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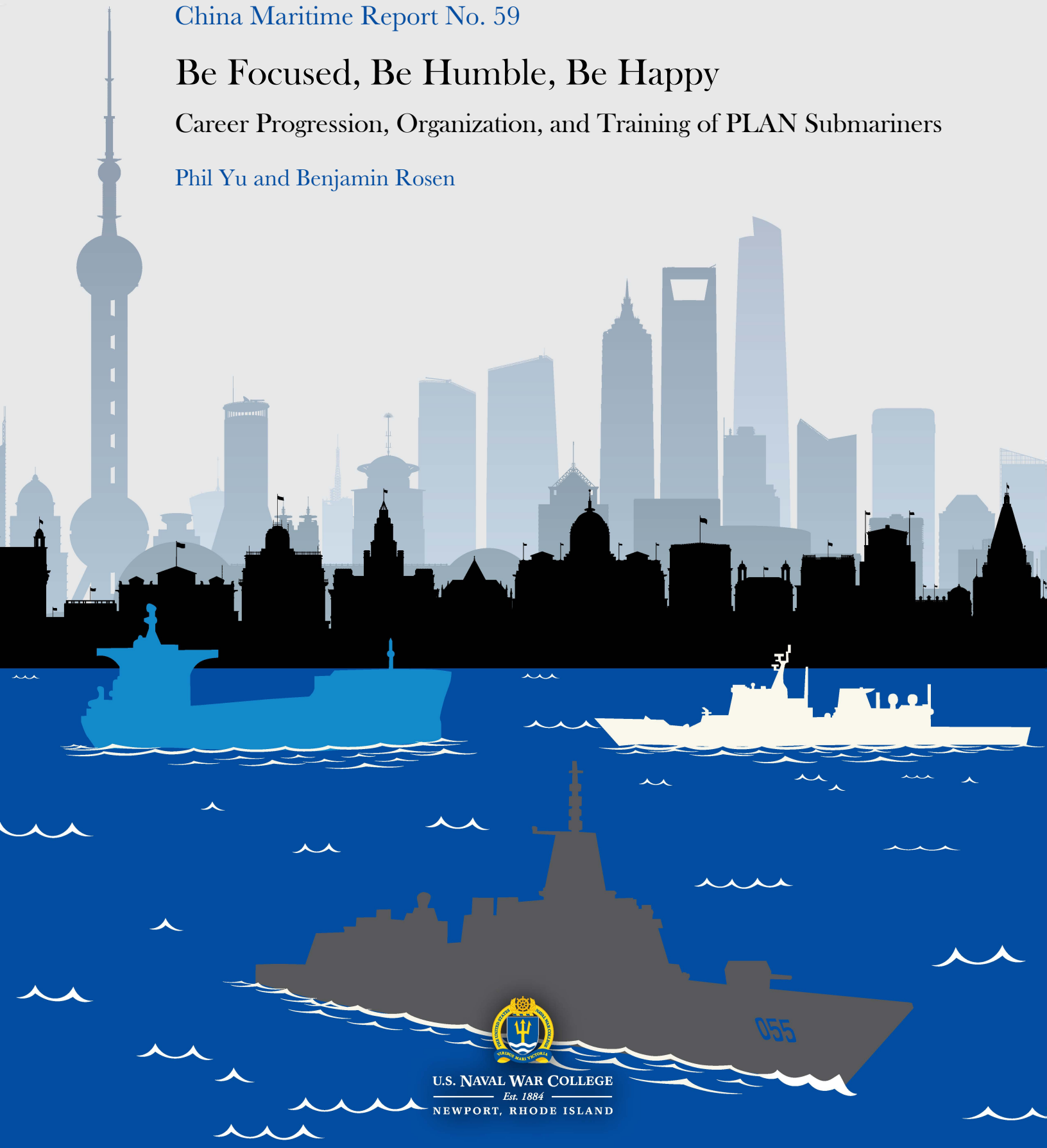
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China Maritime Report No. 59

Be Focused, Be Humble, Be Happy

Career Progression, Organization, and Training of PLAN Submariners

Phil Yu and Benjamin Rosen



U.S. NAVAL WAR COLLEGE
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Main Findings

- Led by the political commissar with the commanding officer serving as deputy, party committees are responsible for major decision-making, maintaining party control, training, and general leadership aboard People's Liberation Army Navy (PLAN) submarines. While Chinese sources extoll this collective leadership model, it is unclear how this command structure influences decision-making efficacy in practice.
- PLAN political officers play a critical role in the leadership and decision making on PLAN submarines, but reportedly lack understanding of submarine operations. Despite attempts to improve the operational competency of political officers, this likely remains a problem for the PLAN submarine force.
- The diverse PLAN submarine fleet and its increasingly ambitious operations require a high degree of technical competency within the submarine force. Recent reforms to the career structure of technical officers can be seen as efforts to retain increasingly needed technical expertise in the PLA, in part to meet this requirement.
- According to PLA media reporting, the PLAN has made progress in expanding educational and career opportunities for NCOs, while enhancing their professionalization and technical competence with updated policies aimed at recruiting more college educated NCOs.
- PLAN submarines' apparent lack of a dedicated "supply department" may pose challenges to the submarine force's ability to become a true "far seas protection" force. The PLAN is attempting to address this via technology investments at Shore Service Departments.
- The U.S. submarine force uses lessons learned from incidents and accidents not only to enhance operations but also as a training tool. In contrast, the PLA treats accidents and near misses primarily as opportunities to promote the importance of political commissars in military decision-making, while prioritizing party loyalty and propaganda value over genuine learning. While public discussions in Chinese media about submarine accidents and incidents are scarce, those that do exist reveal a clear focus on using such events for political messaging.
- The PLAN submarine force has invested in simulators and training systems to enable its crews to exercise operational skills and maintain qualifications. In recent years, this has included more advanced technologies including virtual reality systems that permit some levels of training without as much physical infrastructure.

Introduction

The People's Liberation Army Navy's (PLAN) submarine force has evolved as its fleet has modernized. In 2015, China's State Council issued the white paper on *China's Military Strategy*, which outlined the PLAN's shift from a "near-seas defense" (近海防御) strategy to a combined "near-seas defense and far-seas protection" (远海护卫) strategy.¹ Over the intervening years, this strategic shift has been reflected in the rapid modernization and expansion of China's submarine force. According to the U.S. Department of Defense's annual China Military Power report to Congress, the PLAN has increased nuclear submarines by 50 percent and doubled its fleet of air-independent propulsion (AIP) submarines over the past decade.² The PLAN submarine force now operates over ten different submarine classes and deploys its nuclear and AIP submarines at least as far as the Indian ocean.³ This has very likely had an impact on the shape and structure of the PLAN submarine workforce, as these more advanced propulsion systems require more complex technical training, while operations in the "far seas" entail greater risk and extended operations.⁴

Exhibit 1. Growth and development of the PLAN submarine fleet ⁵

Vessel Classification	2014	2019	2024
Nuclear-powered Ballistic Missile Submarines (SSBN)	3	4	6
Nuclear-powered Attack Submarines (SSN)	5	6	6
Air-Independent Propulsion (AIP) Diesel Attack Submarines (SSP)	12	15	21
Traditional Diesel-powered Attack Submarines (SS)	25	25	27

¹ *China's Military Strategy*, PRC State Council, 27 May 2015, https://english.www.gov.cn/archive/white_paper/2015/05/27/content_281475115610833.htm

² *Military and Security Developments Involving the People's Republic of China 2014*, U.S. Department of Defense, 6 June 2014, <https://www.globalsecurity.org/military/library/report/2014/2014-prc-military-security.pdf>; *Military and Security Developments Involving the People's Republic of China 2019*, U.S. Department of Defense, 2 May 2019, https://media.defense.gov/2019/may/02/2002127082/-1/-1/1/2019_china_military_power_report.pdf; *Military and Security Developments Involving the People's Republic of China 2024*, U.S. Department of Defense, 1 December 2024, <https://media.defense.gov/2024/Dec/18/2003615520/-1/-1/0/MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA-2024.PDF>.

³ 深度：浅谈中国海军 039 潜艇 AIP 技术成战略意义 [“In-depth: A brief discussion on the strategic significance China's Navy's Type 39 Submarine's AIP technology”], *Sina.com.cn*, 18 February 2014, <https://web.archive.org/web/20230325232533/https://mil.news.sina.com.cn/2014-02-18/1533764810.html>; 本刊记者 [Staff Reporter] [战略安全之保障—专家谈中国战略核潜艇实现全天候值班 [“Guarantee of Strategic Security: Expert Discusses China's Strategic Nuclear Submarines Achieving Continuous Duty”], <https://www.andrewerickson.com> Original publisher: 兵工科技 [Ordnance Industry Science Technology], 30 September 2024, <https://www.andrewerickson.com/2024/09/cmsi-translation-7-guarantee-of-strategic-security-expert-discusses-chinas-strategic-nuclear-submarines-achieving-continuous-duty/>; “Report: Second Chinese attack sub docks in Sabah”, *Malaysiakini.com*, 13 September 2017, https://www.malaysiakini.com/news/395040#google_vignette; Gurpreet S Khurana, “China's Yuan-class Submarine Visits Karachi: An Assessment,” *Center for International Maritime Security*, 28 July 2015, <https://cimsec.org/chinas-yuan-class-submarine-visits-karachi-assessment/>; Shihar Aneez and Ranga Sirilal, “Chinese submarine docks in Sri Lanka despite Indian concerns”, *Reuters*, 2 November 2014, <https://www.reuters.com/article/idUSKBN0IM0LT/>.

⁴ LCDr Iain Meredith, “Canada's Under-Ice Options: Submarine Air-Independent Propulsion, Canadian Forces College”, *JCSP 44 – PCEMI 44*, 2018, <https://www.cfc.forces.gc.ca/259/290/405/192/meredith.pdf>.

⁵ *Military and Security Developments Involving the People's Republic of China 2014*; *Military and Security Developments Involving the People's Republic of China 2019*; *Military and Security Developments Involving the People's Republic of China 2024*.

This evolution has impacted PLAN submarine officers' career progression. As Dahm and Zhao investigated in their 2023 paper, the PLA transformed military districts and subordinate fleet command posts into theater commands and "maritime operations sub-centers" (海上作战分中心).⁶ More importantly for submarine personnel, submarines and submarine crews have been transferred between bases and even between theater commands, and shore-based submarine officer positions within bases and flotillas have been reduced.⁷ It would be impossible for this evolution to not impact career progression for submarine officers, as it likely increased the percentage of their careers spent at sea.

This report examines how the career progression, organizational structure, and training of PLAN submariners have evolved as its submarine fleet has expanded. By exploring how PLAN submarines are organized internally, how various submariner career paths fit within this structure, and the training and career progression for each type of career path, this study sheds light on how the PLAN is modernizing its submarine force and its workforce to keep pace with technological advancements and operational requirements.

Organization and Career Tracks of PLAN Submariners

There are six career tracks for personnel involved in PLAN submarine operations: five officer tracks and one enlisted. There are five types of "commissioned" officers in the PLA, including military affairs officers (军事军官), political officers (政治军官), logistics officers (后勤军官), equipment officers (装备军官), and special technical officers (专业技术军官).⁸ Military affairs, political, equipment and special technical officers all serve aboard PLAN submarines, while logistics officers play a critical role in submarine support shore service departments. In addition, over the past decade the PLA has attempted to professionalize its non-commissioned officers (NCOs, 士官) in various ways, leading to their increased importance on PLAN submarines.⁹

Training and Education for PLAN Submariners

The primary institution responsible for training and educating PLAN submariners is the PLAN Submarine Academy (海军潜艇学院) in Qingdao. This institution offers training for military affairs officers, equipment officers, and special technical officers, as well as conscripts and NCOs.¹⁰ Its training pipelines are explicitly designed to prepare students for leadership of various departments

⁶ J. Michael Dahm and Alison Zhao, *Bitterness Ends, Sweetness Begins: Organizational Changes to the PLAN Submarine Force Since 2015*, China Maritime Report No. 28, China Maritime Studies Institute, October 2023, <https://digital-commons.usnwc.edu/cmsi-maritime-reports/28/>.

⁷ 肖明阳 [Xiao Mingyang], 洪利峰 [Hong Lifeng], and 茆琳 [Mao Lin], 千条跟帖彰显军人本色 ["Thousands of Posts Show the True Qualities of Military Personnel"], 人民海军 [People's Navy], 13 March 2017, p. 2. Cited in Dahm and Zhao, *Bitterness Ends, Sweetness Begins*.

⁸ 中华人民共和国现役军官法 ["Law of the People's Republic of China on Active Service Officers"], 国家信访局 [National Public Complaints and Proposals Administration], 12 May 2014, <https://www.gjxfj.gov.cn/gjxfj/xxgk/fgwj/flfg/webinfo/2016/03/1460585589878285.htm>.

⁹ Kenneth Allen, "The Evolution of the PLA's Enlisted Force: Training," Jamestown *China Brief*, 11 February 2022, <https://jamestown.org/program/the-evolution-of-the-plas-enlisted-force-training-part-two/>.

