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### **China Maritime Report No. 21: Civilian Shipping and Maritime Militia: The Logistics Backbone of a Taiwan Invasion**

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*Seagoing civilian cargo ships are an important component of the large-scale combat power projection system.*

—Zhang Jian and Wu Juan, *Army Military Transportation Academy*, 2017<sup>1</sup>

## Summary

Most analysts looking at the Chinese military threat to Taiwan conclude that the People's Liberation Army (PLA) is incapable of invading the island because it lacks the landing ships to transport adequate quantities of troops and equipment across the Taiwan Strait. This report challenges that conventional wisdom, arguing that the PLA intends to meet these requirements by requisitioning civilian vessels operated by members of China's maritime militia (海上民兵). Since the early 2000s, the Chinese government and military have taken steps to strengthen the national defense mobilization system to ensure the military has ample quantities of trained militia forces to support a cross-strait invasion. Despite ongoing challenges—including poor data management, inconsistent training quality, and gaps in the regulatory system—and uncertainties associated with foreign-flagged Chinese ships, this concept of operations could prove good enough to enable a large-scale amphibious assault.

## Introduction

Discussion of a potential Chinese military invasion of Taiwan almost always hinges on whether the PLA has enough lift capacity to deliver the would-be invasion forces across the Taiwan Strait and, to a lesser extent, whether it could sustain them once they are ashore on Taiwan. The argument centers on People's Liberation Army Navy (PLAN) amphibious landing ships and other over-the-shore amphibious assault assets, with most observers concluding that the PLAN has not built enough of these ships and therefore that the PLA cannot (yet?) carry out a full-scale invasion.

This report argues that the PLA plans to rely heavily on mobilized maritime militia forces operating requisitioned civilian shipping as the logistical backbone of a cross-strait landing operation, including both the delivery of PLA forces onto Taiwan and logistical sustainment for the PLAN fleet at sea and ground forces ashore. Moreover, the PLA does not regard civilian shipping as a stopgap measure until more PLAN amphibious shipping can be built, but as a central feature of its preferred approach. The report will examine China's extensive system for preparing and generating this support force, the roles it will undertake in an invasion operation, and the challenges that must be overcome if the plan is to succeed.

## The Scope of the Problem

Most authors looking at the Chinese military threat to Taiwan conclude that the PLA cannot land enough forces on Taiwan to make an invasion viable, that it will not reach that capability until it builds many more amphibious landing ships, and that doing so will take at least several years even if they accelerate their efforts.<sup>2</sup> There has been little detailed analysis to underpin that judgment, at least

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<sup>1</sup> 张健, 吴娟 [Zhang Jian and Wu Juan], 大规模作战海上民用运输船舶动员与运用 [“Mobilization and Employment of Seagoing Civilian Cargo Ships in Large-scale Operations”], *军事交通学院学报* [*Journal of Military Transportation Academy*], no. 11 (November 2017), 1-5, 45.

<sup>2</sup> 李德威 [Li Dewei], 109 年中共軍力報告: 臺海安全挑戰更嚴峻 [“2020 Communist China Military Power Report: Security Challenges Across the Taiwan Strait are More Severe”], *青年日報* [*Youth Daily News* (Taipei)], August 31, 2020, [www.ydn.com.tw/news/newsInsidePage?chapterID=1256680](http://www.ydn.com.tw/news/newsInsidePage?chapterID=1256680); Aaron Tu and Dennis Xie, “China not ready for full assault: report,” *Taipei Times*, September 1, 2020, [www.taipeitimes.com/News/front/archives/2020/09/01/2003742623](http://www.taipeitimes.com/News/front/archives/2020/09/01/2003742623);

not in open sources, but most observers assess that the PLA would need to land 300,000 or more troops on Taiwan in total and that the PLAN amphibious fleet can only land around one division, roughly 20,000 troops, in a single lift.<sup>3</sup> Since these constraints seem obvious, the logical conclusion is that the PLA must judge itself not yet capable of invading Taiwan.<sup>4</sup>

The PLA's prospects appear even worse when one considers the rest of the logistical and operational requirements for a major landing operation, beyond the formidable challenge of getting enough troops ashore quickly in the face of determined resistance. The PLAN auxiliary fleet is inadequate to sustain large-scale combat operations, even if those operations were close to China's shores as a Taiwan conflict would be. The PLAN has enlisted hundreds of civilian vessels to perform tasks ranging from over-the-shore logistics to at-sea replenishment, emergency repair and towing, medical support, casualty evacuation, and combat search and rescue, suggesting that its own inventory of support ships falls far short of what it deems necessary for a landing campaign.<sup>5</sup> Skeptics will argue that this is more proof that the PLA itself does not take the invasion option seriously. The contrary view presented here is that the PLA does take these requirements seriously, but that it intends to rely on maritime militia support for large-scale combat operations, and specifically for a Taiwan invasion campaign.

The maritime militia (海上民兵) has attracted considerable attention in the past decade, led by the efforts of Andrew Erickson and Conor Kennedy at the U.S. Naval War College, focused mainly on its role in supporting China's claims in the South China Sea and East China Sea.<sup>6</sup> Kevin McCauley and Conor Kennedy have also looked at the role of civilian ships in military power projection outside East Asia.<sup>7</sup>

What has received much less Western attention is the maritime militia's role in large-scale combat operations, despite Chinese authors having written extensively on it since the PLA began serious consideration of a Taiwan invasion in the early 2000s. The Nanjing Military Region Mobilization Department director Guo Suqing observed in 2004 that a cross-strait island landing campaign would

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2020 *Report to Congress of the U.S.-China Economic and Security Review Commission*, United States-China Economic and Security Review Commission, December 2020, [https://www.uscc.gov/sites/default/files/2020-12/2020\\_Annual\\_Report\\_to\\_Congress.pdf](https://www.uscc.gov/sites/default/files/2020-12/2020_Annual_Report_to_Congress.pdf), 395; *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2020*, Office of the Secretary of Defense, <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>, 114.

