Command, Saw Militia Wearing Camouflage and Turned Around and Fled" [外籍渔船闯三沙警备区 见穿迷彩民兵掉头就逃], China Net [中国网], November 7, 2016, <https://perma.cc/J7ML-Q8DS>.

187 Tao Deyan [陶德言], Zhang Xuanjie [张选杰], Tian Baojian [田宝剑], and Li Bingfeng [李兵峰], "New Era National Trip (19): Sansha People, Sansha Emotion [新时代国门行 (19): 三沙人 三沙情], Reference News Net [参考消息网], November 8, 2018, <http://www.ckxx.net/pinglun/p/130412.html>.

188 Source documents held by Recorded Future.

189 Source documents held by Recorded Future.

190 Jia Qilong [贾启龙], "National Defense Mobilization System Posts Meritorious Advanced Deeds Report Meeting Held in Beijing" [国防动员系统岗位建功先进事迹报告会京举行], Xinhua Net [新华网], October 16, 2019, http://www.xinhuanet.com/mil/2019-10/16/c_1210313990.htm.

191 "CCP Shenzhen City Party Committee Propaganda Department, Shenzhen City Bureau of Veterans Affairs, and PLA Guangdong Province Shenzhen Garrison Political Work Division's Announcement on Studying 10 'Shenzhen Most Beautiful Veterans' Including Comrade Sun Zhuoqing" [中共深圳市委宣传部 深圳市退役军人事务局 中国人民解放军广东省深圳警备区政治工作处关于向孙卓清同志等 10 名"深圳最美退役军人"学习的通知], Shenzhen City People's Government Net [深圳市人民政府门户网站], August 2, 2021, http://www.sz.gov.cn/cn/xgk/zfxg/tzgg/content/post_9034146.html.

192 "Shenzhen City Veterans Affairs Bureau Firmly Holds 2020 Spring Festival Visiting and Greeting Grassroots Forces Activities" [深圳市退役军人事务局扎实开展 2020 年春节走访慰问基层部队活动], Shenzhen City Veterans Affairs Bureau [深圳市退役军人事务局], January 23, 2020, http://tyjr.sz.gov.cn/zt/szsy/gzdt/content/post_6736846.html.



Figure 18: A Guangzhou Military Region patch visible on the right arm of the Sansha Garrison Command's political commissar in July 2013 (Source: China Daily¹⁹³)

The Sansha Garrison Command also oversees 4 grassroots-level People's Armed Forces Departments (PAFDs), which are responsible for militia work on Woody Island, the Qilian Islets (based on Tree Island), the Crescent Group (based on Drummond Island), and the Spratly Islands.¹⁹⁴ Like the Sansha Garrison Command, these PAFDs also answer to the municipal party-state's leadership.¹⁹⁵ When the Woody Island PAFD was created in 2015, a city official stated that "the establishment of grassroots People's Armed Forces Departments is Sansha City actively supporting national defense construction, realizing the organic combination of militia work and Sansha's construction and development, an important move for implementing the national military-civil fusion development strategy".¹⁹⁶ Grassroots PAFDs are non-active duty organizations staffed by local civilian cadres.¹⁹⁷

193 Zhu "Sansha Maritime Militia Company Established".

194 Wang Ziqian [王子谦] and Hou Kun [侯坤], "Hainan Province Sansha City 4 Grassroots People's Armed Forces Departments Established" [海南省三沙市4个基层人民武装部挂牌成立], People Net [人民网], January 7, 2015, <http://military.people.com.cn/GB/n/2015/0107/c1011-26339396.html>; "South China Sea Sansha Military and Civilians Use Desalinated Seawater, Go Online Using Mobile Phone Wifi Coverage" [南海三沙军民用上淡化海水 上网打手机WiFi覆盖], Xinhua Net [新华网], October 25, 2016, http://www.xinhuanet.com/mil/2016-10/25/c_129336471.htm; Wang Ziqian [王子谦] and Peng Zi'e [彭子娥], "Sansha Drummond Island Law Enforcement Rescue Center Completed, Vegetables Greenhouse Enters Use" [三沙晋卿岛执法救助中心竣工 蔬菜大棚投入使用], China News Net [中国新闻网], July 27, 2016, <http://www.chinanews.com/gn/2016/07-27/7953176.shtml>; "Me and My Party Branch for the Blue Ancestral Sea" | [我和我的党支部 | 为了那片蓝蓝的祖宗海], Sina [新浪], August 28, 2021, <https://cj.sina.com.cn/articles/view/2465568263/92f59607019014ix1>; Feng Xing [冯星], "Actively Support National Defense Construction, Sansha City Grassroots People's Armed Forces Department Opened" [积极支持国防建设 三沙市基层武装部今挂牌], Huanqiu Net [环球网], January 6, 2015, <https://china.huanqiu.com/article/9CaKrNJGrk6>.

195 Wang and Hou, "Hainan Province Sansha City 4 Grassroots People's Armed Forces Departments Established".

196 Feng, "Actively Support National Defense Construction".

197 China's National Defense in 2006; Kennedy and Erickson, China's Third Sea Force, p. 3; Blasko, "The PLA Army/Ground Forces", p. 272.

Duties

State media coverage of the garrison's establishment in 2012 suggested that the garrison would be responsible for national defense mobilization and militia preparation work, coordinating military-local relations, commanding the "military operations and missions" of militia forces, and supporting local disaster relief and rescue efforts.¹⁹⁸ In the years since 2012, the Sansha Garrison Command has worked to train Sansha City's maritime militia, which the city had established in July 2013 based on the old Paracel Islands militia.¹⁹⁹ By July 2016, the force had reportedly grown to more than 1,800 personnel and over 100 vessels,²⁰⁰ including both militiamen stationed on various Chinese outposts as well as a steel-hulled fleet that deploys from Hainan.²⁰¹

Procurement records from 2019 reveal that the Sansha Garrison Command Mobilization Division has militia bases with training facilities near the Yazhou (崖州) and Baimajing (白马井) ports in Hainan.²⁰² These are 2 of the 3 main ports that the Sansha City maritime militia fleet uses, the third being Qinglan (清澜).²⁰³ Reporting in state media reveals that the Sansha Garrison Command provides training in navigation, communications, international law, regional military dynamics, and other subjects both on Hainan and on the islets within Sansha City's jurisdiction.²⁰⁴

198 Wang and Ceng, "Central Military Commission Approves and Agrees to Organize Sansha Garrison Command".

199 Zhu Yong [朱永], "Sansha Maritime Militia Company Established, Soldiers' Shoulders Carry 56 Rifles and Swear Oaths" [三沙海上民兵连成立 战士肩挎 56 步枪宣誓], China Daily [中国日报], July 23, 2013, <https://perma.cc/J49S-YKCR>.

200 Guo, "The Motherland's 'Southern Gate' Becomes a 'Great Wall of Steel'".

201 Haver, "Unmasking China's Maritime Militia".

202 Source documents held by Recorded Future.

203 Haver, "Unmasking China's Maritime Militia".

204 Hou Kun [侯坤] and Yang Zhongfeng [阳宗峰], "Sansha Militiamen Patrolling the South China Sea with Staring Eyes" [三沙民兵瞪大眼睛巡南海], China Military Net [中国军网], January 27, 2016, <https://perma.cc/G3TV-YURH>; Wang Da [王达], "Sansha Militia, An Elite Reserve Contingent Defending the Motherland's Sea and Reefs" [三沙民兵 保卫祖国海礁的后备劲旅], China Youth Daily [中国青年报], November 7, 2016, <https://perma.cc/EG6P-KEWM>; Zhang and Jia, "Sansha Garrison Command Uses Mission and Unyielding to Forge the Rights Defense Vanguard for the National Guarding Sea"; Wu Shaoyuan [吴绍渊], "Wu Shaoyuan: Sansha's Peculiarity is Becoming More Prominent" [吴绍渊：三沙市的特殊性日渐凸显], China Military Net [中国军网], April 14, 2016, <https://perma.cc/RT56-Z6RQ>.

