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Summary

Since 2017, the People's Liberation Army Navy Marine Corps (PLANMC) has undergone significant expansion, growing from two brigades to eight. The major impetus behind these efforts is a desire to build the service arm into an expeditionary force capable of operating in most environments at short notice. However, PLANMC reform has also bolstered its ability to contribute to major campaigns along China's periphery, including a Taiwan invasion scenario. This report examines the PLANMC's role in a cross-strait amphibious campaign and analyzes how new additions to the force could be used against Taiwan. It explores what roles the PLANMC would likely play in the three major phases of a Taiwan invasion: preliminary operations; assembly, embarkation, and transit; and assault landing and establishment of a beachhead. It also examines new capabilities designed for operations beyond the initial beach assault. This report argues the PLANMC is not being configured for a traditional landing operation, but rather is focusing development toward new operational concepts that could provide unique capabilities in support of the larger campaign.

Introduction

The People's Liberation Army (PLA) has two main amphibious ground combat forces, amphibious combined arms brigades in the army and the marine corps within the navy. For many years, the marine corps remained quite limited. Initially a single brigade and later expanded to two brigades, it could not contribute much to a large-scale landing campaign across the Taiwan Strait. PLA reforms in 2017 have transformed the People's Liberation Army Navy Marine Corps (PLANMC). The force has tripled in size, garnering significant attention from Chinese and outside observers. The PLAN has also built a number of large amphibious ships to carry these forces.

While the PLANMC's latest developments indicate the force is preparing for more diverse missions, including greater roles in overseas operations, the service arm's chief mission remains amphibious warfare. This has important implications for Taiwanese security. Advances in its ability to conduct modern amphibious combat operations may both enhance its effectiveness in traditional beach landings and introduce new capabilities in support of the overall joint campaign against Taiwan. This report examines the PLANMC's role in a cross-strait amphibious campaign and analyzes how new additions to the force could be used against Taiwan.

This report contains three main sections. The first section discusses the service arm's transformation and future orientation. The second section examines progress in brigade development to gauge readiness and available capabilities for landing operations. The third section analyzes the PLANMC's likely roles in the different phases of a Taiwan invasion campaign (i.e., a "joint island landing campaign") and explores its current ability to perform these roles.

The "New" PLANMC

Prior to 2017, the PLANMC consisted of just two brigades subordinate to the South Sea Fleet (now Southern Theater Navy), numbering around 12,000 personnel.¹ These two brigades were largely responsible for operations in the South China Sea, including guarding Chinese-occupied features, and contributing forces to anti-piracy escort task forces.² As a major beneficiary of the "below the neck"

¹ 胡波 [Hu Bo], 中国为啥必须要有一支强大的海军陆战队? ["Why Does China Require a Strong PLAN Marine Corps?"], 瞭望智库 [Liao Wang Institute], March 28, 2018, <http://www.lwinst.com/hongguan/6577.htm>.

² This mission began in early 1988 when the 1st and then only brigade was given the task of deploying forces to construct and hold reef structures in the Spratlys. A second brigade, the 164th, was transferred to the PLANMC from the PLA Army (PLAA) in 1998. 李发新 [Li Faxin], 中国人民解放军海军陆战队 [*The PLA Marines*], (Beijing: China Intercontinental Press, 2013), 33, 56-57.

reforms that began in 2017, the force was elevated to Corps Leader grade, established a new headquarters subordinate to the PLAN in Beijing, and added several new brigades including an aviation brigade.³ This expansion and reform were meant to give the force a greater role in China's military operations and the PLAN's strategy of "near seas defense and far seas protection."⁴

The force is tasked with both its longstanding amphibious warfare mission as well as new missions. Over the past decade, the requirement of the PLA to diversify its mission set resulted in an expanded range of military operations for PLANMC forces, including greater emphasis on non-war military operations.⁵ Under the slogan of "all-domain operations" (全域作战), the PLANMC now regularly trains to operate in new environments, such as desert, cold, jungle, and high-elevation training areas.⁶ When the "new" PLANMC was officially established in 2017, its leadership called on the force "to strive to build an elite force capable of full spectrum operations, all-domain operations, operations in all dimensions, and emergency operations at all times."⁷ According to the PLANMC's first Commandant, units must maintain high levels of readiness to deploy, fight, and win "without additional personnel or equipment and without pre-combat training" (不经人员装备补充、不经临战训练).⁸