<sup>3</sup> Ian Easton, *The Chinese Invasion Threat: Taiwan's Defense and American Strategy in Asia*, Kindle Edition, (Manchester UK: Eastbridge Books, 2017), Kindle location 2689.

<sup>4</sup> I have argued elsewhere that this does not appear to be how the Chinese assess the situation, that PLA leaders do believe it is ready if called upon, and that the reliance on civilian shipping is the likely basis for their assessment. See Lonnie Henley, "PLA Operational Concepts and Centers of Gravity in a Taiwan Conflict," Testimony before the U.S.-China Economic and Security Review Commission, February 18, 2021, <https://www.uscc.gov/hearings/deterring-prc-aggression-toward-taiwan>.

<sup>5</sup> To this author's knowledge, there has not been a rigorous assessment outside China of how many auxiliary ships of what types the PLA would require to execute and sustain an invasion of Taiwan.

<sup>6</sup> Conor M. Kennedy and Andrew S. Erickson, "China's Third Sea Force, The People's Armed Forces Maritime Militia: Tethered to the PLA," China Maritime Report No. 1, U.S. Naval War College, March 2017, <https://digital-commons.usnwc.edu/cmsi-maritime-reports/1>.

<sup>7</sup> Kevin McCauley, "China's Logistic Support to Expeditionary Operations," Testimony before the U.S.-China Economic and Security Review Commission, February 20, 2020, <https://www.uscc.gov/hearings/chinas-military-power-projection-and-us-national-interests>; Conor M. Kennedy, "Civil Transport in PLA Power Projection," China Maritime Report No. 4, U.S. Naval War College, December 2019, <https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=1003&context=cmsi-maritime-reports>.

require large amounts of civilian shipping.<sup>8</sup> He noted that there were many suitable ships available, some of which had already been retrofitted for wartime use, but warned that “the traditional form of last-minute non-rigorous civilian ship mobilization can no longer meet the needs of large-scale cross-sea landing operations.” Wang Hewen of the former General Logistics Department’s Institute of Military Transportation noted that efforts to strengthen the retrofitting of civilian vessels for military use had accelerated in 2003,<sup>9</sup> and a 2004 article from the Shanghai Transportation War Preparedness Office outlined the retrofitting work underway there.<sup>10</sup> In 2004, Zhou Xiaoping of the Naval Command College called for overhaul of the mobilization system, arguing that “if the traditional administrative order-style mobilization and requisition methods were still followed, it would be difficult to ensure the implementation of civilian ship preparation and mobilization.”<sup>11</sup> The government and PLA acted on these concerns, and over the past twenty years the maritime militia has evolved into a major force multiplier for the PLAN in large-scale combat operations.



Exhibit 1. PLA forces train with vessels owned by the Bohai Ferry Group.<sup>12</sup>

<sup>8</sup> 郭苏青 [Guo Suqing], 组建民兵船运团保障部队渡海登陆作战 [“Establish a Militia Shipping Regiment to Support Military Sea-crossing Landing Operations”], 国防 [National Defense], no. 12 (December 2004), 35-37.

<sup>9</sup> 王和文 [Wang Hewen], 新形势下推动民船贯彻国防要求体系发展的思考 [“Thoughts on Developing the System for Civilian Ships Carrying Out National Defense Requirements Under the New Situation”], 军事交通学院学报 [Journal of Military Transportation University], no. 1 (Nov 2015), 22-26.

<sup>10</sup> 周铁成 [Zhou Tiecheng], 浅议民船加(改)装的基本原则和程序 [“Brief Thoughts on the Basic Principles and Procedures for Retrofitting or Modifying Civilian Ships”], 国防 [National Defense], no. 6 (2004), 49-50.

<sup>11</sup> 周晓平 [Zhou Xiaoping], 从世界民船建设的成功经验看我民船队伍建设的制点 [“A Look at Points of Leverage for Developing China’s Civilian Ship Units Derived from Successful Worldwide Experience in the Development of Civilian Shipping”], 军事学术 [Military Art Journal], no. 1 (2004), 57-58.

<sup>12</sup> 刘开才, 唐忠超 [Liu Kaicai and Tang Zhongchao], 山东省烟台市“渤海轮渡”现象观察: 行业拥军千帆竞发 [“Observing the Phenomenon of the Shandong Province Yantai City ‘Bohai Ferry’: Industry Embrace the Military and a

## Operational Roles for the Maritime Militia in a Taiwan Invasion

Kennedy and Erickson have written at length on the militia's peacetime mission to assert China's maritime claims, centered on fishing boats that may or may not do any actual fishing. The militia forces discussed here are very different, encompassing large-capacity commercial vessels including container ships, general cargo ships, bulk carriers, tankers, roll-on-roll-off (RO-RO) ferries, barges, semisubmersibles, ocean-going tugboats, passenger ships, "engineering ships," and others, as well as smaller vessels.<sup>13</sup> Authors from the Army Military Transportation University noted in 2015 that the force consisted of over 5,000 ships organized into 89 militia transportation units, 53 waterway engineering units, and 143 units with other specializations.<sup>14</sup>

Unlike the U.S. Merchant Marine model, where government officers and crews take control of leased ships, Chinese maritime militia units are composed mostly of the regular crews of the mobilized ships, what the Central Military Commission (CMC) Militia and Reserve Bureau director called the "model of selecting militiamen according to their ship" (依船定兵模式).<sup>15</sup> The close correlation between requisitioned ships and militia units is essential for integration into military operations. There need to be clear command relationships with the supported PLA units, and the crews need to be trained on their operational tasks, not to mention the increasingly important issue of legal rights and obligations in wartime. Local or provincial mobilization officials negotiate the requisitioning terms with the ship owners, either large shipping companies or individual owners, while the crews are inducted into militia units by a process that is not explained very clearly in the available writings. Several articles note that some militiamen are not enthusiastic about their role.<sup>16</sup>

PLA sources cite a wide range of wartime functions for the maritime militia. In a Taiwan invasion scenario, they include the following:

*Delivery of forces.* The most obvious operational role for militia units is to carry forces to the battlefield, referred to as "military unit transportation and delivery" (部队运输投送). PLA sources list this as a primary role for civilian shipping, to include participating in the assault landing phase of

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Thousand Ships Set Sail"] 解放军报 [*Liberation Army Daily*], December 21, 2019,

[http://www.mod.gov.cn/mobilization/2019-12/21/content\\_4857241.htm](http://www.mod.gov.cn/mobilization/2019-12/21/content_4857241.htm).