¹⁰ 军迷圈 [Jun Miqian], 走进中国军校: 海军潜艇学院 ["Entering the Chinese Military Academy: Naval Submarine Academy"], *Sina.com.cn*, 24 June 2021, <https://mil.news.sina.com.cn/blog/2021-06-24/doc-ikqciyzk1588598.shtml>; 王凤 [Wang Feng], 2022 年军校招生信息 | 第十四站: 海军潜艇学院 ["2022 Military Academy Admissions Information | Station Fourteen: Naval Submarine Academy"], *81.CN*, 12 June 2022, http://www.81.cn/jx_208569/10162414.html.

within a submarine. However, the description of the training programs indicates that only graduates on the path to becoming submarine department heads are those in command track programs.¹¹

In addition to the PLAN Submarine Academy, other institutions are critical for preparing PLAN sailors for submarine duty. The equipment officer and special technical officers heading to the electromechanical department of a PLAN submarine attend the PLA Naval University of Engineering (NUE, 海军工程大学) in Wuhan.¹² Cadets at this university receive training designed to prepare them to become the chief engineers of conventional or nuclear submarines.¹³ Additionally, NUE is the primary training institution for PLAN logistics officers (along with its associated Naval Service Academy in Tianjin).¹⁴

Similar to foreign navies, the PLAN submarine force emphasizes training for maintaining critical skills. Most PLAN submarine units appear to have shore training centers (岸港训练中心) where submarine crews practice essential skills on land. These centers feature systems like pressure simulation chambers to acclimate crew to deep-sea pressure, damage control simulators, and combat simulators for tactical drills. They are used during military exercises, to help simulate activities that could not be safely conducted at sea, such as tactical simulations and torpedo attack drills. Flotillas and bases organize a variety of training events, from emergency avoidance and submarine attack-and-defense drills, using a variety of simulators to ensure that all roles and responsibilities on the submarine are able to exercise and expand their skills.¹⁵ Submariners are required to demonstrate basic survival skills including sealing cabin leaks and other damage control measures as well as torpedo-tube and air-lock sleeve escape techniques on an annual basis.¹⁶

¹¹ Wang, “2022 Military Academy Admissions Information | Station Fourteen: Naval Submarine Academy).”

¹² Ibid; 走进中国军校：海军工程大学 [“China’s Military Academies: Naval University of Engineering”], *Sina.com.cn*, 24 June 2021, <https://mil.news.sina.com.cn/blog/2021-06-24/doc-ikqcfnc2948279.shtml>.

¹³ Ibid.

¹⁴ Jun, “Entering the Chinese Military Academy: Naval Submarine Academy”; Wang, “2022 Military Academy Admissions Information | Station Fourteen: Naval Submarine Academy”; 海军潜艇学院 | 2024 年招收普通高中毕业生计划发布 [“Naval Submarine Academy | 2024 recruitment plan for high school graduates released”], *QQ.com*, 3 June 2024, <https://new.qq.com/rain/a/20240613A08GL200>; 人民海军 [Peoples Navy], 全都是干货！海军潜艇学院 2023 年招生计划正式发布（内附招生指南） [“All of this is useful information! The 2023 enrollment plan of the Naval Submarine Academy is officially released (with enrollment guide included)”], *News.QQ.Com*, 13 June 2023, <https://news.qq.com/rain/a/20230613A091TN00>; 部号 [Bu Hao], 海军潜艇学院欢迎你！报考指南请查收 [“Welcome to the Navy Submarine Academy! Report for inspection”], *Ifeng.com*, 8 June 2017, <https://news.ifeng.com/51212985/news.shtml?&back>.

¹⁵ 王辰玮 [Wang Chengwei], 潜行水下砥砺虎胆 北部战区海军某基地开展防险救生训练掠影 [“Sneaking underwater to sharpen one's courage: A glimpse of the disaster prevention and rescue training carried out at a naval base in the Northern Theater Command”], *China.com.cn*, 13 September 2020, https://military.china.com.cn/2020-09/13/content_76696934_4.htm; 港媒：揭秘中国海军舰艇学院 舰长培养至少需 15 年 [“Hong Kong media: Revealing the Secrets of the Chinese Naval Academy: It Takes at Least 15 Years to Train a Captain”], *Sina.com.cn*, 15 May 2015, <https://mil.sina.cn/zgj/2015-05-15/detail-icpkqaz4320868.d.html>.

¹⁶ 直击潜艇兵鱼雷发射管脱险救生训练 [“Direct attack on submarine soldiers' torpedo tube escape and rescue training”], *CCTV 7 via Bilibili*, 27 August 2020, https://www.bilibili.com/video/BV1T5411b7TM/?spm_id_from=333.337.



Exhibit 2. Torpedo-tube evacuation (left) and airlock sleeve escape training (right) at a submarine base ¹⁷

According to a PLA technical standard that governs training and licensing requirements for nuclear submarine power plant operators, the training department “for the superior unit” (for example, the flotilla command or base to which a given submarine belongs) organizes "Submarine Organization and Navigation Preparations" (潜艇组织与航行准备) tests for sailors, and these examinations are held at the same time as operator qualification or re-certification tests.¹⁸ Though details about the content of these tests are not available using open source information, descriptions of them suggests they fulfill a similar function as the tests for a warfare pin in the U.S. Navy. One article suggested that any sailor that is away from a submarine unit for more than three months is required to recertify these types of qualifications.¹⁹

Submarine bases and flotillas coordinate training events both at and away from the dock, including drills conducted in collaboration with surface vessels or the PLAN Air Force (PLAAF).²⁰ These

¹⁷ Ibid.; Wang, “Sneaking underwater to sharpen one's courage: A glimpse of the disaster prevention and rescue training carried out at a naval base in the Northern Theater Command.”

¹⁸ 王晓丹 [Wang Xiaodan], 谭琳 [Tan Lin], and 宋晓军 [Song Xiaojun], “上天入海，全军开训！2025 年度军事训练大幕正式拉开” [“Ascending to the skies and diving into the seas, the entire military begins training! The curtain has officially risen on the 2025 annual military training”], *Hengyang.gov.cn*, 3 January 2025, <https://www.hengyang.gov.cn/xxgk/dtxx/hydt/20250103/i3551093.htm>; 张大发 [Zhang Dafa], 王乃东 [Wang Naidong], 张广福 [Zhang Guangfu], 姜瑞军 [Jian Ruijun], 张龙飞 [Zhang Longfei], 陆古兵 [Lu Gubing], and 王少明 [Wang Shaoming], GJB 844.4A-2013 潜艇核动力装置运行安全规定 第 4 部分：操纵人员培训、考核、执照制度要求 [“GJB 844.4A-2013 Safety code of operation for submarine nuclear power plants. Part 4: Requirement of training, examination and license management for operator”], 中国人民解放军海军核安全局 [PLA Navy Nuclear Safety Bureau], via Doc88, 41465, <https://www.doc88.com/p-6079185185671.html>.

¹⁹ 陈国全 [Chen Guoquan], 段江山 [Duan Jiangshan], and 蒯琳 [Mao Lin], 军政兼通、战技合一 这支潜艇部队的政工干部响当当！ [“Militarily and Politically Proficient—The Political Cadres of This Submarine Unit Are Outstanding!”], *Sina.com.cn*, 11 November 2017, <http://mil.sina.cn/2017-11-11/detail-ifynsait7186735.d.html>.

²⁰ 尚金鑫 [Shang Jinxin] and 杨晨 [Yang Chen], 海军某基地开展潜舰攻防训练强化官兵实战意识 [“A naval base conducts submarine attack and defense training to strengthen officers and soldiers' combat awareness”], *http://www.mod.gov.cn*, 17 August 2024, <http://www.mod.gov.cn/gfbw/wzll/hj/16331779.html>; 尚金鑫 [Shang Jinxin] and 王疆一 [Wang Jiangyi], 海军某基地开展潜舰机对抗训练 [“A naval base conducts submarine-aircraft confrontation training”], 解放军报 [PLA Daily], 5 December 2024, https://mil.gmw.cn/2024-12/05/content_37720915.htm.

training events are used to certify new personnel.²¹ Just as other parts of the PLA have reformed their training and exercises to increase realism, PLA media highlights that PLAN submarine officers “use warfighting to direct training, and use training to prepare for warfighting” (以战带训、以训待战).²² This reflects the PLA’s integration of military training with actual combat scenarios. Moreover, the PLA uses this dictum to describe how actual operations can be used for training, as when a PLAN submarine would “train” by stalking foreign naval forces.²³

More broadly, the PLA has put resources behind developing a “synthetic blue army” to act as the opposing forces (OPFOR) during training events, and to set up an exercise and training database for use by submariners.²⁴ Part of this has involved adopting AI technologies to create varied OPFOR strategies during exercises and war games.²⁵ These technologies will likely begin to influence the development of shore-based training systems as well. For example, researchers with the PLAN Submarine Academy have published research on the development and implementation of virtual underwater acoustic target simulation to enhance submarine training. They recommended the implementation of AI-driven opponents in underwater target recognition scenarios.²⁶

PLAN submarine units are investing in increasingly advanced simulation equipment to make shore-based training more realistic. PLA experts believe “simulation training can complement shortcomings in real training, including high costs and risk as well as situations that are not easily replicated in real life.”²⁷ The PLAN Submarine Academy’s Submarine Virtual Simulation Training Research Center (潜艇虚拟训练研究中心) has tactical simulators for teaching sonar use, torpedo attacks, and other tactical actions. The Submarine Disaster Prevention and Rescue Training Center (潜艇防险救生训练中心) has full-scale simulation systems to instruct students on how to escape via

²¹ 陈泽生 [Chen Zesheng] and 向黎明 [Xiang Liming], 东部战区海军某支队：组训经验汇编成册提高训练质效 [“A certain flotilla of the Eastern Theater Navy: Training experience compiled into a book to improve training quality and efficiency”], <http://www.mod.gov.cn>, 19 June 2023, <http://www.mod.gov.cn/gfbw/wzll/dbzq/16232228.html>.

²² Mark Cozad, “PLA Joint Training and Implications for Future Expeditionary Capabilities,” RAND, 21 January 2016, <https://www.rand.org/pubs/testimonies/CT451.html>; 倪光辉 [Ni Guanghui], 这里的“战斗”静悄悄——记海军北海舰队某潜艇基地官兵(上) [“The “fighting” here is quiet—remembering a submarine base of the Navy’s Beihai Fleet (Part 1)”], 人民日报 [People’s Daily], 28 October 2015, <http://cpc.people.com.cn/n/2013/1028/c64104-23344916.html>.

²³ 黄龙 [Huang Long], 锚定奋斗目标加紧作战准备 [“Anchor the Struggle Goals, Intensify Combat Preparations”], 人民海军 [People’s Navy], 22 December 2022; 王伸才 [Wang Shencai], 聚力练兵备战提高打赢能力 [“Focus on Training and Combat Readiness, Enhance Warfighting Capability”], 人民海军 [People’s Navy], 22 December 2022, p. 2.

²⁴ 瞭望·治国理政纪事 | 舰指深蓝 向海图强 [“Ship Pointing to the Deep Blue, Striving for Strength at Sea”], <https://jcgov.gov.cn>, 21 April 2024, https://jcgov.gov.cn/dtxx/jrtt/202404/t20240421_1972997.shtml;

²⁵ Elsa Kania, “Learning Without Fighting: New Developments in PLA Artificial Intelligence War-Gaming,” Jamestown China Brief, 9 April 2019, <https://jamestown.org/program/learning-without-fighting-new-developments-in-pla-artificial-intelligence-war-gaming>.

²⁶ 王永洁 [Wang Yongjie], 田立业 [Tian Liye], and 周佳玉 [Zhou Jiayu], 潜艇训练虚拟水声目标仿真研究 [“Research on virtual underwater acoustic target simulation for submarine training”], 指挥控制与仿真 [Command Control & Simulation], Vol. 45 No. 1 (May 2022), <https://www.zhkzyfz.cn/fileup/1673-3819/PDF/1676862285561-1548456632.pdf>.

²⁷ Liu Xuanzun, “PLA simulation training boosted by latest technologies, speeds up capability forming,” *Global Times*, 15 May 2023, <https://www.globaltimes.cn/page/202305/1290739.shtml>.

airlock-sleeves and torpedo tubes.²⁸ According to a sub commander, completing training on damage control and escape are requirements for all Submarine Academy graduates.²⁹

As recently as 2015, PLA sources regarded digital simulators as a novelty.³⁰ Since then, the PLAN has invested in virtual reality (VR) systems and other more advanced simulators for training sailors in new weapon systems to reduce equipment loss and expand training opportunities beyond what the use of actual equipment could provide.³¹ One Northern Theater submarine base reportedly self-funded the installation of a “3D virtual teaching simulation system,” an “underwater confrontation training system,” and a “nuclear-power simulation training system.”³² According to a PLAN officer, VR training “is not restricted by the availability of training sites, weather conditions, or the consumption of equipment.”³³ This gives it an advantage over bulkier simulators. Moreover, VR-based training should make it easier for training systems to keep up with the various subsystems on the PLAN’s 10+ submarine variants more easily than physical simulators could.

Leadership and Administrative Organization of Submarines

Like all PLA commands at or above the regiment grade, submarines are led by a command dyad consisting of the boat’s commanding officer (艇长, a military affairs officer) and its political commissar (政委, a political officer).³⁴ These two officers are co-equal under the PLA’s “dual-command leadership” (双首长制) framework. However, important decisions are made through the boat’s party committee (艇党委) led by the political commissar, who serves as the party secretary, with the commanding officer serving as the deputy secretary.³⁵

²⁸ 肖德伦 [Xiao Delun] and 刁璞 [Diao Pu], 西太海军论坛年会三大看点 [“Key points in the third annual western pacific military conference”], 当地海军 [Navy Today], no. 12 (2014), pp. 10-13.

²⁹ 军武次元 [Military and Martial Second Dimension], 加入潜艇兵吃四等灶有多难? 解放军资深指挥官详细解答军武次元 [“How difficult is it to become a submariner and eat the fourth-class kitchen? A senior commander of the People’s Liberation Army gave a detailed answer”], *Guancha.cn*, 3 October 2022, <https://user.guancha.cn/main/content?id=860163>.

³⁰ Ni, “The “fighting” here is quiet—remembering a submarine base of the Navy’s Beihai Fleet (Part 1)”]; 张利民 [Zhang Limin], 魏颖 [Wei Ying] and 高毅 [Gao Yi], 某新型潜艇: 这里的“战斗”静悄悄 [“A New Type of Submarine: The ‘Combat’ Here is Quiet”], 解放军画报 [PLA Pictorial], no. 11a (November 2014), pp. 46-47.