The Sansha Garrison Command is almost certainly responsible for commanding most of the city's maritime militia operations, though local party-state authorities appear to have a role as well.²⁰⁵ Under the garrison, Sansha City's maritime militia slots into a broader "military, law enforcement, and civilian joint defense" (军警民联防) system designed to protect China's maritime rights and interests.²⁰⁶ In practice, the system facilitates the joint command of Sansha City's maritime militia and maritime law enforcement forces.²⁰⁷ State media reporting indicates that, through this system, the Sansha Garrison Command has some degree of command authority over the city's maritime law enforcement forces as well as its maritime militia.²⁰⁸ The joint command process very likely runs through a military, law enforcement, and civilian joint defense command center located on Woody Island,²⁰⁹ which is visible at the following coordinates: 16°49'57.10"N, 112°20'7.87"E (UTM: 49 N 642293 1861509; MGRS: 49Q FU 42293 61508).

In addition to the Sansha Garrison Command, Sansha City's joint defense system appears to involve other PLA units like the Xisha Maritime Garrison Command and Yongxing Airfield Station.²¹⁰ However, this joint defense system purposefully relies on ostensibly civilian forces, such as maritime law enforcement agencies and maritime militia units, rather than PLA combat forces.²¹¹ Such an approach allows Sansha City to defend China's claims without sparking a major armed conflict.

Facilities and Equipment

On Woody Island, the Sansha Garrison Command appears to share office space with Sansha City's CCP committee and government.²¹² Procurement records reveal that the garrison maintains a reportedly 8,351-square meter compound in the Xiuying District (秀英区) of Haikou and facilities in the Qinglan port area of Wenchang in addition to the aforementioned militia bases near the Yazhou and Baimajing ports.²¹³ The address of the Xiuying District compound is "Binhai Road No. 104, Haikou City" (海口市滨海大道104号).²¹⁴ Baidu Maps and Google Earth searches

confirm the presence of a compound at this address, which is visible at the following coordinates: 20° 1'26.26"N, 110°16'35.71"E (UTM: 49 N 424337 2214296; MGRS: 49Q DC 24337 14296).



Figure 19: Sign showing the address of "Binhai Road 104-1" (滨海大道104-1) and a compound that likely belongs to the Sansha Garrison Command (Source: Baidu Maps)

In late 2015, the Sansha Garrison Command received the PLA Ground Force (PLAGF) GY820 Comprehensive Support Ship.²¹⁵ State media reporting indicates that the ship is 90 meters long, 14.6 meters wide, displaces 2,700 tons, and can withstand journeys of up to 3,000 nautical miles.²¹⁶ It has a helicopter pad and can transport main battle tanks, smaller boats, and other such vehicles.²¹⁷ Procurement records confirm this vessel to be a 90-meter-long Type 701 Comprehensive Support Ship.²¹⁸ The Sansha Garrison Command has also invested in unmanned systems, as demonstrated by a tender for 11 unmanned aerial vehicles (UAVs) in mid-2020.²¹⁹



Figure 20: The GY820 Comprehensive Support Ship (Source: China Military TV Net²²⁰)

205 Haver, Sansha City in China's South China Sea Strategy, p. 29-30, 38-43.

206 The phrase "maritime rights and interests" refers to China's maritime claims.

207 Haver, Sansha City in China's South China Sea Strategy, p. 40-43.

208 "Foreign Fishing Boats Break Into Sansha Garrison Command"; Fei Lei [费磊], "Fisheries Administration, Marine Surveillance, and Coast Guard Mechanism Coordination, Sansha Maritime Rights Defense Law Enforcement System is Improving Daily" [渔政海监海警机制协同 三沙海上维权执法体系日渐完善], China National Radio Net [中国广播网], May 23, 2013, <https://perma.cc/HVS2-CPZR>.

209 Haver, Sansha City in China's South China Sea Strategy, p. 40-41.

210 Xue, "Military, Law Enforcement, and Civilian Joint Biandui First Patrol in the Xisha Islands and Reefs, Duration of 5 Days and 4 Nights"; "Sansha Sea Area Successfully Holds First Sea-Air Three Dimensional Joint Search and Rescue Exercise".

211 Haver, Sansha City in China's South China Sea Strategy, p. 1, 10-11, 32-43.

212 Zhu, "Sansha Maritime Militia Company Established".

213 Source documents held by Recorded Future.

214 Source documents held by Recorded Future.

215 Chang Xin [常鑫], "China Military TV Reporter Probes the Unknown: Largest Displacement Ship GY820 Support Ship" [中国军视网记者探秘：排水量最大船艇GY820保障船], China Military TV Net [中国军视网], September 25, 2016, http://www.js7tv.cn/news/201609_62497.html.

216 Chang, "China Military TV Reporter Probes the Unknown".

217 Chang, "China Military TV Reporter Probes the Unknown".

218 Source documents held by Recorded Future.

219 Source documents held by Recorded Future.

220 Chang, "China Military TV Reporter Probes the Unknown".

Unit 91531

Unit 91531 (91531部队) provides engineering support in the South China Sea. Due to a lack of publicly available information, Recorded Future cannot provide a high-confidence judgment of Unit 91531's true identity (TUD) at the time of this writing, though it appears to be a PLAN engineering command (工程指挥部) or a unit subordinate to a PLAN engineering command. The unit has a documented presence on Woody Island and is likely active elsewhere in the South China Sea.

Organizational Structure

Unit 91531 is very likely either a division leader-grade PLAN engineering command or a division leader-grade unit under a higher-level PLAN engineering command, such as the South Sea Fleet Engineering Command (南海舰队工程指挥部).²²¹ A bulletin posted to Sansha City's website in October 2014 identifies individuals named Fan Jiyong (樊继永) and Chen Qijiang (陈启坚) as the commander and political commissar of Unit 91531, respectively.²²² 2017 state media reports identify Fan and Chen as the commander and political commissar of a work area (工区) under a "newly organized" engineering command, referred to as "a Navy engineering unit", and show Chen wearing division leader grade and senior colonel rank insignia.²²³ This reporting specifies that the work area has first-level departments, such as a political department,²²⁴ and a 2016 Sansha City bulletin lists a work area among various military and law enforcement units on Woody Island.²²⁵ This evidence suggests that the work area could be a distinct unit with its own grade and MUCD. Woody Island was previously home to a division leader-grade

"Xisha Engineering Command" (西沙工程指挥部),²²⁶ but the Xisha Engineering Command's relationship to the "newly organized" engineering command and its work area is unclear.



Figure 21: Unit 91531 Political Commissar Chen Qijiang wearing division leader-grade officer ribbons and senior colonel rank shoulder epaulets (Source: Sohu²²⁷)

Duties

Unit 91531 assists infrastructure construction efforts on Woody Island and elsewhere in the South China Sea, which involves working closely with the civilian authorities in Sansha City. As discussed previously, Unit 91531 worked with the Xisha Maritime Garrison Command and the Sansha City government to create a military-local government work coordination mechanism and draft the "Sansha City Double Support Projects Management Provisional Measures" to standardize the management and operation of military-civil fusion projects.²²⁸ In February 2016, state media reported that Unit 91531 had "played an important role in the construction of Sansha City's infrastructure and

221 "Our City Spring Festival Supporting Military Greeting Group Greets South Sea Fleet Officers and Soldiers" [我市春节拥军慰问团慰问南海舰队官兵], Sansha City People's Government Net [三沙市人民政府网], January 20, 2014, <http://www.sansha.gov.cn/sansha/sysdt/201401/fddb5be3929a44629726f2d18105c4c6.shtml>.

222 Hong Yuanyuan [洪媛媛], "Our City and Unit 91531 Hold Military-Local Government Coordination Conference" [我市与91531部队召开军地协调座谈会], Sansha City People's Government Net [三沙市人民政府网], October 22, 2014, <http://www.sansha.gov.cn/sansha/zcqmfmfcjdt/201410/5092671e7b324545881aff2098009030.shtml>.