<sup>13</sup> Wang, "Thoughts on Developing the System for Civilian Ships Carrying Out National Defense Requirements Under the New Situation," 23.

<sup>14</sup> 刘兴, 刘畅, 李远星 [Liu Xing, Liu Chang, and Li Yuanxing], 金门战役民船保障存在的问题及启示 ["Problems and Insights from Civilian Shipping Support in the Battle of Jinmen"], 军事交通学院学报 [*Journal of Military Transportation University*], no. 2 (February 2015), 20-23.

<sup>15</sup> 王文清 [Wang Wenqing], 破解海上民兵建设难题 ["Solving the Problem of Maritime Militia Development"], 中国国防报 [*China National Defense News*], July 28, 2016, 3; 何军毅, 胡威标, 姚建新 [He Junyi, Hu Weibiao, Yao Jianxin], 万船齐发挺进"海战场" ["Ten Thousand Ships Marched into the 'Sea Battlefield'"], 国防 [*National Defense*], no. 9 (2017), 80-83.

<sup>16</sup> 罗正然, 赵继承, 魏联军 [Luo Zhengran, Zhao Jicheng, and Wei Lianjun], 新形势下海上民兵建设要冲破哪些思想藩篱? ["Under the New Situation, What Ideological Barriers Should the Construction of Maritime Militia Break Through?"], 中国国防报 [*China National Defense News*], August 31, 2017., [www.81.cn/mb/2017-08/31/content\\_7071612\\_2.htm](http://www.81.cn/mb/2017-08/31/content_7071612_2.htm).

the operation.<sup>17</sup> There are several delivery modes contemplated, the most straightforward being through existing ports. A 2019 article on amphibious heavy combined arms brigades in cross-strait island landing operations noted that as part of the first echelon ashore, one of their most important tasks was to create the conditions for second echelon units to land through operations such as the seizure of ports and piers.<sup>18</sup> Articles published in 2014 and 2019 on amphibious landing bases made the same point and included rapid repair of piers among the main tasks to help the second echelon get ashore.<sup>19</sup> Other landing modes include lightering from cargo ships to shallow-draft vessels; semisubmersible vessels delivering amphibious vehicles or air-cushion landing craft;<sup>20</sup> and RO-RO ships delivering amphibious forces to their launching point or directly to shore.<sup>21</sup>

*At-sea support.* The PLAN has only a few replenishment ships, not enough to sustain the huge number of vessels that would be involved in a cross-strait invasion.<sup>22</sup> Given the relatively short distances for a Taiwan landing, most PLAN ships would likely rely on shore-based support, but the service envisions using militia ships for at-sea replenishment as well, including fuel tankers and cargo ships fitted with equipment for alongside replenishment and helipads for vertical resupply.<sup>23</sup> Militia ships would also provide emergency services including towing, rapid repair, firefighting, search and rescue, technical support, and even personnel augmentation to replace casualties aboard navy ships.<sup>24</sup>

*Over-the-shore logistical support.* A discussion of logistical support in island landing operations noted the importance of fuel tankers laying pipelines to support forces ashore.<sup>25</sup> The author did not specify maritime militia in this role, but given the prominence of tankers in other

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<sup>17</sup> 陈炫宇, 任聪, 王凤忠 [Chen Xuanyu, Ren Cong, and Wang Fengzhong], 渡海登岛运输勤务保障面临的问题和对策 [“Issues Encountered in Transportation Support for Island Landings, and Responses Thereto”], 物流技术 [Material Transport Technology], no. 10 (2016), 166-169.

<sup>18</sup> 黄谦, 王红旗 [Huang Qian and Wang Hongqi], 两栖重型合成旅登陆作战后勤保障 [“Logistical Support to Amphibious Heavy Combined Arms Brigades in Landing Operations”], 国防科技 [National Defense Technology], no. 3 (June 2019), 89-92.

<sup>19</sup> 汪欣、王广东 [Wang Xin and Wang Guangdong], 运输投送力量在跨海登岛作战登陆基地开设中的运用研究 [“Research on the Employment of Transportation and Projection Forces in Establishing Landing Bases for Cross-sea Landing Operations”], 国防交通工程与技术 [National Defense Transportation Engineering and Technology], no. 5 (September 2019), 12-16; 赵德龙、陈联、李远星、陶新良 [Zhao Delong, Chen Lian, Li Yuanxing, and Tao Xinliang], 机械化步兵旅登陆作战基地保障研究 [“Research on Landing Operations Base Support for Mechanized Infantry Brigades”], 军事交通学院学报 [Journal of the Military Transportation Academy], 16 no. 9 (September 2014), 44-48.

<sup>20</sup> 中国首艘机动登陆平台舰服役 具有 5 大独特军事应用 [“China's First Mobile Landing Platform Ship in Service Has Five Unique Military Applications”], 中国青年报 [China Youth Daily], July 24, 2015, [http://www.xinhuanet.com/mil/2015-07/24/c\\_128055305.htm](http://www.xinhuanet.com/mil/2015-07/24/c_128055305.htm).

<sup>21</sup> Zhang and Wu, “Mobilization and Employment of Seagoing Civilian Cargo Ships,” 1-5, 45.

<sup>22</sup> Chad Peltier, *China's Logistics Capabilities for Expeditionary Operations*, Prepared for the U.S.-China Economic and Security Review Commission, February 2020. <https://www.uscc.gov/research/chinas-logistics-capabilities-expeditionary-operations>.