³¹ 那立民 [Na Limin] and 夏明辉 [Xia Minghui], ““VR+”成为练兵新引擎” [“VR+” has become the new engine for military training”], 人民海军 [People’s Navy], 20 October 2022, p. 1.

³² Ni, “The “fighting” here is quiet—remembering a submarine base of the Navy’s Beihai Fleet (Part 1).”

³³ Liu Xuanzun, “PLA deploys VR tech for more efficient training”, *Global Times*, 22 March 2021, <https://www.globaltimes.cn/page/202103/1219132.shtml>.

³⁴ Grade 8, 正团, though conventional submarines are actually Grade 7, 副团. In the PLA, military rank (军衔) is distinct from grade (职务等级). Rank denotes an officer’s title (e.g. Colonel, Major General), whereas grade signifies the officer’s level of position or command (e.g. regiment leader or division leader grade) within the hierarchy. Grades are assigned to every officer and unit and were historically considered more important than ranks in determining authority and seniority. Kenneth Allen, Brian Chao, and Ryan Kinsella, “China’s Military Political Commissar System in Comparative Perspective”, *Jamestown China Brief*, 4 March 2013, <https://jamestown.org/program/chinas-military-political-commissar-system-in-comparative-perspective/>.

³⁵ 梦幻之人 [Menghuan Zhiren], 解放军的“双首长制”, 团长与政委到底谁的权利更大? [“In the “dual-chief system” of the People’s Liberation Army, who has more power, the regiment commander or the political commissar?”], <https://www.163.com>, 31 December 2022, <https://www.163.com/dy/article/HPUQR3HK0523EJGA.html>; 军官制度改革, 官方解读来了! [“The military officer system is being reformed, and the official interpretation is here!”], <https://www.thepaper.cn>, 1 February 2021, https://www.thepaper.cn/newsDetail_forward_11082377.



Exhibit 3. A party committee aboard a submarine³⁶

The party committee is responsible for major decision-making, maintaining party control, training, and general leadership.³⁷ Exactly what constitutes a decision that requires party committee intervention has not been described in available sources. Aside from the political commissar and the commanding officer, the party committee comprises the submarine's two deputy political commissars (副政委), two deputy commanding officers (副艇长), and various department heads.³⁸ The chief of the electromechanical department is not always part of the party committee, but is included when engineering expertise is needed. No NCOs are included in the party committee.³⁹ Though the roles of the members of the party committee in the photo above are unstated, one can infer that the submarine's department heads are present based on the observed ranks, along with the commissar, commander, and their deputies.⁴⁰

If higher-echelon leadership, such as the commanding officer or political officer of the superior flotilla (or base) is aboard, an "interim party committee" (临时党委) will be assembled, led by these senior cadres (instead of the submarine's commanding officer and/or commissar), to guide decision-

³⁶ 董存金 [Dong Cunjin], "深海堡垒"的澎湃动能 ["The surging energy of the 'deep sea fortress'"], 人民海军 [People's Navy], 28 July 2022, p. 4.

³⁷ 代宗锋 [Dai Zongfeng] and 李涛 [Li Tao], 潜行深海的"铁脊梁" ["The 'iron backbone' of the deep sea"], 81.cn, 28 May 2018, http://www.81.cn/jfbmap/content/2018-05/28/content_207226.htm.

³⁸ Jeff Benson and Zi Yang, "Party on the Bridge: Political Commissars in the Chinese Navy," Center for Strategic and International Studies, 29 June 2020, <https://www.csis.org/analysis/party-bridge-political-commissars-chinese-navy>, p. 28; 装甲铲史官 [Armored Spade Historian], "《蛟龙行动》军事细节好的不是没有,但是烂的太多,想点赞真太难" ["There are some good military details in Operation Jiaolong, but there are too many bad ones. It's hard to like it."], <https://www.163.com>, 7 February 2025, <https://www.163.com/dy/article/JNQ0E2QI0523D6HE.html>; Dai and Li, "The 'iron backbone' of the deep sea."

³⁹ Dai and Li, "The 'iron backbone' of the deep sea."

⁴⁰ Dong, "The surging energy of the 'deep sea fortress,'" p. 4.

making.⁴¹ As an example, discussion of the Submarine 372 accident highlights the role of the temporary party committee (see below). During that incident, the flotilla commander (also the task commander) acted as the at-sea interim party committee secretary. He was joined by the flotilla political department's director as deputy secretary, as well as five other members of the submarine's crew.⁴² In a separate example involving a nuclear submarine, a temporary party committee was made up of the task commander, the submarine's commanding officer, and the submarine's political commissar.⁴³ It is unclear what dictates the variation in the party committee composition across the submarine fleet.

A key question is whether the role of the party committees, as described in PLAN media, is accurate. One could reasonably think that the party committee acts like the board of directors of a company. In this analogy, the political commissar represents the chairman of the board, bringing in the expertise of the rest of the committee to provide strategic guidance for the chief executive commanding officer to execute. However, this is not how PLA media presents the role of the party committee. *People's Navy* and *PLA Daily* articles present the party committee as integrated into all decisions critical to the operations of a submarine, not just those of political or strategic importance.⁴⁴ Based on this description, it is tempting to imagine party committees aboard PLAN submarines as bureaucratic anchors that slow the commanding officer's ability to act decisively by imposing consensus and political requirements. However, we found little evidence that these party committees inhibit decisive or aggressive action.

How party committees operate likely varies to some degree across the submarine fleet. Personality and professional experience probably affect dynamics within the committee. On boats where the commissar has more experience or has a more forceful supervisory style, party committees may indeed operate as the "iron backbone" (铁脊梁) of a submarine.⁴⁵ However, as will be discussed below, the commanding officers on many submarines have dramatically more operational experience than their political commissars. In these cases, the party committee may end up being a collectivist rubber-stamp for what the commander already decided to do.

No evidence suggests that a party committee's decision-making process always takes the shape of a formal sit-down meeting. In moments of crisis, the commissar and the commander may quickly put their heads together to make the committee's decision. If PLA media depictions of the centrality of regular party-committee meetings for decision making are accurate, it is highly unlikely that those meetings always look like the photo above.

While PLA sources provide valuable insight into PLAN operations, it is important to remember the context in which they are published. Most PLA publications are published by political work departments, and expecting them to present the work of the party committee impartially is like expecting an Apple commercial to be evenhanded when describing the iPhone. These sources are

⁴¹ 穆瑞林 [Mu Ruilin], 解放军潜艇遇严重事故后带伤挫败外军高强度围堵 ["After a PLA submarine suffered a serious accident that led to injuries, it defeated a foreign military's high-intensity blockade"], *News.Sohu.com*, 18 December 2014, <https://news.sohu.com/20141218/n407063450.shtml>.

⁴² Ibid.

⁴³ Ni, "The 'fighting' here is quiet—remembering a submarine base of the Navy's Beihai Fleet (Part 1)."

⁴⁴ Dong, "The surging energy of the 'deep sea fortress,'" p. 4; Dai and Li, "The 'iron backbone' of the deep sea."

⁴⁵ Dai and Li, "The 'iron backbone' of the deep sea."

useful for understanding the committee's structure, but offer little reliable insight into how party command influences decision-making, especially in crises.

The administrative organization of PLAN submarines is defined in 2021's "Regulations on Chinese People's Liberation Army Navy Vessels (Trial)" (中国人民解放军海军舰艇条令 (试行)).⁴⁶ Though this regulation has not been released publicly, available information indicates PLAN submarines are organized similarly to submarines in other navies and include many administrative components found in other PLAN vessels. PLAN submarines have an electromechanical department (机电部门) that acts effectively as the engineering department and is in charge of the propulsion, electrical, and auxiliary systems of the submarine.⁴⁷ No evidence has been found of a separate nuclear power department on PLAN SSNs and SSBNs, and it appears the electromechanical department is in charge of the nuclear power plant when present.

PLAN submarines also have a navigation and communications department (航通部门), under which sit the navigation chief (航海长), the observation and communications chief (观通长), and their respective squads.⁴⁸ All submarines have an operations department (作战部门), which is sometimes called a torpedo and mine department (鱼水雷部门) and is in charge of torpedoes and other non-strategic munitions. SSBNs have a missile department (导弹部门), reportedly in charge of strategic weapons.⁴⁹ It is not clear whether the missile department or the operations department would operate non-strategic missiles.

Equipment officers and special technical officers are engineers whose expertise is critical to advanced systems usage but are not on a full command career track. Logistics officers run the shore-support departments that keep the subs in operation, and they may deploy on subs. Finally, NCOs make up ~70 percent of the crew on all front-line PLAN vessels, including submarines.⁵⁰

⁴⁶ 新修订的《中国人民解放军海军舰艇条令（试行）》施行 [“The newly revised ‘Regulations on Chinese People's Liberation Army Navy Vessels (Trial)’ came into effect”], <http://military.china.com.cn>, 11 August 2021, http://military.china.com.cn/2021-08/11/content_77687197.htm.

⁴⁷ 谢成林 [Xie Chenglin] and 张宸熙 [Zhang Yixi], 群众性自我启发式教育触动兵心, “蓝鲸小课堂”第一课开讲啦! [“Mass-oriented self-initiated education resonates with soldiers' hearts—‘Blue Whale Mini Classroom’ kicks off its first lesson!”], *Weixin.QQ.com*, 9 February 2022, <https://mp.weixin.qq.com/s/Em56V2sQ0XD09-lGxoMBRg>.

⁴⁸ Chen and Xiang, “A certain flotilla of the Eastern Theater Navy: Training experience compiled into a book to improve training quality and efficiency”; Xie and Zhang, “Mass-oriented self-initiated education resonates with soldiers' hearts—‘Blue Whale Mini Classroom’ kicks off its first lesson!”; Dong, “The surging energy of the ‘deep sea fortress,’” p. 4; 胡海燕 [Hu Haiyan] and 胡继锡 [Hu Jixi], 春节, 我们守卫万家团圆 [“During the Spring Festival, we guard the reunion of thousands of families”], *News.Sohu.com*, 27 January 2006, <https://news.sohu.com/20060127/n241631745.shtml>; 兵工科技 [Binggongkeji], 中国第一艘核潜艇的舱室布局你知道吗? [“Do you know the cabin layout of China's first nuclear submarine?”], *Sina.com.cn*, 31 May 2017, <https://mil.news.sina.com.cn/jssd/2017-05-31/doc-ifyfuvpm6861592.shtml>.

⁴⁹ 王洋 [Wang Yang] and 林永超 [Lin Yongchao], 预任者, 以何担当大任 [“How can the pre-appointed officers take on the great responsibility?”], *人民海军 [People's Navy]*, 22 June 2021, p. 3; 乔天富 [Qiao Tianfu], 刘欣欣 [Liu Xinxin], 李唐 [Li Tang], 王松岐 [Wang Songqi], and 胡军 [Hu Jun], 潜龙腾渊震霄汉 [“Hidden Dragon Soars to the Deep and Shakes the Sky”], *解放军画报 [PLA Pictorial]*, no. 11a (2013), pp. 6-15; Zhang, Wei, and Gao, “A New Type of Submarine: The ‘Combat’ Here is Quiet,” pp. 46-47.

⁵⁰ 侯融 [Hou Rong], 顾亚根 [Gu Yagen], 陈国全 [Chen Guoquan], and 李唐 [Li Tang], 深蓝航道挺立新一代“龙骨脊梁”——新型海军士官人才方阵加速成长 [“The deep blue waterway stands up the ‘keel backbone’ of a new generation—The new naval non-commissioned officer talent phalanx is accelerating its growth”], 中华人民共和国国防部网 [Website of the Ministry of National Defense of the People's Republic of China], 19 August 2019, <http://www.mod.gov.cn/gfbw/wzll/hj/4848487.html>.

Appendix 1 depicts the likely administrative structure of PLAN submarine commands.

Military Affairs Officers

Military affairs officers are the line officers of the PLAN. They either currently serve as commanding officers of their unit or are on track to become a commanding officer. Under the dual-commander system, the military affairs officers execute decisions made by the party committee. The PLAN aspires for its military affairs officers to demonstrate strong leadership, strategic thinking, and adaptability in complex, evolving environments. The service aims for naval officers to be cultivated in a training system that aligns with national strategy and supports China's growing maritime ambitions. After officers graduate from the PLAN Submarine Academy or a civilian institution, they are assigned to the unit of their eventual submarine command.⁵¹ Once at their first command, new PLAN submariners (officers and enlisted) are placed in a squad for new arrivals for submarine familiarization and academic instruction. They will remain with this squad for a two-month probationary period before being integrated into the crew.⁵² This probationary period involves familiarization training such as anti-motion sickness training, to accustom new sailors to life on a submarine.⁵³

According to the 2012 *Handbook for Officers and Enlisted of the Chinese PLA Navy*, the career progression of submarine officers in the PLA is similar to those serving aboard PLAN surface ships.⁵⁴ Officers typically stay at their first command until they are ready to assume a Grade 12 role as a Department Head or Chief Operator. From that point on, as the officer progresses up the ranks, he completes established prerequisite periods of training at the PLAN Submarine Academy, the Naval Command College, and the National Defense University (at grades 11, 7 then 6, and at 4, respectively).

The career benchmarks of military affairs officers are the best understood of all the PLAN officer tracks. This is because much of the information we have about career benchmarks tends to come from biographies of senior leaders. By comparison, other officer tracks involve career paths that either rotate in and out of the submarine community or only permit career advancement up to a certain level. There is no submarine specific training or career progression pipeline for political officers, and the advancement prospects of equipment officers are highly limited.