Concepts for maneuver are shifting from traditional linear surface landings to multidimensional precision assault. For example, the PLANMC deputy chief of staff and former brigade commander Chen Weidong wrote in September 2021 that marine corps assault patterns will include multi-dimensional projection, multi-arm coordinated assault, and over-the-horizon concealed launch. Supported by combined precision information and firepower offensive capabilities, forces will conduct rapid precision maneuver to strike weak areas throughout an adversary's depth to exploit gaps, outflank them, and divide their defensive system. This is meant to paralyze the enemy, increase operational effects, and reduce friendly exposure on the ground.⁹ Many of these concepts reflect

³ The PLANMC Headquarters is located in Chaozhou, Guangdong. 孔军: 这次军队规模结构和力量编程改革, 海军陆战队调整扩编 ["Kong Jun: Marine Corps Adjustments and Expansion in Current Reform of Military Scale, Structure, and Force Composition"], 澎湃新闻 [The Paper], July 31, 2017, http://m.thepaper.cn/kuaibao_detail.jsp?contid=1747551.

⁴ 安卫平 [An Weiping], 海军陆战队跨越式发展之我见 ["My Opinions on the Leap-frog Development of the Navy's Marine Corps"], 人民海军 [People's Navy], January 13, 2017, 3.

⁵ 黄新宇, 邓万彬 [Huang Xinyu, Deng Wanbin], 海军陆战队非战争军事行动装备建设思考 ["Thoughts on Construction of Naval Marine Corps Non-War Military Operations Equipment"], 人民海军 [People's Navy], June 9, 2010, 4.

⁶ 王元元, 曾行贱 [Wang Yuanyuan, Zeng Xingjian], 有效提升海军陆战队全域作战能力 – 专访寒训指挥员、南海舰队副参谋长李晓岩 ["Effectively Improve the Navy Marine Corps' All-Domain Combat Capabilities – Interview with Li Xiaoyan, Commander of Cold Training and Deputy Chief of Staff of the South Sea Fleet"], 当代海军 [Navy Today], no. 2, 2015, 21-23.

⁷ Original text: "争取在最短的时间, 建成一支能践行全谱作战、全域作战、全维多栖作战、全时应急作战的精锐之师." 陶佳伟, 陈浩天 [Tao Jiawei, Chen Haotian], 永做最锋利的尖刀劲旅 – 海军陆战队某旅始终牢记统帅嘱托, 以背水攻坚、勇往直前的精气神抓备战打仗 ["Always be the Keenest Force – Navy Marine Corps Brigade Always Keeps the Commander in Chief's Task in Mind and Prepares for Battle with the Spirit of No Retreat and Moving Forward Courageously"], 人民海军 [People's Navy], September 17, 2020, 1-2.

⁸ 孔军 [Kong Jun], 人民日报远望塔: 彰显兵种特性 锤炼战略尖刀 ["People's Daily Observation Tower: Highlighting the Features of the Service and Tempering a Strategic Dagger"], 人民网 [People's Daily Online], February 11, 2018, <http://opinion.people.com.cn/n1/2018/0211/c1003-29817389.html>.

⁹ 陈卫东 [Chen Weidong], 透视两栖作战新特点 ["Insight into the New Characteristics of Amphibious Operations"], 中国军网 [China Military Online], September 16, 2021, http://81.cn/jfjbmap/content/2021-09/16/content_299226.htm.

growing recognition of the wider utility of fielding versatile amphibious combat forces across an expanded set of missions beyond their previous focus on beach landings, as well as lessons learned observing decades of US Marine Corps operations.

Most importantly, the PLANMC is seen as the PLAN's future expeditionary force operating overseas to secure China's national interests and respond to crises.¹⁰ Echoing other official statements, former PLANMC political commissar Yuan Huazhi frankly stated in 2018 "we must fully recognize the status and role of the marine corps as the 'first choice for military forces to go abroad.'"¹¹ To serve this function, PLANMC leaders emphasize the importance of readiness, speed, adaptability, and versatility in future force development. PLANMC forces are now regularly deployed to China's first overseas base in Djibouti and will eventually embark on future amphibious strike groups deployed in the far seas.¹²

While many of these new developments may not be dedicated to a traditional landing on Taiwan, a more modern and versatile PLANMC will make the force more effective in any of the operations it conducts in support of the joint campaign. The next section will examine the post-reform PLANMC and the development of its new combined arms brigades.

PLANMC Force Development

A look at post-reform PLANMC construction is essential to assessing what capabilities will be available in a cross-strait amphibious invasion. As stated above, several new brigades were formed, most from existing PLA Army (PLAA) units. Four new maneuver brigades were formed, two each in the Northern Theater Navy (NTN) and Eastern Theater Navy (ETN). The former PLAN "Jiaolong" commando regiment was upgraded to a brigade and placed under the PLANMC. Additionally, an aviation brigade was formed in Shandong to provide organic aviation support for PLANMC brigades. Exhibit 1 displays the names and locations of the PLANMC's eight brigades.