<sup>23</sup> Wang, “Thoughts on Developing the System for Civilian Ships,” 22-26.

<sup>24</sup> 刘自力、陈青松 [Liu Zili and Chen Qingsong], 海上民兵参加海战的任务与行动 [“On the Tasks and Operations of Maritime Militia Engaged in Naval Warfare”], 国防 [National Defense], no. 11 (2018), 50-51.

<sup>25</sup> Wang and Wang, “Research on the Employment of Transportation and Projection Forces,” 12-16.

discussions of militia support, it seems likely they would take part in this activity as well. Requisitioned cargo ships will also play a major role in logistical support through captured ports or via lighters and barges to expedient floating docks.

*Medical support.* The PLAN's fleet of hospital ships could be overwhelmed by the casualties involved in a major landing operation. Militia would augment this force with containerized medical modules deployed on a variety of commercial ships, as well as smaller vessels providing casualty evacuation and first aid.<sup>26</sup>

*Obstacle emplacement and clearing.* Several sources list emplacing and clearing mines and other obstacles among maritime militia tasks in a landing operation, without providing much further detail.<sup>27</sup>

*Engineering support.* Maritime militia forces will not be passively waiting for first echelon units to open damaged ports. Tugboats, barges, salvage ships, crane ships, and dredgers will join the effort to clear obstacles, open channels, and repair docks and other facilities.<sup>28</sup>

*Reconnaissance, surveillance, and early warning.* While much of this discussion has focused on large ships, the huge fleet of militia fishing boats would have a large role in a Taiwan operation as well, providing eyes and ears across the entire maritime theater.<sup>29</sup>

*Deception and concealment.* One major advantage the PLAN derives from having hundreds of militia ships in the battlespace is the ability to hide its most valuable platforms among the radar clutter. Many sources list deception, camouflage, and feints among the militia's tasks. One 2018 article explains that militia ships will "use corner reflectors, false radio signals, false heat sources, etc., to set up counterfeit ships, missiles, fighters and other targets on the sea ... to cause the enemy to make wrong judgments and lure the enemy into attacking the false target."<sup>30</sup> Flooding the strait with false targets would severely complicate Blue efforts against the invasion fleet.

*Helicopter relay platform.* The Taiwan Strait is relatively narrow, but a two-hundred-mile round trip each sortie still creates a significant strain for helicopter operations. Some militia ships will serve as "helicopter relay support platforms" (直升机中继保障平台), fitted with helipads,

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<sup>26</sup> 障国芳、李朝贵、陈万年 [Chen Guofang, Li Chaogui, and Chen Wannian], "世昌号", 我们热烈欢迎您 —— 我国第一艘国防动员船诞生 ["'Shichang,' We Warmly Welcome You: The Birth of China's First National Defense Mobilization Ship"], 中国民兵 [China Militia], April 15, 1997, 26; Wang, "Thoughts on Developing the System for Civilian Ships," 24; He et al, "Ten Thousand Ships Marched into the 'Sea Battlefield,'" 80-83.

<sup>27</sup> Liu and Chen, "On the Tasks and Operations of Maritime Militia," 50-51; 陈卫国 [Chen Weiguo], 关于加强濒海地区民船支前动员建设的思考 ["Thoughts on Strengthening the Mobilization of Civilian Ships in Coastal Areas to Support the Front"], 国防 [National Defense], no. 12 (2019), 64-66; Guo, "Establish a Militia Shipping Regiment," 35-37; Wang, "Thoughts on Developing the System for Civilian Ships," 23.

<sup>28</sup> Wang, "Thoughts on Developing the System for Civilian Ships," 22-26.

<sup>29</sup> He et al, "Ten Thousand Ships Marched Into the 'Sea Battlefield,'" 80-83; 张践 [Zhang Jian], 围绕“六化”抓建推动海上民兵转型 ["Focus on the 'Six Modernizations' to Promote the Transformation of Maritime Militia"], 国防 [National Defense], no. 10 (October 2015), 21-23.

<sup>30</sup> Liu and Chen, "On the Tasks and Operations of Maritime Militia," 50-51.



ammunition storage compartments, aviation fuel bladders and refueling equipment, limited repair facilities, and flight control support systems to keep the helicopters in the fight.<sup>31</sup>



Exhibit 2. Maritime militia members based in Xiashan District (Zhanjiang city, Guangdong province) receive training on fuel supply logistics.<sup>32</sup>

## Maritime Militia Force Development

*The NDMC system.* Preparing maritime militia forces to operate civilian ships in wartime is a large, complex endeavor involving many parts of Chinese government and military systems. The effort is coordinated through National Defense Mobilization Committees (NDMCs) at the national, provincial, municipal, and county levels. The national-level body styles itself in English as the State Commission for National Defense Mobilization (国家国防动员委员会), referred to hereafter as SCNDM to distinguish it from NDMCs at lower levels. In 2016, Premier of the People’s Republic of China Li Keqiang was its director and its two deputy directors were Secretary-General of the State Council Yang Jing and Minister of National Defense Chang Wanquan, listed in that order.<sup>33</sup> A long

<sup>31</sup> 刘扬 [Liu Yang], 解放军陆航直升机半潜船起降演练 [“PLA Ground Force Aviation Helicopter Take-off and Landing Exercise on Semi-submersible Ship”], 环球时报 [Global Times], August 21, 2020, [https://www.sohu.com/a/414154690\\_162522](https://www.sohu.com/a/414154690_162522), cited in John Dotson, “Semi-Submersible Heavy Lift Vessels: A New ‘Maritime Relay Platform’ for PLA Cross-Strait Operations?”, *China Brief*, 20 no. 15 (August 21, 2020), <https://jamestown.org/program/semi-submersible-heavy-lift-vessels-a-new-maritime-relay-platform-for-pla-cross-strait-operations/>; Wang, “Thoughts on Developing the System for Civilian Ships,” 24.