This creates two analytic challenges. First, the available information tends to be focused on people whose careers are likely to be more noteworthy than the average submariner. Second, as discussed earlier in the report, the PLAN is evolving the shape of its submarine fleet by decreasing the number of traditional diesel subs (as opposed to AIP-subs like the Type 39A) as a share of the fleet, by increasing the level of automation within all platforms, and by directing its subs to conduct

⁵¹ 我海军军官曾冒险修好核潜艇反应堆舱故障 [“An officer of our Navy once risked his life to repair a nuclear submarine reactor compartment failure”], *Sina.com.cn*, 22 December 2009, <https://mil.news.sina.com.cn/2009-12-22/1131578212.html>. Cadets that graduate from civilian universities, or PLAN officers that transfer into submarine service, are likely to go to the PLAN Submarine Academy for foundational emergency response training prior to going to their first duty station.

⁵² Military and Martial Second Dimension, “How difficult is it to become a submariner and eat the fourth-class kitchen? A senior commander of the People's Liberation Army gave a detailed answer.”

⁵³ 茆琳 [Mao Lin] and 董存金 [Dong Cunjin], 艰难的首航经历, 那些无法言表的情感都融化在一碗面里 [“The difficult maiden voyage experience, those unspeakable emotions are melted in a bowl of noodles”], *81.cn*, 4 August 2023, http://www.81.cn/yw_208727/16242331.html.

⁵⁴ 杜景臣 [Du Jingchen], 中国海军军人手册 [*Handbook for Officers and Enlisted of the Chinese PLA Navy*], (Beijing, Haichao Press, 2012), p. 145.

operations farther afield. A likely result of this is that the career of submarine officers currently working as department heads will look very different from the careers of current flag officers working in grade 1-4 positions. At a minimum, the growth in the number of nuclear submarines and total number of submarines has resulted in more officers working in grade 8 & 9 positions (along with all other submarine officer grades) competing for promotion for the same number of division grade roles at submarine flotillas and bases.⁵⁵

Exhibit 4. Career Progression for PLAN Submariners⁵⁶

Highest Rank	Lowest Rank	Grade	Example Years of Service ⁵⁷	Submarine Officer Track	Unit Grade
ADM (上将) 	ADM (上将) 	Grade 1			Central Military Commission (CMC) Member 军委委员
ADM (上将) 	VADM (中将) 	Grade 2	46 ⁵⁸	Theater Navy HQ or Joint Operations Command Sub-Center	Full Theater Grade 正战区职
VADM (中将) 	RADM (少将) 	Grade 3			Deputy Theater Grade 副战区职
RADM (少将) 	VADM (中将) 	Grade 4		The officer attends joint battle command training at the National Defense University for 10 months. He then takes command of a Corps-grade command, such as a Submarine Base (潜艇基地).	Full Corps Grade 正军职

⁵⁵ Ibid., p. 145.

⁵⁶ Ibid., p. 145; 中国人民解放军军官军衔条例 [“Regulations of the Ranks of Chinese People's Liberation Army Officers”], *Cape.Edu.Cn*, 30 October 2019, <https://www.cape.edu.cn/szgl/info/1251/2291.htm>; “Military Mandarin, Brief: PLA Ranks and Grades,” *Junyu.org*, 27 June 2017, <https://junyu.org/brief-pla-ranks-and-grades/>; 中国人民解放军军官军衔条例 [“Regulations of the Ranks of Chinese People's Liberation Army Officers”], *jsnews.jschina.com.cn*, 9 April 2024, https://jsnews.jschina.com.cn/zt2024/fzsxxxpt/hdxf/xffl/202404/t20240409_3387868.shtml; 海军的舰长是什么级别？军衔有多高？ [“What level is the captain of the Navy? How high is the rank?”], *Sohu.com*, 21 September 2018, https://www.sohu.com/a/255263675_100029803; 孙智英 [Sun Zhiying], 栾宝玲 [Luan Baoling], and 茆琳 [Ji Lin], “80后”潜艇艇长 为你讲述潜艇兵的战斗生活 [“A submarine captain ‘born in the 1980s’ tells you about the combat life of submarine soldiers”], *Chinamil.com.cn*, 16 October 2018, http://photo.chinamil.com.cn/pla/2018-10/16/content_9310794.htm.

⁵⁷ This column provides examples of years of service for officers currently serving at that grade. Evidence of years of service, grade, and rank can be derived from a review of imagery of the ranks and ribbons on submarine officers wearing their dress uniforms. Legacy Type 7 ribbons on PLA uniforms imparted very little information about an officer’s career history compared to those of American military ribbons: they only indicate the grade (measured by the number of rows) and the years of service (summed up by the year-marker ribbons). The anecdotal years of service in this table are examples of years-served for officers in their roles, not prerequisite years for service.

⁵⁸ Jeffrey Becker, “The Rise of Admiral Sun Jianguo and the Future of U.S.-China Naval Relations”, *Jamestown China Brief*, 20 June 2016, <https://jamestown.org/program/the-rise-of-admiral-sun-jianguo-and-the-future-of-u-s-china-naval-relations/>.

RADM (少将) 	SCPT (大校) 	Grade 5	38 ⁵⁹		Deputy Corps Grade 副军职
SCPT (大校) 	RADM (少将) 	Grade 6		The officer attends 5 months of battle command training at the Naval Command College. He then becomes the commanding officer at a full division-grade command, such as one of the six submarine flotillas (潜艇支队).	Full Division Grade 正师职
CPT (上校) 	SCPT (大校) 	Grade 7	28, 26 60	The officer attends a 10 month combined-arms course at the Naval Command College. He is then assigned as commanding officers at the division deputy leader-grade level.	Deputy Division Grade 副师职
CPT (上校) 	CDR (中校) 	Grade 8	2061	Commanding Officer of Nuclear Submarine	Full Regiment Grade 正团职
CDR (中校) 	LCDR (少校) 	Grade 9	15, 25, 25, 2162	Command of Conventional Submarine	Deputy Regiment Grade 副团职
LCDR (少校) 	CDR (中校) 	Grade 10			Full Battalion Grade 正营职
LT (上尉) 	LCDR (少校) 	Grade 11	10, 12 63	The officer attends a six to ten-month tactics command course at the PLAN Submarine Academy in Qingdao. Afterward, he is assigned as an executive officer on a submarine. ⁶⁴	Deputy Battalion Grade 副营职

⁵⁹ “Xi encourages China's navy soldiers to commit to training”, *YouTube.com*, 15 June 2018, <https://youtu.be/3F0kXbPR65w?si=jilupJI2vM0oN0Qq3>.

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² 卫雨檬 [Chen Yu] and 丁斐煜 [Wang Xiaoxiao], 东部战区海军某潜艇艇长薛永鹏: “艇为长剑我为锋” [“Xue Yongpeng, a submarine chief of the Navy of the Eastern Theater: ‘I am a long sword, I am a front’”], *People.cn*, 2 December 2021, <https://military.people.com.cn/n1/2021/1202/c1011-32297617.html>; 穆瑞林 [Mu Ruilin], 海军 372 潜艇: 潜行无声, 深海擎剑胆惊天 [“Navy’s Submarine 372: Silent and daring in the deep sea”], 中国军网 [China Military Online], 19 December 2014, https://photo.81.cn/pla/2014-12/19/content_6275497.htm.

⁶³ Mu, “Navy’s Submarine 372: Silent and daring in the deep sea”; 潜艇兵王王昌来: 服役 35 年, 6000 多次险些丧命, 今儿子成他的上司 [“Submarine soldier king Wang Changlai: Served for 35 years, nearly died more than 6,000 times, and now his son is his boss”], *Sohu.com*, 4 October 2021, https://www.sohu.com/a/493528286_121119016.

⁶⁴ | 蓝孝威 [Lan Xiaowei], 中共海军潜艇学院开放参观 学员寝室分两种 [“Visit of the CCP Navy Submarine College- There are two types of students’ bedrooms”], *Chinatimes.com*, 21 April 2024, <https://www.chinatimes.com/cn/realtimenews/20240421002478-260409?chdtv>; Du, *Handbook for Officers and Enlisted of the Chinese PLA Navy*, p. 145.

LT (上尉) 	LTJG (中尉) 	Grade 12	7, 4 ⁶⁵	Officers become Submarine Department Head or Chief Operator.	Full Company Grade 正连职
LTJG (中尉) 	LT (上尉) 	Grade 13	2 ⁶⁶		Deputy Company Grade 副连职
ENS (少尉) 	LTJG (中尉) 	Grade 14		Officers are assigned to their first command at a submarine.	Platoon Grade 排职
Student (学员)	Student (学员)	-		New officers first graduate from a military training institution. Electromechanical personnel receive 10 months of job training, while non-electromechanical personnel receive 14 months.	Unassigned

The career-path presented above is not always strictly followed. Though the above table presents the basic career-path, in practice there are numerous variations. For example, ADM Hu Zhongming appears to have worked in two non-standard positions between joining the PLA as a submarine officer in 1979 and becoming the head of the PLAN in 2023. He followed the standard path of working his way from being a conventional submarine captain and getting qualified to be captain of a nuclear submarine. Later in his career he became the commander of a flotilla, the commander of the Yalong submarine base, and eventually the head of the Northern Theater Command Navy. This path conforms with the career-path for PLAN submariners laid out in PLA texts. However, during that time he also trained to be captain of a destroyer (though perhaps never actually served in this role). According to PRC media reports, this is not a typical role for a submarine captain.⁶⁷

Political Officers

Political commissars and other political officers play a number of roles on PLAN submarines: their principal job is maintaining the Party's political control of the submarine, and their other roles and responsibilities all derive from this goal. They are responsible for evaluating all members of the submarine's crew, up to and including the commanding officer, assessing both political reliability and general competency.⁶⁸ The political officer is expected to understand "that the primary responsibility of the party committee secretary is to focus on warfare, and the primary role of the political commissar is that of a commander. The political commissar is both a Party representative

⁶⁵ "Xi encourages China's navy soldiers to commit to training"; 卫雨檬 [Chen Yu] and 丁斐煜 [Wang Xiaoxiao], 东部战区海军某潜艇艇长薛永鹏: "艇为长剑我为锋" ["Xue Yongpeng, a submarine chief of the Navy of the Eastern Theater: "I am a long sword, I am a front""], *People.cn*, 2 December 2021, <https://military.people.com.cn/n1/2021/1202/c1011-32297617.html>.

⁶⁶ "Xi encourages China's navy soldiers to commit to training."

⁶⁷ Christopher Sharman and Andrew S. Erickson, "Admiral Hu to the Helm: China's New Navy Commander Brings Operational Expertise," *China Maritime Notes* No. 1, China Maritime Studies Institute, 27 December 2023, <https://digital-commons.usnwc.edu/cmsi-notes/1/>.

⁶⁸ John Grady, "Political Commissars on Chinese Warships Play Crucial Role in Interactions With Foreign Vessels," *USNI News*, 3 July 2020, <https://news.usni.org/2020/07/03/political-commissars-on-chinese-warships-play-crucial-role-in-interactions-with-foreign-vessels>

and a commander. Only by possessing both strong political and military qualities can one have the confidence to lead troops into battle.”⁶⁹

Political commissars and the political officers working for them conduct political education and organize training aboard submarines. PLA media often describes political officers as organizing training on a variety of topics for the rest of the crews of submarines, including operational topics for which they have no specific expertise.⁷⁰ Minimum ratios of military-political training are set out in PLA-wide statute, with a significant portion of training being political in nature. For example, the commanders and other senior cadres on regiment-grade units (like nuclear submarines) are required to receive no less than seven days of theoretical political education training per year, and for the whole unit there is an expectation that political training should constitute between 20-30 percent of all training given.⁷¹

Political commissars are also responsible for morale and welfare, as well as general career management. PLA media reports highlight instances where commissars intervened with local officials to assist submariners with family matters while those sailors were deployed.⁷² As one submarine’s political commissar said, “putting people first means not only creating conditions for the growth and success of our personnel but also working hard to solve their real-life difficulties.”⁷³

There are several routes to become a political officer on a submarine. Many political officers enter the PLA in the political officer career field, including through dedicated PLA political education institutions like the Xi’an and Nanjing Political Academies, or other PLAN schools like the Dalian Naval Academy.⁷⁴ Political officers can also transfer in from military-affairs or technical officer career paths, including those with engineering training. In 2003, the Central Military Commission (CMC) promulgated the Opinion on Further Improving Cadre Exchanges (关于进一步做好干部交流工作的意见), which established pathways for cross-posting officers among the command,

⁶⁹ 周逸峰 [Zhou Yifeng], 陈杰 [Chen Jie], and 邓昊 [Deng Hao], 一种叫空气、阳光和晴思草的奢侈品——走进海军潜艇部队 [“A luxury called air, sunshine, and fresh grass—Entering the Navy Submarine Force”], <https://hn.Rednet.cn>, 27 April 2024, <https://hn.rednet.cn/content/646848/61/13794278.html>.

⁷⁰ Chen, Duan, and Mao, “Militarily and Politically Proficient—The Political Cadres of This Submarine Unit Are Outstanding!”, 海军 35 艇员队开展接装培训 新型核潜艇即将入列 [“35th Crew Team at a Naval Submarine Base Expands Mass Training; All Personnel Take the Stage to Explain Equipment Theory”], *PLA Daily* via *Guancha.cn*, 19 February 2016, https://www.guancha.cn/military-affairs/2016_02_19_351527.shtml; Dai and Li, “The ‘iron backbone’ of the deep sea.”

⁷¹ 中国人民解放军思想政治教育大纲 [“Outline of Ideological and Political Education of the Chinese People's Liberation Army”], *81.cn*, 4 August 2015, http://www.81.cn/jwzl/2015-08/04/content_6614424_3.htm.