223 Xiao and Wu, "Home of the Sunny Sea"; Deng Xiuguang [邓曦光] and Li Hongguang [李红光], "I Am Young, Can Take the Burden! Carrying Sickness Held Fast to National Defense Engineering Frontlines for 570 Days, He Used His Life To Protect the Motherland's Coastal Frontier" ["我年轻，扛得住"！带病坚守国防工程一线570多天，他用生命守卫祖国海疆], Sohu [搜狐], July 13, 2017, https://www.sohu.com/a/156868754_259558; "Seeing the Sea as Family, Seeing Work as Life".

224 Xiao and Wu, "Home of the Sunny Sea".

225 "Promote Military-Civil Deep Fusion-Style Development".

226 "PLA Fengxian Division Deputy-Level and Higher Military Control List" [解放军奉贤副师级以上军官名录], Shanghai Local History Office [上海地方志办公室], June 27, 2018, http://61.129.65.112/dfz_web/DFZ/Info?idnode=177667&tableName=userobject1a&id=244964; "Zhanjiang City People's Government Mayor and Deputy Mayor Resumes" [湛江市人民政府市长副市长简历], Southern Net [南方网], April 23, 2003, <https://web.archive.org/web/20060212171939/http://www.southcn.com/news/dishi/zhanjiang/shizheng/200304230026.htm>; "1974 China-Vietnam Xisha Sea Battle: Little Known Details" [1974年中越西沙海战：鲜为人知的细节], Phoenix Net [凤凰网], December 11, 2007, https://news.ifeng.com/history/1/200712/1211_335_327978_2.shtml.

227 Deng and Li, "I Am Young, Can Take the Burden!".

228 "Military-Civil Fusion Jointly Writes Sansha Development New Chapter"; Hong, "Our City and Unit 91531 Hold Military-Local Government Coordination Conference".

military-civilian shared airport”,²²⁹ referring to the airport attached to Woody Island’s airstrip. Unit 91531 personnel reportedly oversee the coordination, organization, arrangement, planning, and review of construction plans, personnel deployments, and building materials transportation in the South China Sea, which includes specific tasks like managing safety inspections, organizing the loading and unloading of materials, and coordinating communications.²³⁰ The unit also works with China Communications Construction Company (CCCC) personnel.²³¹



Figure 22: Unit 91531 personnel pictured working alongside a likely CCCC engineer (Source: Sohu²³²)

Facilities and Assets

Recorded Future did not identify any specific facilities or assets belonging to Unit 91531. The unit has a documented presence on Woody Island;²³³ it is likely active elsewhere in the South China Sea as well. The unit likely also has a presence in Sanya, Hainan, as numerous academic articles authored by individuals affiliated with Unit 91531 list the unit’s location as Sanya.²³⁴

Xisha Satellite Observation Station

The Xisha Satellite Observation Station (西沙卫星观测站) supports space launches and helps manage assets already in orbit. The station is part of the PLASSF Space Systems Department and is located on Duncan Islands in the Crescent Group of the Paracel Islands. It is also associated with addresses in Wenchang, Hainan. Recorded Future judges with high confidence that Unit 63813 is the Xisha Satellite Observation Station’s MUCD. The operationalization of the Xisha Satellite

Observation Station is among the most significant changes to the PLA’s organization on China’s outposts in the past decade.

Organizational Structure

The Xisha Satellite Observation Station, sometimes referred to as the Xisha Tracking and Control Station (西沙测控站),²³⁵ falls under the Wenchang Spacecraft Launch Site (文昌航天发射场) in Wenchang, Hainan.²³⁶ In turn, the Wenchang launch site is subordinate to the corps leader-grade Xichang Satellite Launch Center (西昌卫星发射中心) in Sichuan.²³⁷ The Wenchang launch site also oversees the Tongguling Tracking and Control Station (铜鼓岭测控点),²³⁸ which is located near the southeastern tip of Hainan. According to a 2015 bulletin posted to Sansha City’s website, the leaders of the Xichang Satellite Launch Center regularly meet with the local party-state officials responsible for administering the Crescent Group, which includes Duncan Islands.²³⁹ Recorded Future judges with high confidence that:

- Unit 63790 is the MUCD of the Xichang Satellite Launch Center
- Unit 63811 is the MUCD of the Wenchang Spacecraft Launch Site Command and Control Center (文昌航天发射场指控中心)
- Unit 63810 and Unit 63812 are also MUCDs associated with the Wenchang Spacecraft Launch Site

235 Li Guoli [李国利], “Long March 7 First Flight 4 Big Wonderful Instants” [长征七号首飞任务四大精彩瞬间], China Military Net [中国军网], June 27, 2016, http://www.81.cn/2016cz7h/2016-06/27/content_7122265_3.htm; “Wenchang Spacecraft Launch Site Project” [中国文昌航天发射场工程], China Association of Construction Enterprise Management [中国施工企业管理协会], <http://cacem.com.cn/entrepreneur/qualityengineer/getEngineer.do?id=108&&status=2>.

236 Wang Haitao [王海涛], “The Xisha Star Shining in the South China Sea—Remembering the Xisha Satellite Observation Station ‘Star of Xisha’ Advanced Group” [南海上耀眼的西沙星——记西沙卫星观测站“西沙之星”先进群体], China Military TV Net [中国军视网], July 28, 2020, http://www.js7tv.cn/news/202007_224792.html; “No Seconds Error, No Missed Frames, No Deviation At All—The Xisha Observation Station that Protected the Space Rocket in the South China Sea” [不差分秒 不漏一帧 不偏毫厘——南海上为火箭保驾护航的西沙卫星观测站], Xinhua Net [新华网], July 23, 2020, http://www.hq.xinhuanet.com/news/2020-07/23/c_1126277443.htm.

237 Peter Wood, Alex Stone, and Taylor A. Lee, China’s Ground Segment: Building the Pillars of a Great Space Power (China Aerospace Studies Institute 2021), p. 38-39, <https://www.airuniversity.af.edu/CASI/Display/Article/2517757/chinas-ground-segment-building-the-pillars-of-a-great-space-power/>; Allen, “Introduction to the PLA’s Organizational Reforms”, p. 66; Mark A. Stokes, “Prepared Statement of Mark A. Stokes Executive Director Project 2049 Institute Before The U.S.-China Economic and Security Review Commission”, April 25, 2019, <https://www.uscc.gov/sites/default/files/Mark%20Stokes%20USCC%2025%20April.pdf>.

238 Huang Guochang [黄国畅] and Li Jiayu [李季雨], “New Year Eve Dinner in Tongguling” [铜鼓岭的年夜饭], Xinhua Net [新华网], January 25, 2020, http://www.xinhuanet.com/local/2020-01/25/c_1125501805.htm.

239 Wang Beibei [王蓓蓓], “The Yongle Working Committee’s Passion for Supporting the Military” [永乐工委拥军情], Sansha City People’s Government Net [三沙市人民政府网], August 20, 2015, <http://www.sansha.gov.cn/sansha/zcqmfmccjdt/201508/b8ea2e463cab4bc38878798b3523e74a.shtml>.

229 Gao, “Sansha City Implements ‘Double Support 10 Major Projects’”.

230 Xiao and Wu, “Home of the Sunny Sea”; Deng and Li, “I Am Young, Can Take the Burden!”; “Seeing the Sea as Family, Seeing Work as Life”.

231 Deng and Li, “I Am Young, Can Take the Burden!”.

232 Deng and Li, “I Am Young, Can Take the Burden!”.

233 Hong, “Military-Local Government United Working Together”.

234 Chen Tengfe [陈腾飞], Xu Jinyu [许金余], Liu Shi [刘石], Wang Peng [王鹏], and Fang Xinyu [方新宇], “Experimental Study on Dynamic Mechanical Properties of Post-High-Temperature Sandstone” [经历不同高温后砂岩的动态力学特性实验研究], Explosion and Shock Waves [爆炸与冲击] 34, no. 2 (2014); Jiang Jiangbo [蒋江波], Zhang Qibin [张琦彬], and Lai Yangyi [赖洋羿], “The Experimental Research of Marine Engineering Magnesia-Phosphate Cement for Emergency Repair” [应急抢修用海工磷酸盐凝胶材料试验研究], Material Sciences [材料科学] 7, no. 4 (2017).