<sup>32</sup> 李峻 [Li Jun], 血性民兵 海上尖刀 [“Courageous Militiamen, Sharp Dagger at Sea”], 中国军视网 [China Military TV], September 21, 2016, [www.js7tv.cn/news/201609\\_62079.html](http://www.js7tv.cn/news/201609_62079.html).

<sup>33</sup> 国家国防动员委员会 [“State Commission for National Defense Mobilization”], 国防动员网 [National Defense Mobilization Online], September 28, 2016, [www.gfdy.gov.cn/org/2016-09/28/content\\_7281555.htm](http://www.gfdy.gov.cn/org/2016-09/28/content_7281555.htm) [accessed March 2021].

list of agencies are represented on the committee (see Exhibit 3). It seems very likely that the makeup of lower-level NDMCs reflects that of the SCNDM; certainly, the Gansu NDMC's does.<sup>34</sup>

The broad membership roster highlights two important facts about NDMCs. First, national defense mobilization is primarily a governmental function, not a military function. Several actions over the past six years have strengthened CMC control over the military side of national defense mobilization, most notably the promotion of the previous General Staff Department Mobilization Department to a separate top-level department of the CMC in 2015.<sup>35</sup> Some observers interpret recent changes to the *National Defense Law* as giving the CMC authority over the entire process, but this is a fundamental misunderstanding.<sup>36</sup> The PLA is the customer for mobilized resources, establishing requirements that other departments fulfill under the leadership and authority of the government. The Premier heads the SCNDM and governors or mayors head NDMCs at lower levels.<sup>37</sup>

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<sup>34</sup> 省委、省政府、省军区决定成立甘肃省国防动员委员会 [“The Provincial Party Committee, the Provincial Government, and the Provincial Military Region Decided to Establish the Gansu Provincial National Defense Mobilization Committee”], 甘肃省 [Gansu Province Website], July 7, 2020, [http://www.gansu.gov.cn:8443/art/2020/7/7/art\\_11169\\_16719.html](http://www.gansu.gov.cn:8443/art/2020/7/7/art_11169_16719.html) [accessed March 2021].

<sup>35</sup> Joel Wuthnow and Phillip C. Saunders, “Introduction: Chairman Xi Remakes the PLA,” in Phillip C. Saunders, Arthur S. Ding, Andrew Scobell, Andrew N.D. Yang, and Joel Wuthnow, eds., *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, (Washington DC: National Defense University Press, 2019), 27.

<sup>36</sup> Minnie Chan, “China’s Military Takes Charge of War Powers with New Defence Law,” *South China Morning Post*, January 3, 2021, [www.scmp.com/news/china/military/article/3115988/chinas-military-takes-charge-war-powers-new-defence-law](http://www.scmp.com/news/china/military/article/3115988/chinas-military-takes-charge-war-powers-new-defence-law); Ben Lowson, “China’s Updated National Defense Law: Going for Broke,” *China Brief*, 21 no. 4 (February 26, 2021), <https://jamestown.org/program/chinas-updated-national-defense-law-going-for-broke/>.

<sup>37</sup> 市国防动员委员会召开工作会议 全面提高国防动员应急应战能力 [“The Municipal National Defense Mobilization Committee Held a Working Meeting to Comprehensively Improve the Emergency Response Capability of National Defense Mobilization”], 汕尾市人民政府网站 [Shanwei City Website], July 21, 2020, [https://www.sohu.com/a/408886462\\_100175981](https://www.sohu.com/a/408886462_100175981).

Exhibit 3. SCNDM Membership (2016)<sup>38</sup>

<b>State Commission for National Defense Mobilization (2016)</b>	
Director Li Keqiang	
Deputy Director Yang Jing	
Deputy Director Chang Wanquan	
Secretary-General Sheng Bin	
<b>Member organizations</b>	
• Relevant departments of the Central Military Commission	• Ministry of Housing and Urban-Rural Development
• CCP Central Organization Department	• Ministry of Transport
• National Development and Reform Commission	• Ministry of Commerce
• Ministry of Education	• Ministry of Culture
• Ministry of Science and Technology	• Health and Family Planning Commission
• Ministry of Industry and Information Technology	• State-owned Assets Supervision and Administration Commission
• Ministry of Public Security	• State Administration of Press, Publications, Radio, Film, and Television
• Ministry of Civil Affairs	• State Statistics Bureau
• Ministry of Justice	• All-China Federation of Trade Unions
• Ministry of Finance	• Central Committee of the Communist Youth League
• Ministry of Human Resources and Social Security	• All-China Women's Federation
• Ministry of Land and Resources	

Second, NDMCs are coordinating bodies lacking administrative authority of their own. An article from Hubei province emphasizes that the provincial NDMC is responsible for organizing, guiding, and coordinating national defense mobilization, while the people's government is responsible for implementation.<sup>39</sup> An author noted in 2013 that because all the agencies carrying out mobilization fall under the bureaucratic purview of the National Planning Commission system (计委系统) rather

<sup>38</sup> "State Commission for National Defense Mobilization"

<sup>39</sup> 湖北省民用运力国防动员办法 [Measures for National Defense Mobilization of Civil Transport Capacity in Hubei Province], 河北省人民政府 [People's Government of Hubei Province], June 23, 2013, [www.hubei.gov.cn/zfwj/szfl/201307/t20130705\\_1711145.shtml](http://www.hubei.gov.cn/zfwj/szfl/201307/t20130705_1711145.shtml).

than the military system, “the military basically is not involved, and it is difficult for local governments to reflect military needs in a timely manner.”<sup>40</sup>

For civilian ship mobilization and maritime militia training, the key structures within the NDMC coordination system are Transportation War Preparedness Offices (交通战备办公室) and Transportation Mobilization Offices (交通动员办公室) from national to county level. These offices consolidate the whole range of PLA transportation requirements and, in the case of civilian shipping, work with government offices to develop overall approaches; identify specific ships to mobilize; draft plans for ship requisition, retrofitting, and conversion; advise on militia organizational structure and personnel; and develop militia training requirements.<sup>41</sup>

*The Provincial Military District system.* On the PLA side of this process, the key structures are the Provincial Military Districts (省军区, PMD) and their subordinate sub-districts (军分区) at the prefecture level. At the county level, the PMD system and the local government share joint authority over the People’s Armed Forces Departments (人民武装部, PAFD). The PMD system has not received much attention from observers outside China, but it is the PLA’s interface to the entire apparatus of civilian support to military operations.