¹⁰ An Weiping, "My Opinions on the Leap-frog Development of the Navy's Marine Corps," 3.

¹¹ 袁华智 [Yuan Huazhi], 锻造能打胜仗的战略尖刀 ["Creating a Strategic Dagger that can Fight and Win"], 人民海军 [People's Navy], June 15, 2018, 2.

¹² 庾新国, 邱桂华 [Tuo Xinguo, Qiu Guihua], 转型, 闯出一条科学发展之路 – 陆战学院加快适应调整改建纪实 ["Transformation and Breaking Out on a Path of Scientific Development—A Record of the Naval Marine Academy Accelerating and Adapting to Reorganization"], 人民海军 [People's Navy], June 1, 2012, 3; 过年啦 官兵送祝福啦 驻吉布提保障基地官兵给祖国人民拜年啦 ["It's the New Year and the Troops Send Blessings, The Troops Stationed at the Support Base in Djibouti Wish the Homeland a Happy New Year"], 解放军新闻传播中心融媒体 [PLA News Broadcast Center Integrated Media], February 15, 2018, <https://v.qq.com/x/page/s0553v19jd2.html>.

Exhibit 1. PLANMC Brigades

Theater Command	Brigade Name	Location
Southern	1 st Marine Brigade	Zhanjiang, Guangdong
	2 nd Marine Brigade	Zhanjiang, Guangdong
	Special Operations Brigade	Sanya, Hainan
Eastern	3 rd Marine Brigade	Jinjiang, Fujian
	4 th Marine Brigade	Jieyang, Guangdong
Northern	5 th Marine Brigade	Qingdao, Shandong
	6 th Marine Brigade	Qingdao; Yantai, Shandong
	Naval Shipborne Aviation Brigade	Zhucheng, Shandong

The PLA reforms also reorganized brigade structure. Previous marine brigades in the Southern Theater Navy (STN) contained several infantry battalions and an amphibious armor regiment as the primary assault forces. Reforms have reorganized these forces into combined arms battalions, flattening the chain of command from brigade to battalion in much the same way as PLAA brigades. As 1st marine brigade commander explained in 2020, “the combined arms battalion as the operational unit to take on independent combat missions is a true portrayal of the past three years of reform and transfer.”¹³ The 1st Brigade was the first PLANMC unit to test out the new combined arms battalion structure, forming the 1st combined arms battalion (amphibious). With this new structure, personnel comprising recon, engineering, firepower and other elements are built into the combined arms battalion, enhancing combat power and flexibility at the battalion level.¹⁴

These reforms have faced challenges. Equipment and units can be reorganized and moved around, but battalion commanders must also be trained and experienced to handle the increased burden of coordinating different arms. Commanders and staff are forced to grasp new specialties under their responsibility. In landing exercises, some 1st Brigade battalion staff reportedly did not make use of the reconnaissance elements under their command and lacked understanding of the obstacle removal procedures of engineering detachments, causing delays for follow-on units.¹⁵

Discussions in PLAN official media indicate the brigades are working through this transition to develop capable battalion commanders and staff and correct old ways of thinking.¹⁶ For example, it has sought to improve the quality and focus of officer evaluations. In April 2019, the PLANMC headquarters evaluated the capabilities of command and staff officers with respect to operations, command, political work, and integrated support, placing weight on warfighting in the overall

¹³ Tao Jiawei, Chen Haotian, “Always be the Keenest Force,” 1.

¹⁴ Ibid, 1-2.

¹⁵ Ibid, 1.

¹⁶ Ibid, 1-2.

evaluations. This was conducted force-wide for over 60 deputy regiment and battalion grade officers.¹⁷

Currently, PLANMC brigades consist of nine battalions:¹⁸

- Amphibious mechanized infantry 1st battalion (两栖机械化步兵一营)
- Amphibious mechanized infantry 2nd battalion (两栖机械化步兵二营)
- Light mechanized infantry 3rd battalion (轻型机械化步兵营)
- Air assault infantry battalion (空中突击步兵营)
- Reconnaissance battalion (侦察营)
- Artillery battalion (炮兵营)
- Air defense battalion (防空营)
- Operational support battalion (作战支援营)
- Service support battalion (勤务保障营)

Amphibious combined arms battalions consist of the following:¹⁹

- 4x mechanized infantry companies (机步连)
- Firepower company (火力连)
- Recon platoon (侦察排)

¹⁷ 于征祥, 范旭东 [Yu Zhengxiang, Fan Xudong], 突出打仗标准全程督考 – 海军陆战队从严组织拟提升干部考核 [“Highlight Thorough Supervision of Standards in Warfighting—Navy Marine Corps Strictly Organizes Plan for Improving Cadre Evaluations”], 人民海军 [People’s Navy], April 12, 2019, 1.