⁷² Dong, “The surging energy of the ‘deep sea fortress,’” p. 4; 于海洋 [Yu Haiyang], 南部战区海军某潜艇支队聚焦备战打仗, 加快转型建设 [“A submarine flotilla of the Southern Theater Navy focuses on preparing for war and accelerating transformation and construction”], *81.cn*, 15 May 2024, http://www.81.cn/hj_208557/16308792.html.

⁷³ 彭海 [Peng Hai], 南海舰队某基地 41 艇员队党委探索科学发展之路纪实 [“A Chronicle of the Scientific Development Path Explored by the Party Committee of the 41-member Crew of a Base in the South Sea Fleet”], *人民海军* [*People's Navy*], 18 November 2011, p. 3.

⁷⁴ 西安政治学院: 强军火种在这里越燃越旺 [“Xi'an Political College: The flame of a strong army is burning more and more vigorously here”], *People.cn*, 3 June 2014, <http://military.people.com.cn/n/2014/0603/c1011-25094002.html>; Allen, Chao, and Kinsella, “China’s Military Political Commissar System in Comparative Perspective.”

political, and technical tracks.⁷⁵ Recently, there have been examples of submarine flotilla commanders serving as former political commissars and political officers on submarines.⁷⁶

No specific outlines have been found for the career progression of PLAN political officers that are specific to those performing submarine duty, but some assumptions can be inferred. Political commissars on conventional submarines are Grade 9 (LCDR or CDR), and those on nuclear submarines are Grade 8 (CDR or CPT). Deputy Commissars aboard submarines are likely to be Grade 11 (LT or LCDR), just as executive officers are. Political officers below that point serving on submarines may be political staff officers (政工干部), responsible for political education and assisting the deputy commissars.⁷⁷ Above Grade 11, political officers with submarine experience can serve as the commissar of a submarine flotilla at Grade 6 or a submarine base at Grade 4.⁷⁸

Since the 2014 Gutian conference (i.e., the Whole-Army Political Work Conference, 全军政治工作会议), the PLA has reemphasized the critical role of political commissars in command decision-making, and this can be seen in the political officers aboard submarines. This conference, held in Gutian, Fujian in homage to the similarly-themed 1929 conference, aimed to revitalize political work in the wake of serious corruption scandals within the CMC's General Political Department and perceived nihilism and liberalism across the PLA.⁷⁹ Political officers across the PLA are now training in operations rather than merely focusing on staffing and propaganda.

Traditionally, political commissars on submarines served in positions outside the submarine community prior to submarine assignments. One article suggested that in 2017, only 30 percent of political officers working in submarine units had operational submarine experience.⁸⁰ Now, when a political officer is selected to serve on a submarine, he first must go to the PLAN Submarine Academy for submarine qualification training.⁸¹ This training likely covers the fundamentals of damage control and emergency escape, as this is a highly emphasized requirement for all sailors on PLAN submarines. Commissars have historically arrived on a submarine with clear gaps in their operational knowledge and likely never fully remedy these deficiencies.

Much like the rest of the PLA, the PLAN submarine force has made efforts to ensure that political officers have basic military competencies, so that the political commissars can act as the military commander when needed. As one submarine's political commissar said, "the more you understand military training, the more you can fully grasp the psychological and ideological dynamics of the

⁷⁵ 我军将加快干部交流工作 ["Our army will speed up the exchange of cadres"], *Sina.com.cn*, 17 September 2003, <https://news.sina.com.cn/c/2003-09-17/0414764662s.shtml>.

⁷⁶ Zhou, Chen, and Deng, "A luxury called air, sunshine, and fresh grass—Entering the Navy Submarine Force."

⁷⁷ Chen, Duan, and Mao, "Militarily and Politically Proficient—The Political Cadres of This Submarine Unit Are Outstanding!"

⁷⁸ Du, *Handbook for Officers and Enlisted of the Chinese PLA Navy*, pp. 145, 150.

⁷⁹ Morgan Clemens and Benjamin Rosen, "The impact of reform on the PLA's political work system," in Roy D. Kamphausen, ed., *The People of the PLA 2.0* (Carlisle, PA: U.S. Army War College, 2021), <https://press.armywarcollege.edu/cgi/viewcontent.cgi?article=1940&context=monographs>, pp. 1-39.

⁸⁰ Chen, Duan, and Mao, "Militarily and Politically Proficient—The Political Cadres of This Submarine Unit Are Outstanding!"

⁸¹ 黎香朝 [Li Xiangchao], 邓博宇 [Deng Boyu], and 周演成 [Zhou Shicheng], 潜行大洋展锋芒 ["Sneaking into the ocean to show your talent"], 人民海军 [*People's Navy*], 18 November 2020, p. 2.

sailors... If you don't understand military affairs, you can only talk about empty principles, and who would want to listen?"⁸²

While the PLAN has made some efforts to expand the technical competency of political cadres aboard submarines, it is far from obvious that the PLA sees these efforts as successful. The PLA has continued to roll-out new regulations and formal guidance instructing the PLA's political officers to focus their political training on increasing combat effectiveness.⁸³ This indicates that the PLA believes political education *should* make their military units more effective, but they do not always know exactly how to make this work in practice. It is likely that if operational competence was actually ubiquitous among political officers aboard submarines, PLA media (published by political work departments) would spend less time extolling political cadres for understanding the basics of emergency procedures. Given the highly technical nature of submarine operations, as one deputy political commissar of a submarine flotilla said, it is likely still "extremely difficult to be competent in military positions for political cadres."⁸⁴



Exhibit 5. A submarine flotilla's political cadres conducting emergency escape training⁸⁵

Submarine forces the world over emphasize learning from noteworthy submarine accidents. As in all things, the PLAN submarine force remains fairly opaque regarding accident response analysis involving its own fleet. PLA authors have more flexibility when studying foreign incidents, and these studies can provide reflections about what's happening in the domestic fleet.⁸⁶

⁸² Chen, Duan, and Mao, "Militarily and Politically Proficient—The Political Cadres of This Submarine Unit Are Outstanding!"

⁸³ “习近平强军思想学习问答⑧ | 让生命线永葆生命力” [“Xi Jinping's Thought on Strengthening the Army Study Questions and Answers⑧ | Keep the Lifeline Vitality”], 北京市退役军人事务局 [Beijing Municipal Veterans Affairs Bureau], 28 August 2023, https://tjjswj.beijing.gov.cn/ztzl/zjtjyhd/xxfw/xxwd/202308/t20230828_3231976.html.

⁸⁴ Chen, Duan, and Mao, "Militarily and Politically Proficient—The Political Cadres of This Submarine Unit Are Outstanding!"

⁸⁵ Ibid.

⁸⁶ 李方正 [Li Fangzheng], 张玮 [Zhang Wei], 周晗 [Zhou Han], and 刘洋 [Liu Yang], 国外潜艇事故原因分析及启示 [“The summaries and revelation of foreign submarine accidents”], *html.Rhhz.net*, 1 February 2022, <https://html.rhhz.net/jckxjsgw/html/67435.htm>. In this article, authors from PLA Unit 92578 and China State Shipbuilding

That said, since 2000 the PLAN only admits to having two major accidents involving operational submarines.⁸⁷

2003 – Sub 361 had a mechanical failure, leading to the whole crew perishing of hypoxia

2014 – Sub 372 had an uncontrolled dive caused by a “sea cliff” and a burst pipe.

The Sub 361 accident was treated as a major embarrassment for the PLAN. Media sources speculate that the submarine suffered a mechanical failure, leading to a toxic or oxygen-deprived atmosphere that proved deadly to the entire crew.⁸⁸ The incident drew the direct attention of the Central Military Commission including Jiang Zemin and Hu Jintao.⁸⁹ As a result, numerous senior PLAN officials were punished because of this disaster. Ding Yiping (丁一平), commander of the North Sea Fleet and Chen Xianfeng (陈先锋), commissar of the North Sea Fleet were both demoted and removed from their positions, as were commander of the PLAN Shi Yunsheng (石云生) and the commissar Yang Huaqing (杨怀庆) and many other officers involved in the incident.⁹⁰ Likely as a result of the accident, the PLAN began focusing on improving its capabilities related to submarine escape and rescue. It increased emphasis on emergency escape training and purchased a submarine rescue vessel from the United Kingdom.⁹¹ Eventually, it began exercising escape and rescue procedures at international exercises like RIMPAC2016 and JOINTSEA2017.⁹²

The PLA’s public portrayal of the Sub 372 incident could not have been more different. In this 2014 occurrence Sub 372 reportedly encountered a drastic change in seawater density, causing it to plunge rapidly and leading to ruptured pipes in the engine compartment.⁹³ The crew was able to repair the

Corporation’s 714 Research Institute studied submarine accidents around the world. The authors argued that the PLAN submarine force still had room for improvement regarding ordnance-handling procedures, navigation situational-awareness, emergency-response training, and crew qualifications.

⁸⁷ In addition, in 1959 PLAN submarine 418 collided with a frigate, leading to 38 fatalities (out of a crew of 39). 我淡如菊 [I’m Light as a Chrysanthemum], 中国海军潜艇遭遇三次险情, 前两次造成重大损失, 第三次创造奇迹 [“The Chinese Navy submarine encountered three dangerous situations. The first two caused heavy losses, and the third created a miracle”], *Sina.com.cn*, 13 June 2023, <https://www.163.com/dy/article/I75B4CFQ0543HKTZ.html>.

⁸⁸ 震怒中央軍委的中國海軍驚天事故 [“The shocking accident of the Chinese Navy that angered the Central Military Commission”], 新華澳報 [*Jornal San Wa Ou*], 30 April 2015, <https://www.waou.com.mo/2015/04/30/%E9%9C%87%E6%80%92%E4%B8%AD%E5%A4%AE%E8%BB%8D%E5%A7%94%E7%9A%84%E4%B8%AD%E5%9C%8B%E6%B5%B7%E8%BB%8D%E9%A9%A%E5%A4%A9%E4%B%A%8B%E6%95%85/>.

⁸⁹ 潜艇事故促中国迈向“海洋世纪” [“The Navy’s submarine accident has helped China move towards the ‘Ocean Century’”], *ChinaNews.com*, 19 May 2003, <https://www.chinanews.com.cn/n/2003-05-19/26/304436.html>.

⁹⁰ “The shocking accident of the Chinese Navy that angered the Central Military Commission”; 海军 361 潜艇失事原因查明 [“The cause of the Navy’s 361 submarine accident was found”], *News.GMW.CN*, 14 June 2003, <https://www.gmw.cn/01gmrb/2003-06/14/27-D29DCCB7C47046FC48256D4500071704.htm>.

⁹¹ 周朝荣 [Zhou Chaorong], 印尼海軍參觀潛艇學院 解放軍神秘潛艦模型曝光 [“Indonesian Navy visits Submarine Academy”], *81.cn*, 23 April 2014, https://photo.81.cn/zhuanti/2014-04/21/content_5874723_7.htm; 中国购英深潜救生艇是造不出来吗 其实技术世界领先 [“Is it impossible for China to manufacture the deep-sea lifeboat purchased from Britain? In fact, the technology is world-leading”], *Sina.com.cn*, 27 September 2017, <https://mil.sina.cn/sd/2017-09-27/detail-ifymfcih6676244.d.html>.

⁹² 大国之翼 [Wings of a Great Nation], 中俄缘何演练潜艇救援 两军都曾有潜艇失事惨痛教训 [“Why China and Russia practice submarine rescue? Both armies have had painful lessons from submarine crashes”], *Sina.com.cn*, 25 September 2017, <https://mil.sina.cn/sd/2017-09-25/detail-ifymesii5500717.d.html>.

⁹³ Mu, “After a PLA submarine suffered a serious accident that led to injuries, it defeated a foreign military’s high-intensity blockade.”

leak and arrest the sub's descent, and even was able to complete its original mission, a feat ascribed by PLA media to both the leadership of the party committee on this particular submarine, as well as rigorous emergency response training requirements instituted across the fleet.⁹⁴ For example, prior to the incident, the whole fleet increased the scores needed to pass submarine readiness exams.⁹⁵ Following the Sub 372 incident, the PLAN's political work departments leapt into action. Numerous articles about the incident and triumph of the at-sea party committee were published, highlighting the way the political staff's leadership had proven essential.⁹⁶ In under a year, PLAN training institutions had incorporated the Sub 372 incident into their curricula and had installed instructional placards on bases.⁹⁷



Exhibit 6. An instructor teaching the Sub 372 incident⁹⁸

The specific contents of how the Sub 372 accident is taught in-person are not available publicly, some indication of the focus can be inferred from the public discussions of the incident. Numerous articles about the incident and triumph of the at-sea party committee were published, highlighting the way the political staff's leadership had proven essential.⁹⁹ Similarly, one expects that in-person training about the Sub 372 incident falls in the 20-30% of training mandated as political training, and

⁹⁴ 深度：详解 372 艇创世界潜艇史奇迹 3 分钟化解险情 ["In-depth: Detailed explanation of the miracle of submarine 372 in the history of world submarines, and the dangerous situation was resolved in 3 minutes"], *Sina.com.cn*, 4 September 2014, <https://mil.sina.cn/sd/2014-09-04/detail-icfkptvx3383542.d.html>; 解放军潜艇“断崖”掉深 士兵 3 分钟成功化解险情 ["The PLA submarine 'falls off a cliff' and falls deep. Soldiers successfully resolve the danger in 3 minutes"], *Huanqiu.cn*, 19 April 2014, <https://m.huanqiu.com/article/9CaKrnJESm2>.

⁹⁵ "The PLA submarine 'falls off a cliff' and falls deep. Soldiers successfully resolve the danger in 3 minutes."

⁹⁶ Ibid. Mu, "After a PLA submarine suffered a serious accident that led to injuries, it defeated a foreign military's high-intensity blockade"; "In-depth: Detailed explanation of the miracle of submarine 372 in the history of world submarines, and the dangerous situation was resolved in 3 minutes."