The PMD system serves a wide range of functions, from recruitment to civil defense to representing PLA interests within major non-defense industries. But a sub-district commander in Jiangsu asserted in 2018 that “national defense mobilization is the PMD system’s primary responsibility” (国防动员工作, 是省军区系统的主责主业).<sup>42</sup> PMD Mobilization Departments represent the PLA in the provincial NDMCs, serving as the conduit for operational forces to articulate support requirements. The PMDs man, equip, organize, and train militia units and exercise direct command of the militia in peacetime.

*Maritime militia training.* If civilian shipping is to participate effectively in large-scale combat operations (and survive the experience), the crews must learn a range of military skills in addition to their basic navigation and boat-handling abilities. Training topics include PLA command relationships and coordination processes; marshalling, assembly, and sailing in formation; use of military communications equipment and procedures; self-defense and mutual defense; rescue and first aid; military loading and unloading techniques; basic knowledge of the operating environment from a military perspective; operation of equipment particular to their assigned support tasks; knowledge about their supported unit and their role in that unit’s mission; knowledge about enemy threats they will face; and topics such as “dockless unloading” (无码头卸载).<sup>43</sup> The National

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<sup>40</sup> 郭辽、宋云霞、赵福林 [Guo Liao, Song Yunxia, and Zhao Fulin], 浅析民船动员中的法律问题及对策 [“Analysis on the Legal Problems and Countermeasures in the Mobilization of Civilian Ships”], 政工学刊 [Political Science Journal], no. 7 (July 2013), 46-47.

<sup>41</sup> 何国本、邹伟、鲍文华、陈龙 [He Guoben, Zou Wei, Bao Wenhua, and Chen Long], 战略投送支援船队训练现状及对策 [“Current Situation and Responses for Strategic Projection Support Fleet Training”], 军事交通学院学报 [Journal of Military Transportation University], 19 no. 5 (May 2017), 1-4; Zhang and Wu, “Mobilization and Employment of Seagoing Civilian Cargo Ships,” 1-5, 45.

<sup>42</sup> 徐国安 [Xu Guo’an], 加强国防动员建设的几点思考 [“Some Thoughts on Strengthening the Construction of National Defense Mobilization”], 国防 [National Defense], no. 12 (December 2018), 55-57.

<sup>43</sup> 金来州 [Jin Laizhou], 民船快速动员的组织与实施刍议 [“On the Organization and Implementation of Rapid Mobilization of Civilian Ships”], 国防 [National Defense], no. 1 (2015), 60-61; 杜又功, 杜干 [Du Yougong and Du

Transportation War Preparedness Office issued an *Outline for Training and Evaluation of National Defense Transportation Specialized Support Teams* 《国防交通专业保障队伍训练与考核大纲》 in 2015. This regulation specifies military training requirements for all militia transportation support units, including highway, air, and rail as well as maritime units, but like most such *Outlines*, it does not appear to be available publicly.<sup>44</sup>

*Retrofitting, conversion, and construction.* Outfitting a civilian ship for military operations is a major task. Ships need mounts and interfaces for specialized military equipment, from radios to underway replenishment apparatus to berthing and life support for transported soldiers. They may need stronger hulls and decks than their commercial tasks require and tie-down points for heavy military equipment. Their assigned military mission may require specialized fittings for reconnaissance and surveillance gear, medical treatment facilities, firefighting gear, and emergency repair facilities. The most efficient approach is to address these requirements in the design and shipbuilding process. China touted its first civilian RO-RO ship built to military specifications in 1997.<sup>45</sup> Second best is to identify specific ships, make contractual arrangements with the owner, and retrofit them with the equipment and interfaces they need. The National Transportation War Preparedness Office issued regulatory guidance for the retrofit and conversion process in 2015: the *Technical Standards for Implementing National Defense Requirements in New Construction of Civilian Ships* 《新造民船贯彻国防要求技术标准》 and the *Technical Requirements for Modifying Civilian Ships for Military Transportation* 《民船军运改装技术要求》.<sup>46</sup> The process is managed at the local level by “civilian ship retrofitting and conversion centers” (民船加(改)装动员中心) under the joint supervision of the local Maritime Affairs Department and PAFD.<sup>47</sup>

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Gan], [“Military Application Training and Employment Management for Civilian Cargo Ships”], 军事交通学院学报 [Journal of Military Transportation Academy], 19 no. 10 (October 2017), 20-23; Chen, “Thoughts on Strengthening the Mobilization of Civilian Ships,” 64-66; 刘宝新、袁沐、苑立伟 [Liu Baoxin, Yuan Mu, Yuan Zhiwei], 无码头卸载设备军用物资装备水路集装箱运输 [“Equipment for Unloading Sea Containers Carrying Military Materiel and Armament without Terminals”], 集装箱化 [Containerization], 29 no. 10 (October 2018), 6-9.

<sup>44</sup>张歌 [Zhang Ge], 注重分类指导, 突出军民融合, 国防交通专业保障队伍有了首部训考大纲 [“Pay Attention to Guidance by Categories, Highlight Military-Civilian Integration, The National Defense Transportation Professional Support Team Has the First Training and Examination Outline”], 解放军报 [Liberation Army Daily], February 7, 2015, <http://military.people.com.cn/n/2015/0207/c172467-26523697.html>. For a more in-depth discussion of “outlines”, see David M. Finkelstein, “The PLA’s New Joint Doctrine: The Capstone of the New Era Operations Regulations System,” CNA Occasional paper DOP-2021-U-030643-Final (Arlington, VA: CNA, September 2021).

<sup>45</sup> Chen et al, “‘Shichang,’ We Warmly Welcome You,” 26.