¹⁸ 王素森, 夏德伟, 夏雷 [Wang Susen, Xia Dewei, Xia Lei], 对抗演练, 直戳战伤救护 ‘软肋’ [“Confrontation Drills, Straight into the ‘Weak Spots’ in Casualty Rescue”], 人民海军 [People’s Navy], February 9, 2018, 2; 洪昂, 陶佳伟 [Hong Ang, Tao Jiawei], 精神之光照耀强军征程 – 海军联系点、陆战队某旅积极推动培育弘扬新时代海军精神日常态化具体化形象化生活化的探索 [“The Light of Spirit Shines on the Journey to Strengthen the Military – Navy Connections and a Marine Brigade Actively Promote the Exploration of Cultivation and Enrichment of a Naval Spirit in the New Era that is Regularized, Concrete, Visualized, and Down-to-Earth”], 人民海军 [People’s Navy], September 14, 2020, 3; 陶佳伟 [Tao Jiawei], 火力全开, 直捣黄龙 [“Go Directly to the Root of the Problem in Full Force”], 人民海军 [People’s Navy], November 10, 2020, 2; 夏德伟, 夏雷 [Xia Dewei, Xia Lei], 雄狮高原敢伏虎 – 海军陆战队某旅野战驻训中开展主题教育纪实 [“Lions on the Plateau Dare to Take On Tigers—A Record of Themed Education Carried Out During a Navy Marine Corps Brigade’s Field Training”], 人民海军 [People’s Navy], June 25, 2018, 2; 王淑叶, 张震, 牛涛 [Wang Shuye, Zhang Zhen, Niu Tao], 一张维修表, 缘何牵动六个科? [“How Could One Maintenance Table Affect Six Departments?”], 中国军网 [China Military Online], June 5, 2020, http://www.81.cn/hj/2020-06/05/content_9828702.htm; 夏德伟, 高国敬 [Xia Dewei, Gao Guojing], 三级军士长吴贵云: 只为 ‘利剑’ 舞苍穹 [“Master Sergeant Class Three Wu Guiyun: Merely a ‘Sharp Sword’ Dancing in the Sky”], 南部战区微信公众号 [Southern Theater Navy Official Wechat Account], November 8, 2017, <http://mil.news.sina.com.cn/2017-11-08/doc-ifynmvuq9430959.shtml>.

¹⁹ 方高明, 谢佑贤 [Fang Gaoming, Xie Youxian], 鸡雄山战斗功臣连 – 海军陆战队某旅 2 营火力连 [“Hero Company of Jixiongshan Battle—2nd Battalion Firepower Company of a Navy Marine Corps Brigade”], 人民海军 [People’s Navy], September 23, 2020, 2; Tao Jiawei, Chen Haotian, “Always be the Keenest Force,” 1-2; 曾被称为海上步兵, 现在装备大换装, 中国海军陆战队快认不出来了 [“Once Known as Infantry at Sea, the Chinese Navy Marine Corps is Now Unrecognizable with Major Changes in Current Equipment”], 新浪网 – 刀口谈兵官微 [Sina Weibo—Daokou Tanbing Guanwei], September 8, 2020, https://k.sina.com.cn/article_1183596331_468c3f2b00100tqbt.html?from=mil.

- Air defense element (防空分队)
- Artillery element (炮兵分队)
- Engineer element (工兵分队)
- Repair team (修理小队)

The four mechanized infantry companies are reported to each contain 14 combat vehicles, for a total of 56 Type-05 vehicles per battalion (ZBD-05 and ZTD-05) and thus 112 per brigade.²⁰ These are the primary amphibious vehicles for PLANMC landing operations. The addition of firepower companies, engineers, recon, and air defense elements enhances the battalion's ability to operate independently and seize coastal terrain.

The most combat ready units are found in the STN. The two original pre-reform brigades, the 1st and the 2nd brigades, are located near Zhanjiang City and are likely the amphibious mechanized forces most ready to mobilize and execute landing operations. These brigades continue to train regularly on the Leizhou peninsula for amphibious landing operations. Based in Sanya, the Special Operations Brigade has grown to around 3,000 personnel in an unknown number of battalion formations. Around 1,000 of these personnel are transfers from other units. Lacking sufficient professional training staff for the enlarged force, a number of experts have been brought in from other special operations units to bolster training capacity. Additionally, force development appears to further emphasize improvement in coordinated operations. These special forces units are usually kept at high levels of readiness.²¹