⁹⁷ Mu, "Navy's Submarine 372: Silent and daring in the deep sea."

⁹⁸ Ibid.

⁹⁹ Mu, "After a PLA submarine suffered a serious accident that led to injuries, it defeated a foreign military's high-intensity blockade"; "In-depth: Detailed explanation of the miracle of submarine 372 in the history of world submarines, and the dangerous situation was resolved in 3 minutes"; "The PLA submarine 'falls off a cliff' and falls deep. Soldiers successfully resolve the danger in 3 minutes."

a substantial portion of the contents are focused on the way the leadership of the Party spurred the crew of the sub into action. The PLAN's handling of submarine accidents reflects a broader strategy of using such incidents for political messaging rather than purely operational analysis.

Equipment Officers and Special Technical Officers

Other than the commanding officer and the political commissar, arguably the most important person on a PLAN submarine is the chief of the electromechanical department and his subordinate technical officers. These engineers supervise NCO technicians and are responsible for maintaining the submarine's main propulsion, electrical, and auxiliary systems. The officers of this department are likely either equipment officers (装备军官) or special technical officers (专业技术军官).

Authoritative discussions of these two career fields tend to bleed together, making it difficult to distinguish the differences between the two career tracks.

The opportunities for advancement for equipment officers aboard submarines are somewhat limited, with few positions above Grade 12 (CDR/LCDR).¹⁰⁰ In 2003, the PLA began allowing electromechanical officers to switch career tracks.¹⁰¹ However, no engineer was permitted to transfer into the military-affairs career track until 2009.¹⁰² Additionally, 2021 reforms re-categorized all military affairs, political, and logistics officers, but not equipment officers, as “command and administrative officers” (指挥管理军官), though the career paths of the three categories appear to maintain distinct training pipelines. Command and administrative officers are distinguished from special technical officers, which include officers whose duty is in “teaching positions, scientific research positions, engineering positions, health service positions, and [other] specialized positions.”¹⁰³ Equipment officers are not mentioned in the regulation that created this change, possibly as a result of the post-2016 merging of PLAN equipment and logistics departments into “support departments” at Grade 2-6 commands (such as theater command service HQs, submarine bases, and submarine flotillas).¹⁰⁴

The 2021 rank and grade reform appears to have encouraged engineers to convert into the special technical officer career-track. As mentioned above, career opportunities for equipment officers are limited and the PLA has up-or-out rules that may force separation of much needed senior technical expertise. Equipment engineers can be the department head of the electromechanical department, and when in that position, they supervise special technical officers within the department even if those

¹⁰⁰ Zhou, Chen, and Deng, “A luxury called air, sunshine, and fresh grass—Entering the Navy Submarine Force.”

¹⁰¹ Ibid.; “Our army will speed up the exchange of cadres.”

¹⁰² 魏兵 [Wei Bing], 刘亚迅 [Liu Yaxun], and 方立华 [Fang Lihua], 海军某潜艇艇长陆敏: 去远航, 一个崛起的民族在我身后 [“Lu Min, the captain of a submarine: Going the distance with a rising nation behind me”], 解放军报 [PLA Daily], 23 April 2019, http://www.mod.gov.cn/gfbw/wzll/hj/4840074_3.html.

¹⁰³ Kenneth Allen, Thomas Corbett, Taylor A. Lee, and Ma Xiu, “Personnel of the People’s Liberation Army”, *US-China Economic and Security Review Commission*, 3 November 2022, https://www.uscc.gov/sites/default/files/2022-11/Personnel_Peoples_Liberation_Army.pdf; 吴谦 [Wu Qian], 国防部: 新的军官制度由基于职务等级调整为基于军衔等级 [“Ministry of National Defense: The New Officer System is Adjusted from a Grade-Based Level to the Rank-Based Level”], 国防部 [PRC Ministry of National Defense], 28 January 2021, <http://www.mod.gov.cn/gfbw/xwfy/lxjzhzt/2021njzh/2021nly/4878158.html>; 吴谦 [Wu Qian], “Regular Press Conference of the Ministry of National Defense on January 28,” <http://eng.Chinamil.com.cn>, 1 February 2021, http://eng.chinamil.com.cn/view/2021-02/01/content_9978281.htm.

¹⁰⁴ Kenneth Allen, “PLA Navy Equipment Department & Support Department: History & Organizational Background,” *AndrewErickson.com*, 22 January 2025, <https://www.andrewerickson.com/2025/01/pla-navy-equipment-department-and-support-department-history-and-organizational-background/>.

officers are higher rank, according to Chinese netizen commentary on the 2021 rank and grade reform.¹⁰⁵

As a result of the 2021 rank and grade reform, submarine engineers that transfer into the special technical career field can remain on active service longer without promotions than if they remain equipment officers. The 2021 reform also blocks command and administrative officers from taking special technical officer positions: this may help keep open roles within submarine community academic, training, and testing organizations from being filled by less technically qualified command and administrative track officers with more supervisory experience. This policy change is likely directed at keeping needed technical skills in the PLA, including in the submarine force.¹⁰⁶

As of 2021, special technical officers are categorized into four position grades (vs the 15 grades for commanding and administrative officers). The grades are “senior professional title” (正高职), “associate senior professional title” (副高职), “intermediate professional title” (中职) and “junior professional title” (初职), and each grade is roughly associated with a batch of ranks.¹⁰⁷ That said, examples of special technical officers on submarines in PLA media do not present these grades. For example, one 2023 article describes the career and accomplishments of one special technical officer aboard a submarine, Special Technical CDR Engineer (专业技术中校工程师) Xu Weigui.¹⁰⁸ CDR Xu, a 14-year veteran of submarine electromechanical departments, is not described as being an intermediate engineer. It may be that information about use of special technical officers' grades will only be encountered via study of the ribbons on dress-white uniforms.

Special technical officers in the submarine community appear to have more career flexibility than the command and administrative officers do. Special technical officers in the PLAN that are expert in submarine equipment or related technical domains can find positions at academic institutions, equipment manufacturers or testing bases, and on active submarines or submarine units.¹⁰⁹ For example, at the Navy Submarine Test Training Base in Dalian, male and female technical officers carry out equipment certification testing on submarines. As part of this duty, the female officers ride on submarines during equipment evaluations, though they are unlikely to be permanently stationed on one.¹¹⁰ “We don't promote people based on seniority here, but we recruit talented personnel regardless of their background,” said one member of the unit.¹¹¹

¹⁰⁵ 刘小二 [Liu Xiao'er], “指挥管理军官和专业技术军官有什么区别？” [“Unveiling the difference between military command and management officers and professional and technical officers”], *Zhihu.com*, 25 March 2023, <https://zhuanlan.zhihu.com/p/617020383>.

¹⁰⁶ 技术干部衔级对应关系，差异化！ [“The correspondence between the ranks of technical cadres is differentiated!”], *Sohu.com*, 9 April 2021, https://www.sohu.com/a/459883133_120139977.

¹⁰⁷ Wu, “Ministry of National Defense: The new officer system is adjusted from a job -based level to the rank-based level”; Wu, “Regular Press Conference of the Ministry of National Defense on January 28.”

¹⁰⁸ 李润芳 [Li Runfang] and 黄小殷 [Huang Xiaoyin], 微视频 | “蛟龙先锋”勇潜深蓝 [“Micro video | ‘Jiaolong Pioneer’ bravely dives into the deep blue”], 南方网 [Southern Online], 16 April 2023, http://www.mod.gov.cn/gfbw/spbb_214126/16217379.html.

¹⁰⁹ Liu, “Unveiling the difference between military command and management officers and professional and technical officers.”

¹¹⁰ 杨毅 [Yang Yi], 通讯：海军潜艇试训基地里的“铿锵玫瑰” [“Report: ‘Wonderful Roses’ in the Navy Submarine Training Base”], *Sina.com.cn*, 24 July 2015, <https://news.sina.com.cn/o/2015-07-24/101532143339.shtml>.

¹¹¹ 王达 [Wang Da], 王庆厚 Wang Qinghou], and 李丁 [Li Ding], 把潜艇的作战极限找出来 [“Find out the combat limit of submarines”], *CYOL.com*, 24 July 2015, https://zqb.cyol.com/html/2015-07/24/nw.D110000zgqnb_20150724_1-10.htm.

It is possible that the rank and grade reforms of 2021 will help to keep technical talent in the PLA and solve a contradiction facing the PLAN, including the submarine force: the PLAN needs skilled and motivated technical officers but disincentivizes ambitious technical staff from staying in that career path. Indeed, a 2024 article in *People's Daily* highlighted switching career tracks between technical, political, and command officers as an important part of the PLAN submarine force becoming more prepared for warfighting.¹¹² PLA media frequently proclaim the importance of technical expertise within submarine crews, including the commanding officers and other leadership positions. Career-track switching should have provided an outlet for engineers since the early 2000s: those who were seeking expanded leadership responsibilities could switch to be either a military-affairs or political officer, and those who wanted more of a technical focus could become special technical officers.¹¹³

Anecdotal commentary suggests that in practice, the best option for career advancement was to become a political officer. In 2021, *People's Navy* published an article discussing a high-performing officer in a ship's electromechanical department and graduate of the Naval Engineering University who was selected to convert to a political officer. Technical officers are incentivized to make this switch, as there are far more senior positions available for political officers than there are for technical officers.¹¹⁴

Lu Min, the first technical-track officer to convert to command-track military-affairs in the PLAN submarine force, sounded wistful when discussing the comparative breadth of experiences of the commanders of U.S. Navy submarines. "In the U.S. Navy, once an officer becomes a ship captain, it means they've worked in almost every position on the ship. That kind of experience is a form of capability in itself—something worth studying," he said.¹¹⁵ Nevertheless, it is unclear how frequently PLAN technical track officers transition to command-track and bringing their technical expertise into the line officer community.

As PLAN submarines take on increasingly complex missions and as the nuclear fleet grows both in size and in platform variety, engineering expertise in submarine crews grows in importance. While it is possible there are more equipment officers successfully making the transition to military affairs than have been publicized, encouraging more engineers to become special technical officers to stay in the submarine force appears to be the PLAN's preferred solution.

Non-Commissioned Officers

Many PLAN submariners' careers start with conscription.¹¹⁶ The selection process for enlisted submariners is considered to be very strict. Prospective submariners, like all prospective members of the PLA, must pass a physical and political review, and are additionally subject to psychological and

¹¹² Yu, "A submarine flotilla of the Southern Theater Navy focuses on preparing for war and accelerating transformation and construction."

¹¹³ "Our army will speed up the exchange of cadres."

¹¹⁴ 林永超 [Lin Yongchao] and 王洋 [Wang Yang], 预任者，以何担当大任 ["Director, How It Can Be a Great Responsibility"], 人民海军 [People's Navy], 22 June 2021, p. 3.

¹¹⁵ Wei, Liu, and Fang, "Lu Min, the captain of a submarine: Going the distance with a rising nation behind me."

¹¹⁶ 王若愚 [Wang Ruoyu], 王若愚：义务兵两年制会影响我军战斗力吗？ ["Wang Ruoyu: Will the two-year conscription system affect the combat effectiveness of our army?"], *Guancha.cn*, 17 September 2020, https://www.guancha.cn/wangruoyu/2020_09_17_565407.shtml.

cultural evaluation and an oxygen toxicity test before being permitted to begin training.¹¹⁷ A former director of the Submarine Academy's political department said “there is always a 10 percent elimination-rate after these tests.”¹¹⁸

Newly conscripted sailors' next stages of training include basic indoctrination and professional training focused on their eventual job on the boat. Basic indoctrination takes three months, and professional training can take up to five months for enlisted sailors, depending on the field of study.¹¹⁹ New conscripts heading to submarine duty are provided focused training in a variety of subjects that likely align with career-fields, including:¹²⁰

- Torpedoes
- Radar
- Sonar
- Navigation
- Command and Control Instrumentation
- Radios
- Electronics
- Mechanics
- Ship Service (Cooks)
- Rudder-Signal¹²¹

As a result of their comparatively small crews, strict selection criteria, and the technical nature of their work, PLAN submarines tend to have a relatively high percentage of their crews as NCOs versus conscripts. The roles that need to be filled on submarines can be demanding, and only a small percentage of conscripts selected for submarine duty will go on to become NCOs. Becoming fully qualified in many positions takes 1-2 years, and reportedly it is not uncommon for conscripts to complete their whole initial service requirement without doing so.¹²² In 2012, 80 percent of technical positions on PLAN submarines were filled by NCOs, and it is unlikely that number has decreased since.¹²³ The PLAN Submarine Academy provides a continuing education program for former

¹¹⁷ Oxygen toxicity is a rare condition where the body's immune system reacts abnormally to prolonged or high concentrations of oxygen exposure.

¹¹⁸ 士兵在潜艇中的生活如何？ 40 多度环境睡觉，上厕所要开六七次阀门 [“How do soldiers live in submarines? Sleeping in an environment of more than 40 degrees, opening the valve six or seven times to go to the toilet”], *Totiao.com*, 23 October 2021, <https://www.toutiao.com/article/7021348240603939366/>; “Hong Kong media: Revealing the Secrets of the Chinese Naval Academy: It Takes at Least 15 Years to Train a Captain.”

¹¹⁹ “Hong Kong media: Revealing the Secrets of the Chinese Naval Academy: It Takes at Least 15 Years to Train a Captain.”

¹²⁰ 潜艇兵与潜艇兵的工作和生活(上) [“Submarine Soldiers and Their Work and Life (Part 1)”], *Sina.com.cn*, 6 May 2003, <https://mil.news.sina.com.cn/2003-05-06/124906.html?from=wap>.