The Xisha Satellite Observation Station is very likely a regiment leader-grade unit and was reportedly created in 2009.²⁴⁰ A photograph from March 2019 appears to show the commander and political commissar of the Xisha Satellite Observation Station wearing 3 rows of officer ribbons with a purple center ribbon,²⁴¹ which indicates a regiment leader or regiment deputy leader grade, as well as colonel rank shoulder epaulets, a rank that corresponds with the regiment leader and division deputy leader grades. Moreover, the station reportedly had a logistics division (处) in 2015,²⁴² which is typical of regiment leader-grade units.²⁴³ The station also has a technical office (技术室).²⁴⁴



Figure 23: Photograph from 2019 that very likely depicts the commander (right) and political commissar (left) of the Xisha Satellite Observation Station (Source: Shenzhen Yantian Port Holdings Co., Ltd.²⁴⁵)

Xisha Satellite Observation Station personnel are often depicted wearing ostensibly civilian uniforms,²⁴⁶ sometimes adorned with “China Space” (中国航天) patches and insignia.²⁴⁷ Similar uniforms are worn by other known PLASSF Space Systems Department units,²⁴⁸ such as the Xiamen Tracking

and Control Station (厦门测控站),²⁴⁹ the Qingdao Tracking and Control Station (青岛测控站),²⁵⁰ and the Yuanwang 5 (远望5号) tracking and control ship.²⁵¹ These uniforms are likely intended to obfuscate the fact that China’s space program is largely under the PLA’s control.²⁵²



Figure 24: Xisha Satellite Observation Station personnel wearing uniforms marked with “China Space” patches and insignia (Source: China Net²⁵³)

Duties

As “the only deep-sea land-based observation station in [Chinese] territory”, the Xisha Satellite Observation provides radar and telemetry data capabilities during the last phase of ground observations for launches.²⁵⁴ Its specific duties include tracking, course measurement, and receiving and recording telemetry data.²⁵⁵ It also carries out long-term management duties for in-orbit spacecraft.²⁵⁶ By July 2020, the station had reportedly completed over 70 rocket observations and over 18,000 hours of satellite management missions.²⁵⁷ It supported the first Long March-5 launch, the Tianwen-1 Mars rover mission, and the first Long March-7 launch.²⁵⁸ Though some facilities

240 “No Seconds Error, No Missed Frames, No Deviation At All”.

241 “Joint-Stock Company Party Committee Went to Hainan for Cultural Exchange Activities” [股份公司党委赴海南进行文化交流活动], Shenzhen Yantian Port Holdings Co., Ltd. [深圳市盐田港股份有限公司], April 8, 2019, http://www.yantian-port.com/djgz/dwdt/202001/t20200112_6944.html.

242 “Drowning Tourists Close to Death, Stationed Officers and Soldiers Rescue” [溺水游客生命垂危 驻地官兵抢救脱险], Hainan Daily [海南日报], March 7, 2015, http://hnrh.hinews.cn/html/2015-03/07/content_12_3.htm.

243 Allen, “Introduction to the PLA’s Organizational Reforms”, p. 37, 70.

244 “National Outstanding Party Committee Members, National Outstanding Party Workers, and National Advanced Grassroots Party Organizations List” [全国优秀共产党员、全国优秀党务工作者和全国先进基层党组织名单], People Net [人民网], June 30, 2021, <http://henan.people.com.cn/n2/2021/0630/c351638-34800657-8.html>.

245 “Joint-Stock Company Party Committee Went to Hainan for Cultural Exchange Activities”.

246 “The Xisha Star Shining in the South China Sea”; Yu Xinhe [于欣禾] “Xisha Satellite Observation Station Completes High-Resolution Multi-Mode Satellite Tracking and Control Mission” [西沙卫星观测站圆满完成高分多模卫星测控任务], Zhihu [知乎], July 3, 2020, <https://zhuanlan.zhihu.com/p/154433137>.

247 Yu Xunhe [于欣禾] and Wang Yinghao [王应皓], “Xisha Satellite Observation Station Holds ‘Study Party History, Grind Original Intentions’ Activity” [西沙卫星观测站开展“学党史、砺初心”活动], China Net [中国网], July 3, 2021, http://photo.china.com.cn/2021-07/03/content_77603945.htm.

248 Wood, Stone, and Lee, China’s Ground Segment, p. 26-29, 40-42.

249 Zhang Mei [张梅] and Yuan Yitian [袁怡天], Xi’an Satellite Tracking and Control Center Xiamen Tracking and Control Station Completes ‘Tianlian-1 05’ Launch Tracking and Control Mission Record” [西安卫星测控中心厦门测控站圆满完成“天链一号05星”发射测控任务侧记], The Paper [澎湃], July 9, 2021, https://www.thepaper.cn/newsDetail_forward_13513815.

250 Yang Jia [杨佳] “Xi’an Satellite Tracking and Control Center Qingdao Tracking and Control Station Completes Shenzhou-12 Crewed Flight Launch Tracking and Control Mission Record [Pictures]” [西安卫星测控中心青岛测控站完成神舟十二号载人飞船发射测控任务侧记[组图]], China Net [中国网], June 17, 2021, http://photo.china.com.cn/2021-06/17/content_77573519.htm.

251 “Yuanwang 5 Ship Completes Maritime Tracking and Control Mission in Predetermined Pacific Ocean Sea Area” [远望5号船在太平洋预定海域单船圆满完成海上测控任务], Guiyang Broadcasting and Television [贵阳网络广播电视台], June 3, 2021, https://zggy.tianma3600.com/fccommon/Home/detail?site_id=75&detail_type=1&cid=31669.

252 Wood, Stone, and Lee, China’s Ground Segment, p. 20-24.

253 Yu and Wang, “Xisha Satellite Observation Station Holds ‘Study Party History, Grind Original Intentions’ Activity”.

254 “No Seconds Error, No Missed Frames, No Deviation At All”.

255 “Xisha Satellite Observation Station Completes High-Resolution Multi-Mode Satellite Tracking and Control Mission”; “No Seconds Error, No Missed Frames, No Deviation At All”.

256 No Seconds Error, No Missed Frames, No Deviation At All”.

257 “The Xisha Star Shining in the South China Sea”.

258 “The Xisha Star Shining in the South China Sea”.

in the ground segment of China's space infrastructure assist missile instrumentation,²⁵⁹ we did not observe any references to the Xisha Satellite Observation Station carrying out missile instrumentation duties.

Facilities and Assets

The Xisha Satellite Observation Station is located on the eastern side of Duncan Islands in the Crescent Group in the Paracel Islands. State media reports suggest that the station's facility was completed around 2014,²⁶⁰ and satellite imagery shows that the facility was finished around 2014 as well. The station, with its 4 large radomes, is visible at the following coordinates: 16°27'3.87"N, 111°42'49.71"E (UTM: 49 N 576199 1818966; MGRS: 49Q EU 76199 18966).

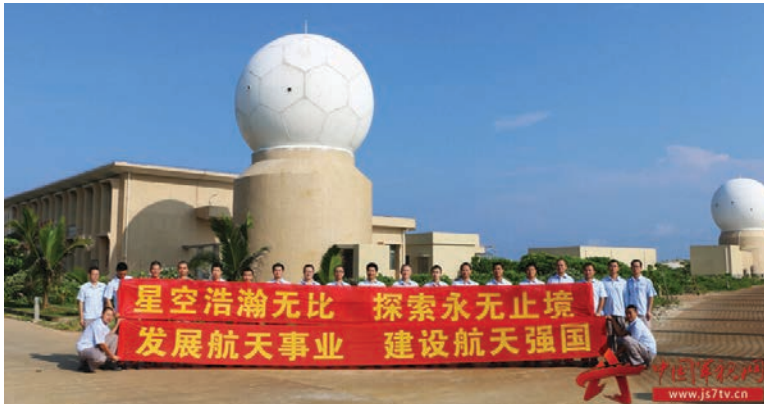


Figure 25: The Xisha Satellite Observation Station on Duncan Islands (Source: China Military TV Net²⁶¹)



Figure 26: A radar being assembled at the Xisha Satellite Observation Station (Source: China Military TV Net²⁶²)

259 Wood, Stone, and Lee, China's Ground Segment.

260 "The Xisha Star Shining in the South China Sea"; "No Seconds Error, No Missed Frames, No Deviation At All".