In the NTN, the transition of the 6th brigade from the former 77th motorized infantry brigade (26th Group Army) appears to be nearing completion. Type-05 assault vehicles and IFVs have been allocated to the two amphibious mechanized infantry battalions, ZBL-09 IFVs and ZTL-11 assault vehicles to the light mechanized infantry battalion, as well as CS/VP4 "Lynx" all-terrain vehicles to unspecified units.²² The 6th brigade reportedly takes part in regular amphibious training programs (海训) as well as other transregional training events.²³ The 5th brigade received ZBD-09 and ZTL-11

²⁰ This is slightly less per brigade than pre-reform, which would have an assault gun battalion of 41 ZTD-05s, and two mechanized infantry battalions each with 41 ZBD-05s, totaling 123 vehicles. 簡一建 [Jian Yijian], 共軍「兩棲作戰能力」發展之研析 [“Research and Analysis of the Development of the Communist Army's ‘Amphibious Combat Capabilities’”], 陸軍學術雙月刊 [Army Academic Bimonthly], December 2017, 57-58; “Once Known as Infantry at Sea, the Chinese Navy Marine Corps is Now Unrecognizable with Major Changes in Current Equipment,” September 8, 2020.

²¹ 翟思宇 [Zhai Siyu], 特战精兵磨砺出 – 海军陆战队某旅聚焦实战加强核心战斗力建设 [“Honing Special Warfare Elites—Navy Marine Corps Brigade Focuses on Live Combat to Strengthen the Building of Core Combat Capabilities”], 人民海军 [People's Navy], April 29, 2019, 3; 翟思宇, 曹可轩 [Zhai Siyu, Cao Kexuan], ‘蛟龙突击队’开展群众性练兵比武 [“‘Jiaolong Commandos’ Carry Out Mass Training Contest”], 中国军网 [China Military Online], August 10, 2018, http://www.81.cn/tzjy/2018-08/10/content_9248798.htm.

²² 惠一楠, 王淑叶, 牛涛 [Hui Yinan, Wang Shuye, Niu Tao], 传统之光照亮强军实践 – 海军主题教育联系点、陆战队某旅弘扬优良传统培育红色传人的新闻追踪 [“The Light of Tradition Illuminates the Practice of a Strong Military—Tracing the News on the Navy's Themed Education Connections and a Marine Corps Brigade Carrying Forward Fine Traditions and Cultivating Red Disciples”], 人民海军 [People's Navy], April 28, 2020, 3; 强军路上 我们在战位报告 ‘火蓝刀锋’ 锻造新质战力 [“On the Way to a Strong Military, Reporting to Our Combat Posts and Forging New Combat Power with ‘Blue Flame on the Blade’s Edge’”], 央视网 [CCTV], March 31, 2021, <https://tv.cctv.com/2021/03/31/VIDEYsOkASxZPEi6JLjieCA1210331.shtml>.

²³ Hui Yinan, Wang Shuye, Niu Tao, “The Light of Tradition Illuminates the Practice of a Strong Military—Tracing the News on the Navy's Themed Education Connections and a Marine Corps Brigade Carrying Forward Fine Traditions and Cultivating Red Disciples,” 3.

wheeled vehicles for its light mechanized infantry battalion sometime in 2020, and it has established its reconnaissance battalion.²⁴ However, it is unclear whether the 5th brigade has created amphibious mechanized infantry battalions. These two brigades likely conduct much of their amphibious training in the amphibious training area in Ganjingzi District of Dalian, Liaoning Province.²⁵

The 7th aviation brigade is a significant addition to the PLANMC, which previously relied on PLAN helicopters for aerial mobility. Described by the 7th aviation brigade political commissar as a “leading force for advancing from the sea to shore in depth” and “a force for strategic maneuver,” the aviation forces are expected to conduct vertical landing operations into the adversary’s depth.²⁶ When the brigade was established in 2017, it lacked training grounds, support forces, and pilots.²⁷ The brigade’s deputy chief of staff frankly told reporters in 2020 they lacked flight equipment and flight instructors that could teach and understood command; “everything was started from scratch.”²⁸ A number of PLAA helicopter pilots appear to have been transferred and retrained for shipborne operations. Other pilots in the brigade are PLANMC cadets that graduated from the Army Aviation College in 2020.²⁹ The PLANMC has been equipped with a limited number of Z-8 and Z-9 helicopters, likely transferred from the PLAN, and begun training with air assault units.³⁰ Other helicopter types could join the force in the future. These may include the Z-20 medium lift helicopter to provide a flexible multi-mission platform and the Z-10 for close air support.³¹ However, these have not yet been observed. The brigade currently contains at least two flight squadrons (飞行大队)

²⁴ 海军陆战队实弹训练，新型轮式战车首次亮相 [“New-type Wheeled Combat Vehicles Revealed During Navy Marine Corps Live-fire Training”], 央视网 [CCTV], July 12, 2020, <https://v.cctv.com/2020/07/12/VIDEYWEAkdvihZh1fFuvofrp200712.shtml>; 市拥军优属慰问团走访慰问驻青部队基层单位和优抚对象 [“City Delegation for Supporting and Promoting the Military Visits Grassroots Posts and Preferential Treatment Recipients of Unit Garrisons in Qingdao”], 青岛日报 [Qingdao Daily], February 13, 2018, http://www.dailyqd.com/epaper/html/2018-02/13/content_205325.htm.