¹²¹ Rudder-signal sailors (舵信兵) have the responsibilities of a helmsman and a planesman along with maintenance duties for control equipment.

¹²² “Submarine Soldiers and Their Work and Life (Part 1).”

¹²³ 中国潜艇部队 80%的专业技术岗位由士官执掌 [“80% of the professional and technical positions in China's submarine force are held by non-commissioned officers”], *PLA Daily* via *China News*, 16 August 2012, <https://www.chinanews.com.cn/mil/2012/08-16/4112318.shtml>.

conscripts after they are promoted to Navy Junior Sergeant (海军下士, equivalent to an E-4 in the U.S. Navy).¹²⁴

Since 2009, the PLA has permitted direct recruitment of civilians to become submarine NCOs if they have applicable education. If selected, these direct-to-NCO selectees are trained at the PLAN Submarine Academy for between six months to a year, depending on their course of study.¹²⁵ Recent reports suggest that in other PLAN communities, direct-to-NCO selectees enter service with serious gaps in needed experience.¹²⁶

NCOs can serve as squad leaders in submarines, under the direction of a senior NCO such as a sergeant major (军士长).¹²⁷ For example, one *PLA Daily* article described the work of an electrician squad leader (电工班长) and a main engine squad leader (主机班长) that worked in the electromechanical department, likely reporting to an electrician sergeant major (电工军士长) and engine sergeant major (轮机军士长) respectively.¹²⁸ Similarly, a sonar squad leader (声呐班长) worked for the Observation and Communication department, under the sonar sergeant-major (声呐军士长).¹²⁹ Senior NCOs can act as domain experts on the submarine, just as chief petty officers often do on U.S. submarines. Reportedly, PLAN submarines have senior NCOs in a number of roles similar to the ones described above, including a lead boatswain (水手长), a torpedo sergeant-major (鱼雷军士长), and a ship-service sergeant major (舰务军士长), providing senior expertise in their respective departments.¹³⁰

¹²⁴ 带你认识潜艇士官学员 [“Let's introduce you to submarine NCO cadets”], *Weixin.QQ.com*, 23 January 2017, https://mp.weixin.qq.com/s?src=3×tamp=1741571637&ver=1&signature=U9CGgeuMBYAyNiXyMGo*pirNnV6ScVrTQvwt5Ywp64JGCLovDJebw65RU3ar5-glOHRnu*Ze*y80qbln5SQOgC4rtznuMf7kiH3eqW60bcvDNKL VzMRC9XZEWTmjJ4PIC0BMLG0R-yUaTsYjVeWfJbi-7mTizJfSaL6Riosdt-U=.

¹²⁵ 2009 年潜艇专业直招士官简章 [“2009 Submarine Professional Direct Recruitment NCO Brochure”], <https://www.zjc.edu.cn>, 27 April 2009, <https://www.zjc.edu.cn/bgxt/viewnotice.php?id=1153>.

¹²⁶ 向黎明 [Xiang Liming], 倪帅 [Ni Shuai], and 涂拥军 [Xu Yongjun], 瞄准实战强能力, 海军士官学校有的放矢抓好人才培养 [“Aiming at actual combat and strengthening capabilities, the Naval NCO School has a targeted approach to talent cultivation”], <https://mil.gmw.cn>, 28 February 2024, https://mil.gmw.cn/2024-02/28/content_37170719.htm#.

¹²⁷ The PLA's enlisted-ranks and categories make one-for-one association with ranks of U.S. petty-officers awkward.

¹²⁸ 陈国全 [Chen Guoquan] and 段江山 [Duan Jiangshan], “钢铁脊梁”: 走进海军某潜艇基地士官群体 [“‘Steel Backbone’: Visiting the Non-commissioned Officers of a Submarine Base of the Navy”], *MOD.gov.cn*, 20 June 2018, http://www.mod.gov.cn/gfbw/wzll/hj/4817268_2.html.

¹²⁹ 鲁泰来 [Lu Tailai] and 高密 [Gao Mi], 聚焦人民海军潜艇部队, 这部主题宣传片你看懂了吗? [“Focusing on the People's Navy submarine force, have you understood this theme propaganda film?”], *MOD.gov.cn*, 16 June 2024, http://www.mod.gov.cn/gfbw/spbb_214126/16316156.html.

¹³⁰ “Submarine Soldiers and Their Work and Life (Part 1).” Sergeant Major (军士长) in this context includes ranks ranging from the equivalent of a USN senior chief to a command master chief.



Exhibit 7. A Navy Senior Sergeant Second Class and Squad Leader (left) and a Navy First-Class Sergeant Major (right) ¹³¹

Compared to officers, much less is known about how long it takes NCOs to reach different ranks, but some sources have provided information. Reforms in 2019 related to PLAN NCOs established several policies that have influenced the career paths of those serving on submarines. These reforms provided retention incentives for NCOs with critical operational experience, including submarine NCOs. The new policies encouraged continued education for skilled NCOs and established pathways for NCOs to become recognized subject-matter experts.¹³² For example, a Navy Second-Class Sergeant (U.S. Petty Officer First Class) assigned to an Eastern Theater submarine flotilla became an instructor on AIP propulsion systems at the PLAN Submarine Academy.¹³³ Another exemplary NCO, Navy First Class Sergeant Major (U.S. Command Master Chief-equivalent) Zhou Junsheng has contributed to multiple PLAN textbooks about marine diesel engine maintenance and repair.¹³⁴ These longer-term incentives, combined with events like skill competitions among the NCOs on submarine

¹³¹ 组图 | 潜艇里的一平米战位——走进海军潜艇部队 [“Photo Gallery | One Square Meter Battle Station in a Submarine - Entering the Navy Submarine Force”], <https://hn.rednet.cn>, 26 April 2024, <https://www.toutiao.com/article/7362000423085228579/>; 陈国全 [Chen Guoquan], 雷彬 [Lei Bin], and 周演成 [Zhou Yancheng], 对话一级军士长周军生：一位潜艇老兵的“深海之路” [“Dialogue of the First-Class Sergeant Major Zhou Junsheng: The ‘deep sea’ submarine veteran”], 解放军报 [PLA Daily] published on MOD.GOV.CN, 12 April 2021, <http://www.mod.gov.cn/gfbw/wzll/nbzq/16105838.html>.

¹³² 新型海军士官人才方阵加速成长 [“The new phalanx of naval non-commissioned officers is growing rapidly”], *Sina.com.cn*, originally sourced from *Xinhua*, 19 August 2019, <https://mil.sina.cn/2019-08-19/detail-ihyteitn0271186.d.html>.

¹³³ 范江怀 [Fan Jianghui], 刘亚迅 [Liu Yaxun], and 代宗锋 [Dai Zongfeng], 深海突击 [“Deep Sea Assault”], 解放军报 [PLA Daily], 16 December 2018, http://www.81.cn/jfjbmap/content/2018-12/16/content_223294.htm.

¹³⁴ Chen, Lei, and Zhou, “Dialogue of the First-Class Sergeant Major Zhou Junsheng: The ‘deep sea’ submarine veteran.”

crews, appear to be part of a concerted effort to expand the technical expertise and professionalization of submarine NCOs.¹³⁵

It is unclear to what extent these attempts to professionalize the submarine NCO corps have been successful. That said, it is clear that as on American submarines, PLAN NCOs are critical trainers and leaders for their crews and are vital to the successful operation of PLAN submarines. As Zhou Junsheng said, to be a submariner, “One must be focused: each part and detail of the submarine are crucial and interrelated... One must be humble: with the continuous development of the Navy, the speed of equipment upgrades has accelerated and there are more-and-more basic skills to learn... One must be happy: when underwater one is isolated from the world and our comrades [are] dependent on each other...”¹³⁶

Logistics Officers and Shore Service Departments

Unlike other nations’ submarine forces, PLAN submarines do not have a supply department, and logistics officers are not likely to be permanently assigned to most PLAN submarines.¹³⁷ Though there are at least anecdotal examples of submarine base quartermasters participating in onboard submarine operations, supply-tracking responsibilities are split between the head of the electromechanical department (for fuel and spare parts) and the ship-service sergeant major (for food).¹³⁸ On PLAN ships (and one assumes submarines), the ship-service personnel (the cooks) answer to the submarine’s executive officer. Galley duty is just one of many watch-standing duties aboard Chinese ships and submarines, and it is likely that numerous types of sailors have to perform this duty in support of the ship-service squads.¹³⁹

Most sailors providing logistics support to a PLAN submarine do so stationed ashore at submarine bases, as part of a “shore service department” (岸勤部).¹⁴⁰ Shore service departments are commanded by a PLAN logistics officer. These “submarine babysitters” are unlikely to deploy on submarines directly, but will be in charge of all submarines assigned to this base.¹⁴¹ The logistics officers themselves are categorized as command and administrative officers, but most other personnel that work for them are either special technical officers or NCOs/enlisted. The service

¹³⁵ 孙伟帅 [Sun Weishui], 陈国全 [Chen Guoquan] and 段江山 [Duan Jiangshan], 从 372 潜艇透视海军士官队伍快速成长 [“From the 372 submarine to the rapid growth of the Navy’s non-commissioned officer team”], 解放军报 [PLA Daily], 21 November 2018, http://www.81.cn/jfjbmap/content/2018-11/21/content_221180.htm.

¹³⁶ Chen, Lei, and Zhou, “Dialogue of the First-Class Sergeant Major Zhou Junsheng: The ‘deep sea’ submarine veteran.”

¹³⁷ 夕潮 [Xi Chao], 漫议海自潜艇部队 [“Discussion of the submarine force of the maritime self-defense force”], 舰船知识 [Naval and Merchant Ships], Vol. 3 Issue 474 1 February 2019,

¹³⁸ 钱晓虎 [Qian Xiaohu] 潘前芝 [Pan Qianzhi], “中国潜艇兵配发耳罩可在水下嘈杂环境中交流” [“Chinese submarine soldiers are equipped with earmuffs to communicate in noisy underwater environments”], *Sina.com.cn*, 16 April 2012, <https://mil.news.sina.com.cn/2012-04-16/0412687747.html>; 夕潮 [Xi Chao], 漫议海自潜艇部队 [“Discussion of the submarine force of the maritime self-defense force”], 舰船知识 [Naval and Merchant Ships], no. 3 (March 2019), p. 47; Du, *Handbook for Officers and Enlisted of the Chinese PLA Navy*, p. 153.

¹³⁹ Du, *Handbook for Officers and Enlisted of the Chinese PLA Navy*, p. 153.

¹⁴⁰ 周逸峰 [Zhou Yifeng], 陈杰 [Chen Jie], and 邓昊 [Deng Hao], 做好大国重器的“金牌管家”——走进海军潜艇部队 [“Be a ‘golden steward’ of a great power’s heavy weapon—Enter the Navy Submarine Force”], <https://hn.rednet.cn>, 28 April 2024, <https://hn.rednet.cn/content/646848/62/13813095.html>.

¹⁴¹ 潜艇兵, 你的“王牌辅助”已到达战场 [“Submarine soldier, your ‘ace assistant’ has arrived on the battlefield”], *Sina.com.cn*, 22 March 2022, <https://mil.news.sina.com.cn/2022-03-22/doc-imcwiwss7499597.shtml>.

departments they command provide a number of vital support functions to PLAN submarines. Their personnel include:¹⁴²

- Water supply technicians who provide potable water both to the submarines and to the personnel stationed on the often-remote island submarine bases;
- Oxygen generation crews who handle and maintain liquid oxygen and air purification systems;
- Fuel support crews who maintain fuel supplies and pipelines;
- Motor pool personnel who provide transport to and from base;
- Cooks and supply staff, who both work in the mess hall and assist with food planning for submarines;
- Doctors and medical support staff.

Logistics officers training to command a shore service department attend the Naval University of Engineering's Ship and Ocean Engineering school with a focus on Maritime Supply Service, or the Management Science and Engineering school with a focus on Naval Port Service. Either way, their first three years are spent at the main Naval University of Engineering campus in Wuhan, and the fourth year is spent at the Naval Service Academy in Tianjin.¹⁴³ The Naval Service Academy also offers master's programs in military logistics and engineering management.¹⁴⁴ Logistics officers can also pursue a masters in Logistics and Equipment Support from the PLAN Submarine Academy, which is likely focused more directly on the issues relevant to submarine commands.¹⁴⁵

The PLAN has made efforts to improve the quality of naval logistics in a couple ways. For instance, it has upgraded the status of the Naval Service Academy. Moreover, shore service departments supporting PLAN submarines have increased automation of food and supplies logistics planning, both to improve the welfare of submariners in peacetime and to protect food security in wartime.¹⁴⁶ It is unlikely that PLA media reports would highlight improvements to supply provision to submarines if the shore service departments' support to submarines was always smooth and reliable.¹⁴⁷ Moreover, based on one submarine commander's online commentary, submariners have little regard

¹⁴² Ibid.

¹⁴³ "China's Military Academies: Naval University of Engineering."

¹⁴⁴ 王凤 [Wang Feng], 海军勤务学院 2023 年硕士研究生招生简章 ["Naval Service Academy 2023 Master's Degree Admissions Brochure"], *81.cn*, 14 October 2022, http://www.81.cn/jx_208569/10192259.html; 李芮 [Li Rui], 海军勤务学院: “双课堂三层次”助力军士学员实现自我价值 ["Naval Service Academy: 'Dual Classrooms and Three Levels' Helps NCOs Realize Their Self-worth"], *MOD.gov.cn*, 7 May 2024, http://www.mod.gov.cn/gfbw/gfjy_index/jsyxgfs/16306478.html.

¹⁴⁵ 海军潜艇学院 2025 年硕士研究生招生简章 ["Navy Submarine Academy 2025 Master's Degree Admissions Brochure"], *Kaoyan.cn*, 28 October 2024, <https://www.kaoyan.cn/news/239815>.