261 "The Xisha Star Shining in the South China Sea".

262 "The Xisha Star Shining in the South China Sea".

Procurement records and patents show that the Xisha Satellite Observation Station, the Wenchang Spacecraft Launch Center Command and Control Center, Unit 63810, and Unit 63812 all use various addresses in Wenchang, Hainan.²⁶³ These include addresses on Shugang Road (疏港路). A May 2018 video produced by Unit 63812 depicts a compound that almost certainly belongs to the Wenchang Spacecraft Launch Site.²⁶⁴ Searches on Baidu Maps and Google Earth reveal that this compound is located on Shugang Road, visible at the following coordinates: 19°32'24.26"N, 110°47'15.51"E (UTM: 49 N 477722 2160601; MGRS: 49Q DB 77722 60600).

Unit 92155

Unit 92155 (92155部队) very likely performs air defense duties on Woody Island. Due to a lack of publicly available information, Recorded Future cannot provide a high-confidence judgment of Unit 92155's true identity (TUD) at the time of this writing, though it appears to be the naval aviation air defense brigade based in Sanya, Hainan. This brigade has surface-to-air missiles (SAM), radar, and AAA capabilities.

Several pieces of evidence suggest that Unit 92155 is a PLAN naval aviation air defense unit. Since the early 2000s, individuals affiliated with Unit 92155 have consistently authored studies on SAM units, air defense battalions, island and reef air defense operations, air attack threat assessment, radar technology,

263 Source documents held by Recorded Future.

264 People's Liberation Army Unit 63812 [中国人民解放军63812部队], "Brain Hole Time | When a Spicy Female Soldier and Artistic Female Soldier Swap Souls..." [脑洞时间 | 当麻辣女兵与文艺女兵灵魂互换.....], China Military Net [中国军网], May 22, 2018, http://www.81.cn/zgnb/2018-05/22/content_8038851.htm.

coastal defense force exercises, and other similar topics.²⁶⁵ Many of these articles are co-authored with individuals affiliated with the former Navy Aviation Engineering Academy (海军航空工程学), which is now part of Naval Aviation University (海军航空大学).²⁶⁶ A number of these articles state that Unit 92155 is located in Sanya. Moreover, provincial party-state documents have listed Unit 92155 subunits as naval aviation units under the Southern Theater Command.²⁶⁷

Unit 92155 is very likely the naval aviation air defense brigade based out of Sanya. State media reports have referenced “a naval aviation air defense brigade” in Hainan under the Southern Theater Command that possesses SAM, radar, and AAA capabilities.²⁶⁸ This brigade has subordinate battalions, including

265 Guo Hengguang [郭恒光], Zhu Mo [朱默], and Jing Qin [敬沁], “Study of Sample Selection Method for Building Calibration Model of Near Infrared Spectroscopy of Jet Fuel” [喷气燃料近红外光谱建模样本选择方法研究], *Shandong Chemical Industry* [山东化工] 49, no. 2 (2020); Lin Jie [林洁], Teng Yunfei [滕云飞], and Jiang Li [蒋莉], “Tropical Area Surface-to-Air Missile Unit Emergency Mobile Health Support Characteristics and Countermeasures” [热带地区地空导弹部队应急机动卫勤保障特点及对策], *Journal of Navy Medicine* [海军医学杂志] 41, no. 2; Du Lei [杜雷], “Thoughts on the Role of Air Defense Unit Battalion Party Committees Under the New System” [对新体制下防空兵部队营党委作用发挥的思考], *Political Work Journal* [杜雷] 3 (2019); Han Feng [韩锋] and Chen Gang [陈岗], “Island and Reef Air Defense Characteristics and Countermeasures” [岛礁防空的特点和对策], 3th China Command and Control Conference Proceedings [第四届中国指挥控制大会论文集] (2016); Wang Guanghui [王光辉], Xiao Zhengliang [肖正良], Lu Chao [吕超], and Zhang Wei [张伟], “An Air-attack Threat Assessment Method Based on Maximizing Deviation Method” [基于离差最大化的空袭目标威胁评估], *Ship Electronic Engineering* [舰船电子工程] 36, no. 2 (2016); Han Feng [韩锋], Chen Gang [陈岗], and Chen Guansheng [陈观生], “Strategy on Air-Defense Against the Low-Slow-Small Target in Important Coastal Area” [沿海要地低慢小目标防御对策], 3rd China Command and Control Conference Proceedings [第三届中国指挥控制大会论文集] (2016); Xing Fucheng [邢福成], Wang Bo [王波], Sun Baoliang [孙保良], and Guan Chengbin [关成斌], “Design of One Radar Intermediate Frequency Simulator” [一种中频雷达模拟器的设计], *Journal of Naval Aeronautical and Astronautical University* [海军航空工程学院学报] 27, no. 3 (2012); Li Guojun [李国君], Chen Guoliang [陈国良], Tang Xiaoming [唐小明], “Bistatic Radar Signal Detection and Analysis Based on Fuzzy Function” [基于模糊函数的双基地雷达信号检测分析], *Fire Control Radar Technology* [火控雷达技术] 40, no. 1 (2011); Xu Xiaolin [胡晓林], “A Navy Coastal Defense Unit Disease Outbreak Situation Investigation” [海军某岸防兵部队发病情况调查], *People's Military Surgeon* [人民军医] 4 (2007); Hu Xiaolin [胡晓林], Wang Bo [王波], and Miao Chenglong [苗成龙], “Investigation of Disease Outbreak Situation During a Coastal Defense Unit's Exercise” [岸防兵某部演习期间发病情况调查], *Journal of Navy Medicine* [海军医学杂志] 4 (2003).

266 Kenneth Allen and Mingzhi Chen, *The People's Liberation Army's 37 Academic Institutions* (China Aerospace Studies Institute, 2020), p. 130-131, https://www.airuniversity.af.edu/Portals/10/CASI/Books/CASI_Academic_Institutions_Encyclopedia_web_final.pdf.

267 “Hainan Province First Batch of Spirit and Civilized Construction Advanced Models Continuing to Retain Honorific Titles”; “Hainan New National Spirit and Civilization Construction Work Advanced List Announced”.

268 “Navy Air Defense Brigade All-Elements Exercises Whole-Process Confrontation” [海军防空旅全要素演练全程对抗], PRC Ministry of National Defense [中华人民共和国国防部], October 31, 2018, http://www.mod.gov.cn/v/2018-10/31/content_4828357.htm; “Scene | Naval Aviation Live Fire Shooting, Multiple New Tactics ‘Dazzled’” [现场 | 海军航空兵实弹射击 多种新战法“眼花缭乱”], China Military Net [中国军网], October 25, 2018, http://tv.81.cn/jq360/2018-10/25/content_9322911.htm.

at least 1 battalion in the Sanya area.²⁶⁹ Previous analyses have suggested that the naval aviation air defense unit in Sanya is the 7th Air Defense Brigade,²⁷⁰ though Recorded Future could not verify this claim. Given that brigades are division deputy leader-grade units, Unit 92155 is very likely a division deputy leader-grade entity, and its presence on Woody Island is presumably organized as a battalion.²⁷¹



Figure 27: The Hainan-based naval aviation air defense brigade firing SAMs during an exercise in 2018 (Source: PRC Ministry of National Defense²⁷²)

Unit 92155 has a documented presence on Woody Island. A 2019 bulletin posted to the website of Sansha City describes Unit 92155 as being located on Woody Island.²⁷³ According to this bulletin, when visiting Unit 92155 on Woody Island, Sansha City's party secretary discussed military-civil fusion, specifically mentioning the PLA's contributions to Sansha City's development and the city's efforts to support PLA units stationed in the city.²⁷⁴

269 Liu Yuxin [刘羿辛], Gao Hongwei [高宏伟], and Yin Bin [尹宾], “This Navy Air Defense Brigade 3rd Battalion: Singing Lei Feng's Song at ‘The World's End’” [海军这个防空旅三营：在“天涯海角”唱响雷锋赞歌], China Military Net [中国军网], March 3, 2019, http://www.81.cn/hj/2019-03/03/content_9438514.htm.