<sup>46</sup>倪大伟 [Ni Dawei], 《新造民船贯彻国防要求技术标准》颁布实施 进一步促进我军战略投送和海上支援保障能力建设 [“The Promulgation and Implementation of ‘Technical Standards for the Implementation of National Defense Requirements for Newly Built Civilian Ships’ to Further Promote the Construction of Our Military’s Strategic Projection and Maritime Support Capabilities”], 解放军报 [Liberation Army Daily], June 6, 2015, <http://military.people.com.cn/n/2015/0606/c172467-27112315.html>; Wang, “Thoughts on Developing the System for Civilian Ships,” 22-26.

<sup>47</sup> Jin, “On the Organization and Implementation of Rapid Mobilization of Civilian Ships,” 60-61.

## Command and Control

In peacetime, maritime militia units fall under the command of the PMD system. Most units would chop to PLA supported unit command in wartime, a principle one author called “whoever uses, commands” (谁使用、谁指挥).<sup>48</sup> The PMD reportedly would retain command of some units performing wide-area functions such as intelligence collection, reconnaissance, and early warning.<sup>49</sup>

Several authors bemoan persistent problems in the PLA’s ability to command mobilized ships and militia. Colonel Xu Guo’an, commander of a military sub-district in Jiangsu, complained in 2018 that the peacetime militia suffered from “unscientific” command structure and “weak” command functions, while the transition from peacetime to wartime command relations suffered from cumbersome communication and slow processes, incompatible with the need to rapidly mobilize forces for informatized warfare.<sup>50</sup> Faculty members from the Navy Logistics College noted in 2017 that the commanders of militia units are militiamen themselves, part-timers often lacking systematic military training or strong command abilities. Furthermore, they said, militia training conducted with the PLAN did not spend as much time as needed on vital tasks unfamiliar to civilian sailors, such as sailing in formation, dockless unloading, and military communications.<sup>51</sup> Such training seems to be far from routine; a 2019 article praised an exercise where civilian ships transported a surface-to-air missile (SAM) battalion on a long movement across the Bohai Gulf, Yellow Sea, and East China Sea, noting in passing that this was the first time the SAM unit had traveled by ship.<sup>52</sup> A remarkably frank assessment of PLA failures in the Battle of Jinmen, 1949, cited abysmal command and control of civilian shipping among the major causes of the fiasco, a lesson the PLA should take to heart in future island landing operations.<sup>53</sup>

## Challenges and Known Problems

A large share of PLA articles on this and other topics take the form of “problems and responses.” The proposed solutions may never be implemented, and may not work if they were, but these articles do provide a ready list of problems they believe they need to fix, or at least topics that the authors think will attract attention.

*Data management.* Maintaining current and accurate information for thousands of ships and tens of thousands of crewmen is a major chore, and PLA writers are unanimous that it is not being done well enough. Deciding which ships to bring into the system or which are suited for what tasks requires extensive information on ship type, capacity, seaworthiness, fittings, and other aspects. Large commercial ships spend most of their time away from their home region, and just knowing whether the vessel is even close enough to be mobilized is a challenge. Ships are bought, sold, leased, and transferred, and notifying the home port PAFD of the change often falls through the cracks. Crewmen gain experience, undergo training, get injured, change jobs, retire. Each individual

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<sup>48</sup> Du and Du, “Military Application Training and Employment Management for Civilian Cargo Ships,” 20-23.

<sup>49</sup> 徐海峰 [Xu Haifeng], 适应新形势--全面规范海上民兵建设 [“Adapt to the New Situation: Fully Standardize the Development of Maritime Militia”], 国防 [National Defense], no. 2 (February 2014), 65-66.

<sup>50</sup> Xu, “Some Thoughts on Strengthening the Construction of National Defense Mobilization,” 55-57.

<sup>51</sup> Du and Du, “Military Application Training and Employment Management for Civilian Cargo Ships,” 20-23.

<sup>52</sup> 熊华明 [Xiong Huaming], 如何让民用船舶助力军事运输? — 随某任务分队跨海机动闻思录 [“How Can Civilian Ships Help Military Transportation?—Accompanying a Mission Unit to Cross-Sea Maneuver”], 中国国防报 [China National Defense News], May 24, 2019, p. 3.

<sup>53</sup> Liu et al, “Problems and Insights from Civilian Shipping Support in the Battle of Jinmen,” 20-23.

has to be evaluated for political reliability as well as skill levels. Data systems are often incompatible from one locality to another, making it difficult to aggregate data at a higher level.<sup>54</sup>

*Training quality.* Keeping individual militiamen trained to the proper level is also a challenge. Like the ships they sail on, crewmen are away from their home port much of the year. When they are home, they often seek other jobs, particularly fishermen during the annual three-month fishing moratorium. Training curricula are often inadequate, an issue the *Outline* is presumably intended to address. The quality of training equipment varies greatly, and many localities do not have adequate facilities for training on the many topics required. Militia units do not train often enough with the navy units they will serve under or the army units they will load, transport, and unload.<sup>55</sup>

*Finance and law.* The whole mobilization system continues to grapple with China's incomplete transition from a command economy to a market economy. Creating a viable legal, regulatory, and economic foundation for mobilization in the reform era has been a two-decade effort and remains far from finished.<sup>56</sup> The most challenging issue on the financial side is that of compensation for the use of ships and crews—what should be compensated, at what rate, by what part of the Chinese regime? As late as 2019, authors complained that the body of relevant laws and regulations did not cover many situations, that the compensation standards were not clear enough, that the compensation rates were out of date, and that the fiscal burden was not distributed appropriately among national, provincial, and local governments.<sup>57</sup> Moreover, there is no mechanism for adjudicating disputes over compensation, due to the general ban on litigation against the state under the *Administrative Litigation Law*.<sup>58</sup> The pertinent laws and regulations do not include enough cross-references. For example, as one author notes, the *Military Service Law* stipulates that veterans and militiamen have priority in applying for civil service positions, but the *Civil Service Law* does not, while the *Military Service Law* itself does not establish any penalties for militia personnel refusing military training.<sup>59</sup>