²⁵ 直击演训一线：海军陆战队某旅 全流程 全要素两栖登陆作战演练 [“Go Straight to the Front Line of Training—A Navy Marine Corps Brigade in Complete, Full Element Amphibious Landing Combat Exercises”], CCTV-7 正午国防军事 [CCTV-7 Mid-Day National Defense], September 24, 2021, <https://tv.cctv.com/2021/09/24/VIDEYui6J6J6ETluYRdXWH0K210924.shtml>.

²⁶ 苗国正 [Miao Guozheng], 锻造能打胜仗的陆战雄鹰 [“Forging Eagles in Ground Warfare that Can Fight and Win”], 人民海军 [People’s Navy], July 13, 2020, 3.

²⁷ 王宏博, 牛涛 [Wang Hongbo, Niu Tao], 解码‘陆战先锋’的场效应-海军陆战队创新典型激励模式提升思想政治工作质效的探索与实践 [“Decoding the Field Effect of ‘Marine Vanguard’—Exploration and Practice of the Navy Marine Corps Innovation in Typical Incentive Models to Improve the Quality and Effectiveness of Ideological and Political Work”], 人民海军 [People’s Navy], June 19, 2020, 3.

²⁸ 展望“十四五”奋进新征程 海军陆战队某旅：加快转型 锻造陆战铁翼 [“A Navy Marine Corps Brigade Advances Bravely on a New Journey in the ‘Fourteenth Five Year Plan’: Accelerate Transformation and Force the Iron Wings of Land Warfare”], 央视网-军事报道 [CCTV—Military Report], November 24, 2020, <https://tv.cctv.com/2020/11/24/VIDENAJQQ1lp9TDIKLuUvske201124.shtml>.

²⁹ 海军陆战队舰载直升机飞行学员喜获蓝天‘通行证’ [“Navy Marine Corps Shipborne Helicopter Cadets Receive Their ‘Pass’ into the Blue Sky”], 海军新闻微信公众号 [PLAN News Official Wechat Account], April 22, 2020, <http://www.cnnnews.com.cn/2020/0422/211999.shtml>.

³⁰ 胶东半岛某机场战鹰轰鸣 猛虎添翼立体突击 [“The Roar of Eagles at an Airport on the Jiaodong Peninsula, Winged Tigers in Multidimensional Assault”], 胶东网 [JiaoDong.net], July 31, 2020, <http://news.bandao.cn/a/393107.html>.

³¹ 中国海军两栖攻击舰载机的选型 [“Selecting Shipborne Helicopters for the Chinese Navy’s Amphibious Assault Ship”], 舰载武器 [Shipborne Weapons], February 2019, 31; 075 型的舰载机 [“Aircraft of the Type-075”], 舰载武器 [Shipborne Weapons], March 2020, 21.

and an aircraft maintenance group (机务大队), but will gradually grow in size as more helicopters and pilots are delivered.³² Flight teams train to operate with PLAN landing ships. Public reports show PLANMC pilots training with the ETN LPD No. 985 (*Qilianshan*) in day and night operations, including nighttime hot refueling.³³ The PLAN recently commissioned its first Type-075 LHD, with at least two more hulls expected to join the fleet in the near term. These will be essential platforms for enabling PLANMC air assault and vertical landing operations.³⁴

In the ETN, PLAN reporting indicates the 3rd Brigade in Fujian province is gradually receiving amphibious warfare equipment and regularly conducts amphibious landing training exercises. The 1st company of the 1st amphibious mechanized infantry battalion was the first in the brigade to receive amphibious armored vehicles, likely receiving them sometime in 2019.³⁵ Training tactics are similar to those reportedly used by the STN marine brigade amphibious units, including beach assaults, breaching teams, coordinating naval gunfire support, and other subjects.³⁶ One report suggests the 3rd Brigade in Fujian province trains with an ETN landing ship *dadui*, conducting countermeasures against an island landing confrontation and security of landing ships at sea.³⁷ The 3rd Brigade also contains a light mechanized infantry battalion, air assault battalion, reconnaissance battalion, and operational support battalion, similar in structure to the other brigades.³⁸ Much less information is