270 Li, “The People's Liberation Army Navy as an Evolving Organization”, p. 324.

271 Allen, “Introduction to the PLA's Organizational Reforms”, p. 21.

272 Navy Air Defense Brigade All-Elements Exercises Whole-Process Confrontation”.

273 Hong, “Zhang Jun Greets Sprint Festival Holding Fast to Posts Cadre Staff and Officers”.

274 Hong, “Zhang Jun Greets Sprint Festival Holding Fast to Posts Cadre Staff and Officers”.

Other evidence ties Unit 92155 to Sanya, including state media reporting and the LinkedIn profiles of self-described Unit 92155 personnel.²⁷⁵ Shenzhen Yixunwei Electronics Co., Ltd. (深圳市怡讯威电子有限公司) claims to have provided services to a second-level department under Unit 92155's staff department in Sanya.²⁷⁶ A branch of ZTO Express (中通快递) in Hongsha Town in Sanya's Jiyang District appears to provide delivery services to a vehicle company and artillery company belonging to Unit 92155 in addition to the Xisha Maritime Garrison Command, Yulin base facilities, and other PLA units.²⁷⁷ The unit also reportedly has a group training team in Wenchang, Hainan.²⁷⁸

Unit 92508

Unit 92508 (92508部队) is very likely the MUCD of a PLA Navy entity that maintains a presence on Woody Island. Due to a lack of publicly available information, Recorded Future cannot provide a high-confidence judgment of Unit 92508's true identity or the scope of its responsibilities at the time of this writing. Bulletins posted to the website of Sansha City in 2014, 2015, 2016, and 2019 identify Unit 92508 as being located on Woody Island and interacting with the leadership of Sansha City.²⁷⁹ A bulletin from October 2014 identifies an individual named Yang Xiushan (杨秀山) as the unit's chief of staff.²⁸⁰ Given that Unit 92508 has an MUCD, it should be at least a regiment leader-grade unit.

275 Li Jinsong [李劲松], et al., "Sanya City '8-1' Supporting Military Greeting Group Visits Military and Police Units Stationed in the City" [三亚市“八一”拥军慰问团走访慰问驻市军警部队], Sanya Daily [三亚日报], July 25, 2019, http://epaper.sanyarb.com.cn/html/2019-07/25/content_225890_1320605.htm; "Hainan: Chen Mingwei, A Baoting County Chaokang Village Good Moral Youth" [海南：陈明卫—保亭县抄抗村道德好青年], China Youth Net [中国青年网], September 12, 2014, https://qnzz.youth.cn/zhuanqi/xchqn/hqnzb/dehqn/201409/t20140912_5736615.htm; "Kuang Jinglong" [匡景隆], LinkedIn, <https://cn.linkedin.com/in/%E6%99%AF%E9%9A%86%E5%8C%A1-059310108>; "Duan Bowen" [段博文], LinkedIn, <https://www.linkedin.com/in/%E5%8D%9A%E6%96%87-%E6%AE%B5-29402b111/?originalSubdomain=cn>;

276 "Hainan Sanya People's Liberation Army Unit 92155 Staff Department Detection Office" [海南三亚中国人民解放军92155部队参谋部作侦科], Shenzhen Yixunwei Electronics Co., Ltd. [深圳市怡讯威电子有限公司], <http://www.yxwled.cn/photo/html/?61.html>.

277 "ZTO - Sanya Hongsha Town" [中通快递-三亚红沙镇], Kuaidi100 [快递100], <https://m.kuaidi100.com/network/networkdt/792926195169545.htm>.

278 "Feeling Connection to the People's Younger Generation Army, Writing a New Chapter of 'Double Support', Our City Visits Military and Police Units Stationed in Wenchang" [情系人民子弟兵 谱写“双拥”新篇章 我市慰问驻文昌军警单位], Wenchang City People's Government [文昌市人民政府], July 28, 2020, <http://wenchang.hainan.gov.cn/wenchang/ld34tp/202007/cad305d8374943f09790f1841f4db21a.shtml>.

279 Hong, "Military-Local Government United Working Together"; Hong, "Zhang Jun Greets Sprint Festival Holding Fast to Posts Cadre Staff and Officers"; Hong, "Our City 8-1 Military Greeting Group Greets Forces Stationed on the Island"; Wang, "Promote Military-Civil Deep Fusion-Style Development"; Hong Yuanyuan [洪媛媛], "Xiao Jie Requires: Do a Job and Do Carefully Double Support Projects, Do It To the Bottom of Military and Civilians' Hearts" [肖杰要求：办好办细双拥工程，办到军心坎上], Sansha City People's Government Net [三沙市人民政府网], October 25, 2014, <http://www.sansha.gov.cn/sansha/zcggmfcjdt/201410/fd3ea8128870402087230db9484329a6.shtml>.

280 Hong, "Xiao Jie Requires".

Other Units

The 9 units discussed above are not the only PLA forces present on the islands and reefs that China occupies in the South China Sea. Recorded Future identified a handful of other PLA units that maintain or previously maintained at least a marginal presence on China's outposts. These include the PLAN Marine Corps 1st Brigade (海军陆战队第一旅), Unit 92690 (92690部队), Unit 92053 (92053部队), and Unit 91522 (91522部队).

PLAN Marine Corps 1st Brigade

The modern PLAN Marine Corps was established in May 1980.²⁸¹ It initially consisted of a single brigade, the PLAN Marine Corps 1st Brigade, which was established in Hainan and later moved to Zhanjiang, Guangdong.²⁸² The PLAN Marine Corps 164th Brigade was then created in 1998 using forces from the former 164th Division of the PLA Ground Force (PLAGF) 41st Group Army.²⁸³ Both the 1st Brigade and the 164th Brigade now fall under the Southern Theater Command.²⁸⁴ The PLAN Marine Corps entered a period of significant expansion in 2017, adding multiple new brigades in locations across China.²⁸⁵

State media reporting reveals that the 1st Brigade participated in the initial occupation of the Spratly Islands in 1988.²⁸⁶ Likewise, historical information posted to the website of Sansha City suggests that the 1st Brigade was initially responsible for patrolling the Spratly Islands and defending China's reefs.²⁸⁷ However, Recorded Future did not observe any

281 Shou Yi [守一], "These Pictures Exposed! It Is Time To Talk About the Marine Corps..." [这张照片曝光！是时候谈谈海军陆战队了……], Xinhua Net [新华网], January 8, 2018, http://www.xinhuanet.com/mil/2018-01/08/c_129785341.htm; Hang Jian [杭建], "The Rise of the Chinese Navy Marine Corps" [崛起中的中国海军陆战队], National Defense [国防] 1 (1989); Chen Xiuling [陈秀伶], The Army's Army: Birth of the Chinese People's Liberation Army Navy Marine Corps [军中之军：中国人民解放军海军陆战队诞生] (Jilin Publishing Group Co., Ltd [吉林出版集团有限责任公司], 2011); Dennis Blasko, "China's Marines: Less is More", China Brief 10, no. 24 (2010), <https://jamestown.org/program/chinas-marines-less-is-more/>.

282 Hang, "The Rise of the Chinese Navy Marine Corps"; Chen, Birth of the Chinese People's Liberation Army Navy Marine Corps; Blasko, "China's Marines".

283 "China's Marines"; Bureau Party Group Member Zhong Ma'an [局党组成员 钟么安], Zhanjiang City Leizhou Youth Canal Management Bureau [湛江市雷州青年运河管理局], April 16, 2021, https://www.zhanjiang.gov.cn/zjsfw/bmdh/yhj/jggk/ldfg/content/post_1448882.html; "Liu Jiuyan" [刘吉元], Shaoyang City Housing and Urban-Rural Construction Bureau [邵阳市住房和城乡建设局], July 29, 2020, <https://zj.shaoyang.gov.cn/syzj/ldjj/202007/f4a990dc15e14f109a12d578308edd4e.shtml>.