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<sup>54</sup> 熊昕, 陈新文 [Xiong Xin and Chen Xinwen], 沿海省军区民用船舶动员问题研究 [“Research on Problems of Civilian Ship Mobilization in Coastal Area Provincial Military Districts”], 国防科技 [National Defense Technology], 40 no. 2 (April 2019), 68-72; 毕毅 [Bi Yi], 加快国防动员法规体系建设推进新时代国防动员创新发展 [“Accelerate the Establishment of a Legal System for National Defense Mobilization and Advance the Innovative Development of National Defense Mobilization in the New Era”], 国防 [National Defense], no. 8 (August 2019), 40-43; 张绍明 [Zhang Shaoming], 增强动员能力 促进国防建设 ——《湖北省民用运力国防动员办法》解读 [“Enhance Mobilization Ability and Promote National Defense Construction —— Interpretation of the Measures for National Defense Mobilization of Civil Transport Capacity in Hubei Province”], 湖北日报 [Hubei Daily], July 19, 2013, [www.hubei.gov.cn/zwggk/zcsd/201307/t20130719\\_459562.shtml](http://www.hubei.gov.cn/zwggk/zcsd/201307/t20130719_459562.shtml).

<sup>55</sup> Xiong and Chen, “Research on Problems of Civilian Ship Mobilization in Coastal Area Provincial Military Districts,” 68-72; Luo et al, “Under the New Situation, What Ideological Barriers Should the Construction of Maritime Militia Break Through?”

<sup>56</sup> Lonnie Henley, “The Legal and Regulatory Basis for Defense Mobilization in China.” CNAC/RAND Conference on Mobilization and the PLA, Warrenton, VA, February 2005. Unpublished.

<sup>57</sup> Xiong and Chen, “Research on Problems of Civilian Ship Mobilization in Coastal Area Provincial Military Districts,” 68-72; Chen, “Thoughts on Strengthening the Mobilization of Civilian Ships,” 64-66.

<sup>58</sup> Guo et al, “Analysis on the Legal Problems and Countermeasures in the Mobilization of Civilian Ships,” 46-47.

<sup>59</sup> Bi, “Accelerate the Establishment of a Legal System for National Defense Mobilization,” 40-43.

*Foreign-flag ships.* Like the rest of the global shipping industry, an ever-growing portion of the Chinese-funded commercial fleet uses flags of convenience.<sup>60</sup> A 2018 article by officers from the Army Military Transportation University and the CMC Logistics Support Department assessed that 62.5 percent by tonnage of the shipping capacity controlled by Chinese entities in 2015 flew foreign flags.<sup>61</sup> The authors were confident that China could justify requisitioning these ships in an emergency, despite the lack of any specific legal provision to do so, but that registering them, getting them ready for mobilization, and getting them trained properly would be a particular challenge for the NDMC and Transportation Mobilization Department at each level.

## **Conclusion**

The PLA concept of operations for a cross-strait landing on Taiwan relies heavily on large numbers of civilian ships and their crews, organized into maritime militia units under the operational command of the supported force. The PLA has spent over two decades developing the bureaucratic apparatus, laws, and regulations to organize, train, and manage this force. This author finds nothing in PLA writings on this subject to suggest this is a temporary measure, filling the gap until the Navy expands its own fleet of transports and auxiliary ships. Rather, this seems to be how Chinese leaders, civilian and military, think the PLA should function, leveraging the enormous resources of China's civilian economy to support military operations.

Any landing operation of this scale would be immensely complicated, and the reliance on maritime militia and mobilized civilian ships adds yet another layer of complexity and uncertainty. Undoubtedly the support effort would not go as well as planners might wish, given the many problems they already know of and the inevitable new crises that will erupt mid-fight. That does not mean it is doomed to fail, however. Capturing enough ports and keeping them open will almost certainly be the main challenge. If first echelon forces succeed at that, the rest of the operation has a reasonable chance of success, at least in this author's opinion. Either way, an attempted invasion of Taiwan would not only be one of the most ambitious landing operations in history, it also undoubtedly would represent the largest ever mobilization of civilian shipping to support military operations, far outstripping Dunkirk in the number of civilian vessels and the Falklands War in tonnage. The militia logistics backbone is vital to the success of a Taiwan invasion.

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<sup>60</sup> Chinese-funded ships may not technically be Chinese-owned, being held through subsidiaries located outside China.

<sup>61</sup> 刘宝新, 刘嘉生 [Liu Baoxin and Liu Jiasheng], 中资方便旗船国防动员问题研究, [“National Defense Mobilization of Chinese-Funded Ship with Flags of Convenience”], 军事交通学院学报 [*Journal of Military Transportation University*], 20 no. 1 (January 2018), 15-20.



## **About the Author**

Lonnie Henley retired from federal service in 2019 after more than 40 years as an intelligence officer and East Asia expert. He served 22 years as a U.S. Army China foreign area officer and military intelligence officer in Korea, at Defense Intelligence Agency, on Army Staff, and in the History Department at West Point. He retired as a Lieutenant Colonel in 2000 and joined the senior civil service, first as Defense Intelligence Officer for East Asia and later as Senior Intelligence Expert for Strategic Warning at DIA. He worked two years as a senior analyst with CENTRA Technology, Inc. before returning to government service as Deputy National Intelligence Officer for East Asia. He rejoined DIA in 2008, serving for six years as the agency's senior China analyst, then National Intelligence Collection Officer for East Asia, and culminating with a second term as DIO for East Asia. Mr. Henley holds a bachelor's degree in engineering and Chinese from the U.S. Military Academy at West Point, and master's degrees in Chinese language from Oxford University, which he attended as a Rhodes Scholar; in Chinese history from Columbia University; and in strategic intelligence from the Defense Intelligence College (now National Intelligence University). His wife Sara Hanks is a corporate attorney and CEO specializing in early-stage capital formation. They live in Alexandria, Virginia.

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