³² 王宏博, 牛涛 [Wang Hongbo, Niu Tao], ‘先锋’ 引领陆战猛虎向战冲锋 – 海军陆战队连续三年开展 ‘陆战先锋’ 系列评选表彰形成典型激励磁场效应 [“Vanguards’ Lead the Marine Corps Tigers on the War Charge—Navy Marine Corps Holds Series of Selections and Commendations for ‘Marine Vanguards’ for Three Consecutive Years, Creating a Magnetic Field of Incentives”], 人民海军 [People’s Navy], June 19, 2020, 1; 傅原野, 牛涛 [Fu Yuanye, Niu Tao], 红心向党 为战前行 – 海军陆战队某舰载航空兵旅开展主题党日活动侧记 [“Red Hearts to the Party Marching Ahead of War – A View into Themed Party Day Activities Held by the Navy Marine Corps Shipborne Aviation Brigade”], 人民海军 [People’s Navy], July 7, 2020, 2; 傅原野 [Fu Yuanye], 年终岁尾, 再来一次 ‘上门服务’ – 某旅聚焦破解难题提升帮建质效 [“Another ‘Doorstep Service’ at the End of the Year – A Brigade Focuses on Solving Problems to Improve the Quality and Efficiency of Assistance”], 人民海军 [People’s Navy], December 24, 2020, 2.

³³ Photograph by 丛连营 [Cong Lianying], Untitled, 人民海军 [People’s Navy], December 30, 2020, 1.

³⁴ 南海舰队入列三艘新战舰 专家: 夺岛能力、二次核反击能力大大增强 [“Three New Warships Join the South Sea Fleet. Expert: Island Seizure and Nuclear Second Strike Capabilities Greatly Enhanced”], 环球时报 [Global Times], April 25, 2021, http://www.xinhuanet.com/mil/2021-04/25/c_1211126765.htm; 王世纯 [Wang Shichun], 075 三号舰下水 或于年内试航 [“Third 075 Launched and May Have Sea Trial Within the Year”], 观察者网 [Observer], January 29, 2021, https://www.guancha.cn/military-affairs/2021_01_29_579667.shtml.

³⁵ 李磊磊, 张飞龙 [Xu Leilei, Zhang Feilong], 仰望崇高, 他们用奋斗续写光荣 – 海军陆战队某旅机步一连运用优良传统培育弘扬新时代海军精神纪事 [“Looking Up into the Majestic, They Continue to Write Glory in Struggle—Chronicle of a Navy Marine Corps Brigade 1st Mechanized Infantry Company Using Fine Traditions to Cultivate and Carry Forward the Spirit of the Navy in the New Era”], 人民海军 [People’s Navy], December 18, 2020, 1.

³⁶ 莫海明, 姜顺 [Mo Haiming, Jiang Shun], ‘两栖尖兵’ 背水攻坚 – 陆战队某旅从难从严组织抢滩登陆演练 [“No Retreat for ‘Amphibious Pioneers’—A Marine Corps Brigade Strictly Organizes Beach Landing Exercises”], 人民海军 [People’s Navy], December 4, 2020, 1.

³⁷ 孙毅, 李珂嘉贺 [Sun Yi, Li Kejiahe], 航行多设险 演练频发难 – 东部战区海军某登陆舰大队聚焦联演联训锤炼作战能力 [“Setting Up Dangers Along Routes to Create Difficulties in Drills – A Landing Ship Dadui of the Eastern Theater Navy Focuses on Joint Exercises and Training to Temper Combat Capabilities”], 人民海军 [People’s Navy], November 24, 2020, 2.

³⁸ 五中全会精神在军营 海军陆战队某旅: 贯彻全会精神 争做转型先锋 [“Fifth Plenary Session Spirit in the Barracks of a Navy Marine Corps Brigade: Carrying Out the Plenary Session Spirit and Striving to Be a Vanguard of Transformation”], 央视网 [CCTV], November 22, 2020, <https://tv.cctv.com/2020/11/22/VIDEgi7MDTDHLIYMwLLWNkvx201122.shtml>; 陶佳伟, 吴浩宇 [Tao Jiawei, Wu Haoyu], 一堂 ‘足球课’ [“A ‘Lesson From Football’”], 人民海军 [People’s Navy], November 27, 2020, 2; 张磊峰, 徐鹏,

available on the 4th Brigade in Jieyang, Guangdong Province, although it has received some equipment such as ZBL-09 IFVs.³⁹