284 Peter Wood, "Snapshot: China's Southern Theater Command", China Brief 16, no. 12 (2016), <https://jamestown.org/program/snapshot-chinas-southern-theater-command/>.

285 Dennis J. Blasko and Roderick Lee, "The Chinese Navy's Marine Corps, Part 1: Expansion and Reorganization", China Brief 19, no. 3 (2019), <https://jamestown.org/program/the-chinese-navys-marine-corps-part-1-expansion-and-reorganization/>.

286 Zhou Jia [周佳] Miao Jun [田军] Fang Ruizhi [房蕊子], "Former Marine Corps Personnel Remember Years Guarding Nansha Reefs: National Flag Fluttering High-Legged House" 原海军陆战队队员回忆南沙守礁岁月：国旗飘扬高脚屋, China Military Net [中国军网], May 18, 2021, http://www.81.cn/j-s/2021-05/18/content_10036325.htm.

287 "Salute, Nansha General" [敬礼，南沙将士], Sansha City People's Government Net [三沙市人民政府网], 2016, <http://www.sansha.gov.cn/sansha/zzhstp/201606/702d1f4c0b684cf5b430384b378ea76f.shtml>.

credible evidence of the 1st Brigade maintaining a significant presence on China's outposts beyond the late 1980s or early 1990s, nor did we observe any proof of the 164th Brigade being deployed to these outposts after its creation in 1998. As discussed previously, the Xisha Maritime Garrison Command and Unit 91431 are now responsible for guarding China's outposts in the Paracel and Spratly Islands. Indeed, numerous sources specify that some Xisha Maritime Garrison Command and Unit 91431 personnel are ex-PLAN Marine Corps.²⁸⁸

Unit 92690, Unit 92053, and Unit 91522

Unit 92690, Unit 92053, and Unit 91522 are PLAN units that have very likely deployed personnel to China's outposts, potentially on an ad hoc rather than permanent basis. Due to a lack of publicly available information, Recorded Future cannot provide a high-confidence judgment of these units' true identities (TUDs) or the scope of their responsibilities at the time of this writing. Individuals from these units have been included on recent provincial government lists of military personnel stationed on islands or in Sansha City, mentioned alongside personnel from units such as the Xisha Maritime Garrison Command, Sansha Garrison Command, and Xisha Satellite Observation Station.²⁸⁹

Procurement records and other sources suggest that Unit 92053 performs engineering support duties,²⁹⁰ and the leaders of Sansha City have visited Unit 92053 on Hainan at least once.²⁹¹ An October 2020 bulletin posted to the website of Zhanjiang City says that Unit 92053 is stationed in Zhanjiang, describes the unit as a "base" (基地), and shows the base's director wearing senior colonel rank insignia, suggesting that he is a division deputy leader-, division leader-, or corps deputy leader-grade officer.²⁹² Recorded Future did not observe any other references to Unit 91522.

²⁸⁸ Jun, Wu, and Li, "Nansha 'Sunflower'"; Zhang and Su, "Making 'the First' Become a Business Card"; "China Navy Xisha Garrison Yearly Handles Over 1,000 Batches of Sea-Air Targets".

²⁸⁹ "2019 Hainan Province Military Personnel, Firefighting and Rescue Personnel Children Enjoy Middle School Enrollment Drop" [2019年海南省军人、消防救援人员子女享受中招降], Qingzhou Middle School [青州中学], May 19, 2021, <http://www.sqcqzx.com/jiaoxue/272515.html>; "2019 General College Entrance Exam Enjoy 'Stationed in Sansha Units Working Officers and Soldiers' Children' Take Care of Adding Points List" [2019年普通高考享受"驻三沙部队工作官兵子女"照顾加分考生名单], Hainan News Net [南海网], http://www.hinews.cn/news/doc/003/201/882/00320188271_f7f6befe.xls.

²⁹⁰ Source documents held by Recorded Future.

²⁹¹ Hong Yuanyuan [洪媛媛] and Wang Huilang [王惠浪], "Sansha City '8-1' Supporting Military Greeting Group Visits Units Stationed in Hainan" [三沙市"八一"拥军慰问团慰问驻琼部队], Sansha City People's Government Net [三沙市人民政府网], July 30, 2020, <http://www.sansha.gov.cn/sansha/sysdt/202007/03d01e925aaf4de687dc7abbf830b7e4.shtml>.

²⁹² "Signed! Zhanjiang City Judicial Bureau Creates Distinctive Military-Local Government Coordination Method Service Brand" [签了！湛江市司法局打造特色军地协作法律服务品牌], Zhanjiang City Judicial Bureau [湛江市司法局], October 14, 2020, https://www.zhanjiang.gov.cn/zjsfw/bmdh/sfj/zgwk/gzdt/content/post_1283228.html.

Outlook

China significantly militarized its outposts in the South China Sea over the past decade. In addition to the well-documented deployment of new military capabilities to the Spratly Islands and Paracel Islands such as SAMs, bombers, and anti-ship cruise missiles, this militarization is also reflected in more subtle organizational changes. These changes include multiple upgrades to the Nansha Garrison's organizational status, the establishment of the Sansha Garrison Command, the operationalization of the Xisha Satellite Observation Station, the likely creation of Unit 91531, and efforts to formalize cooperation between the PLA and civilian entities in the South China Sea via military-civil fusion programs.

In recent years, the PLA has generally played a background role in China's strategy to consolidate control over the South China Sea, providing a deterrent cover for frontline maritime law enforcement and maritime militia operations.²⁹³ This being said, the PLA is also prepared to directly intercept foreign vessels in both the Spratly Islands and Paracel Islands,²⁹⁴ such as when a pair of Houbei-class missile boats (reportedly operating from Mischief Reef) chased off a Philippine vessel near the Spratly Islands in April 2021.²⁹⁵ Thanks to its efforts in the South China Sea, the PLA is now better situated to defend China's maritime and territorial claims, achieve localized information superiority,²⁹⁶ project power within and beyond the first island chain,²⁹⁷ control access to vital sea lines of communication (SLOCs),²⁹⁸ maintain space situational awareness,²⁹⁹ or engage the United States in a conflict over the status of Taiwan.³⁰⁰ Moving forward, the PLA will likely continue building its capacity to carry out combat operations in the South China Sea, surveil foreign ships and aircraft operating in the region, and perform joint rights defense and rescue operations with China's maritime law enforcement and maritime militia forces.

²⁹³ Ryan Martinson, *Echelon Defense: The Role of Sea Power in Chinese Maritime Dispute Strategy* (China Maritime Studies Institute, 2018), <https://digital-commons.usnwc.edu/cmsi-red-books/15/>; Haver, *Sansha City in China's South China Sea Strategy*.

²⁹⁴ Zhang and Su, "Making 'the First' Become a Business Card"; Wang, Xiong, and Xue, "Xisha Guardian".

²⁹⁵ Chiara Zambrano, "Filipino vessel chased down by 2 Chinese missile attack craft in West PH Sea", ABS-CBN, April 9, 2021, <https://news.abs-cbn.com/news/04/09/21/filipino-vessel-chased-down-by-2-chinese-missile-attack-craft-in-west-ph-sea>.

²⁹⁶ Dahm, *South China Sea Military Capabilities Series*.

²⁹⁷ Lee and Clemens, *Organizing to Fight in the Far Seas*.

²⁹⁸ "How Much Trade Transits the South China Sea?", *China Power*, August 2, 2017, <https://chinapower.csis.org/much-trade-transits-south-china-sea/>.

²⁹⁹ Wood, Stone, and Lee, *China's Ground Segment*.

³⁰⁰ Gregory Poling, "The Conventional Wisdom on China's Island Bases Is Dangerously Wrong", *War on the Rocks*, January 10, 2020, <https://warontherocks.com/2020/01/the-conventional-wisdom-on-chinas-island-bases-is-dangerously-wrong/>.