¹⁴⁶ 潜艇兵的“智慧食堂”来了 ["The Submariners 'Smart Kitchen' has arrived"], YouTube, 23 July 2022, <https://www.youtube.com/watch?v=fz8PJ5DJTSI>; 陈羽 [Chen Yu] and 唐宋 [Tang Song], 海军成建制成体系推进饮食保障标准化 ["The Navy has promoted the standardization of food support in an organized and systematic manner"], *People.cn*, 19 August 2022, <http://military.people.com.cn/n1/2022/0819/c1011-32506564.html>.

¹⁴⁷ Military and Martial Second Dimension, "How difficult is it to become a submariner and eat the fourth-class kitchen? A senior commander of the People's Liberation Army gave a detailed answer."

for their support staff that remain on shore.¹⁴⁸ It is presently unclear whether expanding automation in shore service departments has addressed the issues that inspired the changes.



Exhibit 8. PLAN Submarine Shore Support Department Personnel ¹⁴⁹

Logistics and supply are critical considerations on a submarine: a sub's highly limited storage space requires careful maintenance of supplies, especially for longer voyages. Reports about quality of life aboard PLAN submarines often discuss food issues, both the high-quality chow early in a voyage (and at-shore), and bleeding gums caused by vitamin C deficiency later in a long deployment. For the diesel subs that make up the majority of the PLAN submarine fleet, even water must be rationed tightly.¹⁵⁰ Given these potential issues, the extent to which the PLAN submarine force is professionalizing and modernizing its onboard supply department personnel and logistics capabilities remain unclear. As the PLAN grows its nuclear submarine force and increases the frequency of longer-duration missions, it will be interesting to see whether there are more examples of Shore Service Department logistics officers deploying with subs, or if PLAN submarines gain dedicated supply departments.

¹⁴⁸ Ibid.

¹⁴⁹ "Submarine soldier, your 'ace assistant' has arrived on the battlefield."

¹⁵⁰ 比航母还神秘！中国潜艇部队伙食首次公开！探访中国海军首支潜艇部队，走进潜艇神秘的厨房，直击解放军伙食最高标准—海勤灶 ["More mysterious than an aircraft carrier! China's submarine force meals are revealed for the first time! Visit the first submarine unit of the Chinese Navy, walk into the mysterious submarine kitchen, and see the highest standard of PLA meals—the sea service kitchen"], CCTV 7 via YouTube, 25 October 2024, <https://www.youtube.com/watch?v=HJoF83Po3jY>; 浩然史观 [Grand View of History], 中国的潜艇部队：伙食待遇比飞行员还高，享受高待遇要受最累的苦 ["China's submarine force: Food treatment is higher than that of pilots, and to enjoy high treatment, you have to suffer the most exhausting hardships"], 163.com, 4 March 2023, <https://www.163.com/dy/article/HV0EF2EM0553RHMP.html>.

Conclusions

The training and career progression of PLAN submarine officers and NCOs reflect both the force's modernization efforts and its lingering institutional challenges. The PLAN submarine force has made significant strides in training and career development through investments in advanced simulators and VR technology, and it has expanded educational pathways for officers and NCOs. However, career progression remains rigid, with technical officers facing limited advancement opportunities unless they shift into out of technical roles or abandon ambitions of command. Moreover, political officers are positioned as key decision-makers but continue to struggle to master the technical expertise needed to command the PLAN's modernizing submarine fleet, despite efforts to improve operational knowledge.

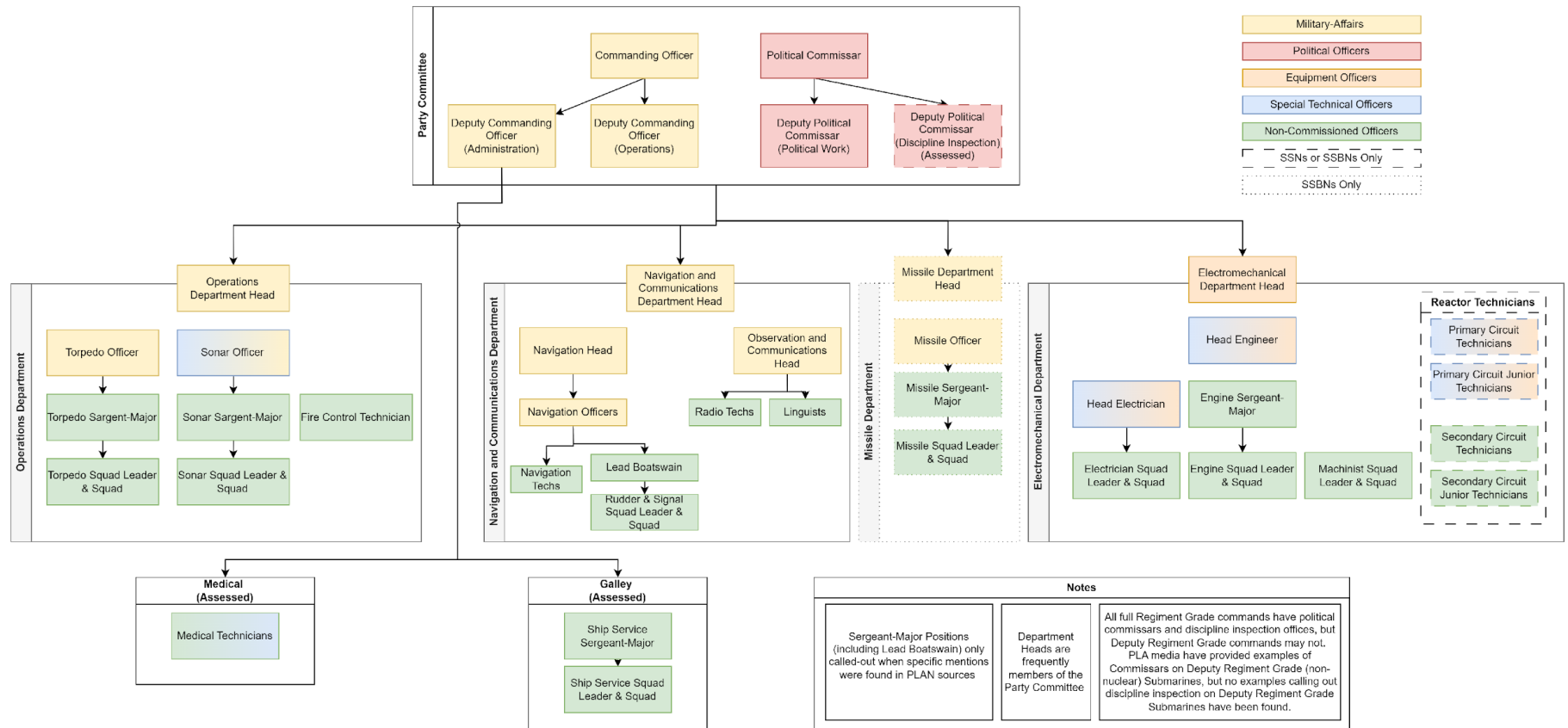
Ultimately, the PLAN submarine force has made notable progress in training and officer/enlisted career development, but challenges remain in ensuring a clear and flexible path for technical and operational expertise to keep pace with its expanding and modernizing fleet. Xi Jinping has said the PLA needs “a force of underwater vanguards that is competent on all fronts” in order for it to meet its goals by 2027.¹⁵¹ The career fields and their training pipelines remain critical for generating that force.

Key gaps remain in our understanding of personnel issues related to PLAN submarines:

- Nuclear and conventional submarines are different grade organizations. Does this fact affect the administrative shape of those commands, including whether or not they have dedicated logistics or supply staff assigned to submarines?
- The PLAN has a highly diverse fleet of submarines, with over 10 classes of sub in active use. Has the PLAN kept up with this diversity in the development of its shore-based trainers and simulators?
- The PLAN submarine fleet has experienced accidents that it is hesitant to discuss publicly. To what extent are these events used internally to improve procedures or training?
- How many conscripts do submarines typically receive every cycle?
- Has there been significant debate within the PLAN about allowing more technical officers to become commanding officers?

¹⁵¹ Mo Jingxi, "Xi stresses efforts to build up submarine fleet capabilities", *ChinaDaily HK*, 11 May 2023, <https://www.chinadailyhk.com/hk/article/330482>.

Appendix 1. Administrative Organization and Career Types of a PLAN Submarine Crew (Inferred)¹⁵²



¹⁵² Binggongkeji, “Do you know the cabin layout of China's first nuclear submarine?”, 张大发 [Zhang Dafa], 王乃东 [Wang Naidong], 张广福 [Zhang Guangfu], 姜瑞军 [Jian Ruijun], 张龙飞 [Zhang Longfei], 陆古兵 [Lu Gubing], and 王少明 [Wang Shaoming], “GJB 844.4A-2013 潜艇核动力装置运行安全规定 第4部分: 操纵人员培训、考核、执照制度要求” [“GJB 844.4A-2013 Safety code of operation for submarine nuclear power plants. Part 4: Requirement of training, examination and license management for operator”], 中国人民解放军海军核安全局 [PLA Navy Nuclear Safety Bureau] via Doc88, 10 July 2013, <https://www.doc88.com/p-6079185185671.html>; 海甜恬 qx [Haitiantian QX], 潜艇兵的岗位分工有哪些? [“What are the job divisions of submarine soldiers?”], Zhihu.com, 12 April 2018, <https://zhidao.baidu.com/question/559636446530607204.html>; Du, *Handbook for Officers and Enlisted of the Chinese PLA Navy*, pp. 141-157; 钱晓虎 [Qian Xiaohu] and 潘前芝 [Pan Qianzhi], 中国潜艇兵配发耳罩可在水下嘈杂环境中交流 [“Chinese submarine soldiers are equipped with earmuffs to communicate in noisy underwater environments”], Sina.com.cn, 16 April 2012, <https://mil.news.sina.com.cn/2012-04-16/0412687747.html>; “Submarine Soldiers and Their Work and Life (Part 1).”; 这位被习主席点赞的潜艇声纳兵, 到底有多牛? [“How awesome is this submarine sonar soldier praised by President Xi?”], ChinaDaily.com.cn, 17 June 2018, http://china.chinadaily.com.cn/2018-06/17/content_36405117.htm; 驾驭新型潜艇的舵信兵 [“The struggle and growth of two submarine soldiers”], 81.cn, 5 June 2024, <http://www.81.cn/zt/2024nzt/ycjgrgjbn/xsdfdg/16314732.html>; 杨世超 [Yang Shichao] and 邓文方 [Deng Wenfang], 张祥军一次远航带出4名新舵手 [“Zhang Xiangjun trained 4 new helmsmen in one voyage”], 解放军报 [PLA Daily], 15 August 1980, p. unknown; 菅琳 [Jian Lin], 中国人民解放军内务条令 [“Internal Affairs Regulations of the Chinese People's Liberation Army”], 81.cn, 20 August 2015, http://www.81.cn/jwzl/2015-08/20/content_6641285_7.htm.

Appendix 2. Training Pipelines for Submariners at PLA Academies

The following tables list training majors offered at the PLAN Submarine Academy and the Naval University of Engineering, and what type of PLAN officer the training curricula is offered to.

PLAN Submarine Academy ¹⁵³ Command-track Majors/Training Pipelines
<u>Submarine Executive Officer Training</u> ¹⁵⁴ ● Combat Command ● Submarine Military Tactics
<u>Submarine Observation and Communications Department Command Training</u> ● Electronics Information Engineering ● Sonar Engineering¹⁵⁵
<u>Submarine Operations Department Command Training</u> ● Weapons Firing Engineering
<u>Nuclear Submarine Missile Department Command Training</u> ● Weapons Systems and Engineering
<u>Submarine Navigation Department Command Training</u> ● Navigation Technology¹⁵⁶

¹⁵³ Jun, “Entering the Chinese Military Academy: Naval Submarine Academy”; Wang, “2022 Military Academy Admissions Information | Station Fourteen: Naval Submarine Academy”; “Naval Submarine Academy | 2024 recruitment plan for high school graduates released”; Peoples Navy, “All of this is useful information! The 2023 enrollment plan of the Naval Submarine Academy is officially released (with enrollment guide included)”; Bu, “Welcome to the Navy Submarine Academy! Report for inspection.”

¹⁵⁴ Training taken by military affairs officers prior to taking a grade 11 position, such as becoming an executive officer.

¹⁵⁵ “All of this is useful information! The 2023 enrollment plan of the Naval Submarine Academy is officially released (with enrollment guide included).”

¹⁵⁶ Bu, “Welcome to the Navy Submarine Academy! Report for inspection.”

PLA Naval University of Engineering¹⁵⁷ Department-head track (Equipment Officers) Majors/Training Pipelines
<u>Electromechanical Department Command Training</u> • Electrical Engineering and Related Automation • Turbine Engineering
<u>Nuclear Submarine Electromechanical Department Command Training</u> • Nuclear Engineering and Nuclear Technology • Radiation Protection and Nuclear Safety
<u>Nuclear Ballistic Submarine Missile Department Command</u> • Radiation Protection and Nuclear Safety

PLA Naval University of Engineering¹⁵⁸ Special Technical Officer-track Majors/Training Pipelines
<u>Nuclear Submarine Electromechanical Department Support</u> • Nuclear Engineering and Nuclear Technology (Nuclear reactor maintenance and management) • Radiation Protection and Nuclear Safety

PLAN Submarine Academy¹⁵⁹ Special Technical Officer-track Majors/Training Pipelines
<u>Submarine Navigation and Communications Department Support</u> • Sonar Engineering

¹⁵⁷ “China’s Military Academies: Naval University of Engineering.”

¹⁵⁸ Ibid.

¹⁵⁹ “Naval Submarine Academy | 2024 recruitment plan for high school graduates released.”

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