Appendix A: The PLA's Grade and Rank System

The PLA currently uses a system of 15 grades and 10 ranks. In this system, every organization has a grade that corresponds to the grade of its leaders,³⁰¹ typically its commander and political commissar. Ranks mainly provide quick indicators of hierarchical status and aid foreign military interactions.³⁰² As such, even though the PLA is pursuing reforms to elevate the importance of ranks,³⁰³ grades remain the fundamental building blocks of the PLA's organizational structure, determining vertical command and control relationships as well as horizontal coordination relationships.³⁰⁴ The following tables list each grade, the ranks that correspond to each grade, and the special technical officer level that corresponds to each grade.

| Grade | Primary Rank | Secondary Rank |
|---|--------------|----------------|
| CMC Chairman (军委主席) / CMC Vice-Chairman (军委副主席) | - / GEN (上将) | - |
| CMC Member (军委委员) | GEN (上将) | - |
| Theater Command Leader (正战区职) | GEN (上将) | LTG (中将) |
| Theater Command Deputy Leader (副战区职) | LTG (中将) | MG (少将) |
| Corps Leader (正军职) | MG (少将) | LTG (中将) |
| Corps Deputy Leader (副军职) | MG (少将) | SCOL (大校) |
| Division Leader (正师职) | SCOL (大校) | MG (少将) |
| Division Deputy Leader (副师职) | COL (上校) | SCOL (大校) |
| Regiment Leader (正团职) | COL (上校) | LTC (中校) |
| Regiment Deputy Leader (副团职) | LTC (中校) | MAJ (少校) |
| Battalion Leader (正营职) | MAJ (少校) | LTC (中校) |
| Battalion Deputy Leader (副营职) | CAPT (上尉) | MAJ (少校) |
| Company Leader (正连职) | CAPT (上尉) | 1LT (中尉) |
| Company Deputy Leader (副连职) | 1LT (中尉) | CAPT (上尉) |
| Platoon Leader (正排职) | 2LT (上尉) | 1LT (中尉) |

Table 2: The PLA's system of 15 grades and 10 ranks that has been in place since 1988 (Source: China Military Net; PLA As Organization v.2.0.; China Brief³⁰⁵)

301 Allen, "Introduction to the PLA's Organizational Reforms", p. 16.

302 Allen, "Introduction to the PLA's Organizational Reforms", p. 16.

303 Wuthnow and Saunders, "A New Step Forward in PLA Professionalization"; Allen, "China Announces Reform of Military Ranks".

304 Allen, "Introduction to the PLA's Organizational Reforms", p. 16.

305 Xu, "The Evolution of Our Army's Cadre Ranks After the Founding of New China"; Allen, "Introduction to the PLA's Organizational Reforms", p. 16-22; Wuthnow and Saunders, "A New Step Forward in PLA Professionalization".

| Grade | Officer Special Technical Level |
|--|---------------------------------|
| CMC Chairman (军委主席)/ CMC Vice-Chairman (军委副主席) | - |
| CMC Member (军委委员) | Level 1 (1级) |
| Theater Command Leader (正战区职) | Level 2 (2级) |
| Theater Command Deputy Leader (副战区职) | Level 3 (3级) |
| Corps Leader (正军职) | Level 4 (4级) |
| Corps Deputy Leader (副军职) | Level 5 (5级) |
| Division Leader (正师职) | Level 6 (6级) |
| Division Deputy Leader (副师职) | Level 7 (7级) |
| Regiment Leader (正团职) | Level 8 (8级) |
| Regiment Deputy Leader (副团职) | Level 9 (9级) |
| Battalion Leader (正营职) | Level 10 (10级) |
| Battalion Deputy Leader (副营职) | Level 11 (11级) |
| Company Leader (正连职) | Level 12 (12级) |
| Company Deputy Leader (副连职) | Level 13 (13级) |
| Platoon Leader (正排职) | Level 14 (14级) |

Table 3: Grades and their special technical officer level equivalents
(Source: China Military Net³⁰⁶)

306 Xu, "The Evolution of Our Army's Cadre Ranks After the Founding of New China".

Recorded Future Threat Activity Group and Malware Taxonomy

Recorded Future's research group, Insikt, tracks threat actors and their activity, focusing on state actors from China, Iran, Russia, and North Korea, as well as cybercriminals — individuals and groups — from Russia, CIS states, China, Iran, and Brazil. We emphasize tracking activity groups and where possible, attributing them to nation state government, organizations, or affiliate institutions.

Our coverage includes:

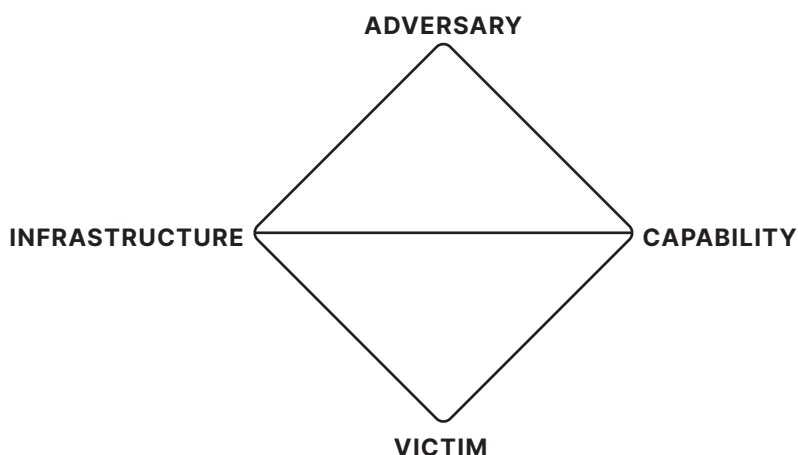
- Government organizations and intelligence agencies, their associated laboratories, partners, industry collaborators, proxy entities, and individual threat actors
- Recorded Future-identified, suspected nation-state activity groups, such as RedAlpha, RedBravo, Red Delta, and BlueAlpha and many other industry established groups
- Cybercriminal individuals and groups established and named by Recorded Future
- Newly emerging malware, as well as prolific, persistent commodity malware

Insikt Group publicly names a new threat activity group or campaign, such as RedFoxtro, when analysts typically have data corresponding to at least three points on the Diamond Model of Intrusion Analysis with at least medium confidence. We will occasionally report on significant activity using a temporary activity clustering name such as TAG-21 where the activity is new and significant but doesn't map to existing groupings and hasn't yet graduated or merged into an established activity group. We tie this to a threat actor only when we can point to a handle, persona, person, or organization responsible. We will write about the activity as a campaign in the absence of this level of adversary data. We use the most widely used or recognized name for a particular group when the public body of empirical evidence is clear the activity corresponds to a known group.

Insikt Group uses a simple color and phonetic alphabet naming convention for new nation-state threat actor groups or campaigns. The color generally corresponds to that nation's flag colors, with more color/nation pairings to be added as we identify and attribute new threat actor groups associated with new nations.

For newly identified cybercriminal groups, Insikt Group uses a naming convention corresponding to the Greek alphabet. Where we have identified a criminal entity connected to a particular country, we will use the appropriate country color, and where that group may be tied to a specific government organization, tie it to that entity specifically.

Insikt Group uses mathematical terms when naming newly identified malware.



About the Author

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Zoe Haver specializes in the South China Sea disputes and other China-related security issues. She has worked on these topics for Radio Free Asia, the Center for Advanced China Research, SOSI's Center for Intelligence Research and Analysis, the U.S. Naval War College China Maritime Studies Institute, C4ADS, and other organizations. She received her BA from George Washington University and is proficient in Mandarin Chinese.

About Insikt Group®

Recorded Future's Insikt Group, the company's threat research division, comprises analysts and security researchers with deep government, law enforcement, military, and intelligence agency experience. Their mission is to produce intelligence that reduces risk for clients, enables tangible outcomes, and prevents business disruption.

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Recorded Future is the world's largest provider of intelligence for enterprise security. By combining persistent and pervasive automated data collection and analytics with human analysis, Recorded Future delivers intelligence that is timely, accurate, and actionable. In a world of ever-increasing chaos and uncertainty, Recorded Future empowers organizations with the visibility they need to identify and detect threats faster; take proactive action to disrupt adversaries; and protect their people, systems, and assets, so business can be conducted with confidence. Recorded Future is trusted by more than 1,000 businesses and government organizations around the world.

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