Exhibit 2. 4th Brigade ZBL-09 IFV.⁴⁰

Four years since the PLANMC was reformed and expanded, progress is far from complete. The 77th motorized infantry brigade's transition to a PLANMC brigade was likely easier than the transition for the coastal defense units comprising the 3rd, 4th, and 5th brigades. Those units came out of outdated forces under the provincial military district system instead of a group army, and they will probably require more investment. Xi Jinping's visit to the PLANMC headquarters in October 2020 put significant emphasis on the force's development, resulting in the PLAN Party Committee releasing the "Decision on Thoroughly Implementing the Spirit of Chairman Xi's Important Speech and Strengthening the Guidance and Assistance of the Navy Marine Corps" in December of that year. This signaled increased support for PLANMC manning, equipment, training, and other measures to

全中宝 [Zhang Leifeng, Xu Peng, Quan Zhongbao], 家属来队坐上“1 号车”- 转隶一年多来, 海军陆战队某旅暖心举措频出 [“Family Members Visit Troops on ‘Car No. 1’—Over a Year Since Transferring, a Navy Marine Corps Brigade has Made Frequent Heart-warming Gestures”], 中国军网 [China Military Online], July 4, 2019, http://www.81.cn/jfjbmap/content/2019-07/04/content_237549.htm; 揭来同志先进事迹报告会举行 [“Report Meeting on the Advanced Deeds of Comrade Jie Lai Held”], 石狮日报 [Shishi Daily], July 10, 2018, http://epaper.ssrp.com.cn/html/2018-07/10/content_43116_277155.htm.

³⁹ Official sources have shown CS/VP4 all-terrain vehicles have been delivered to this brigade, however, there has been little reporting on its other capabilities. 吴浩宇, 贾成露 [Wu Haoyu, Jia Chenglu], 擂响新年度训练战鼓 – 海军陆战队某旅开训突出实战化 [“Beating the War Drums for Another Year of Training—A Navy Marine Corps Brigade Highlights Realism as it Begins Training”], 当代海军 [Navy Today], no. 1 (2019), 22-23; 直击演训场 – 新质作战力量 海军陆战队某旅: 转型重塑 打造三栖尖兵 [“Directly from Training Grounds a New Type Combat Force. A Navy Marine Corps Brigade: Transforming and Reshaping to Create a Tri-phenious Vanguard”], 央视网-国防军事早报 [National Defense Military Morning Report], October 13, 2020, <https://tv.cctv.com/2020/10/13/VIDEtkofTbXGv49jAjE9Qtic201013.shtml>.

⁴⁰ Interestingly, this image suggests 1st Battalion of the 4th Brigade is a light mechanized infantry battalion, not an amphibious mechanized infantry battalion as other brigades are configured. This could simply be a temporary designation as new brigades may have not yet received their full allocation of equipment, or it may signify a different structure for 4th brigade. Image on the cover of *Shipborne Weapons*. 舰载武器 [Shipborne Weapons], no. 10 (2020).

boost its development.⁴¹ Urgency from Beijing and senior PLAN leadership will likely catalyze a period of rapid strengthening of the force.

In total, the PLANMC can currently contribute six or more amphibious mechanized infantry battalions to a cross-strait landing. The exact number will depend on the final configuration of the new brigades, in particular those transferred from former coastal defense units. Based on information from reporting on the 3rd and 5th brigades, both former coastal defense units, it does appear the PLANMC will generally standardize its six maneuver brigades over time. This could potentially result in twelve amphibious mechanized infantry battalions, six light mechanized infantry battalions, and six air assault battalions for a total of 24 battalions as the primary maneuver forces. However, new battalion types such as a “high mobility light infantry battalion” (高机动轻型步兵营) in one of the new brigades suggests that brigade structure will not be completely uniform.⁴² Additionally, the special operations brigade can contribute several battalions of highly trained special forces personnel operating in smaller-scale tactical units.

Efforts are underway by the PLANMC Headquarters to bolster amphibious warfare capabilities, with special emphasis on new unit commanders. During the Lunar New Year in 2018, it held a ten-day collective training session for up to 100 commanders at different levels focused on their warfighting abilities. Experts were brought in from the PLAN, PLAA, PLA Strategic Support Force, military academies, and other organizations to support this event. Commanders received training on the operational patterns of amphibious landing, island and reef capture, and special operations; and tactics covering embarkation and transit, landing craft ferrying and assault wave formation, assault landings, and seizing points throughout the adversary’s depth; and resisting enemy counterattacks, reconnaissance, sabotage, and vertical landings. They trained to make decisions and give combat orders to units within their landing combat organizations and coordinate operational support. Special attention was given by headquarters staff to ensure commanders were evaluated and given feedback on an individual basis. This crash course in amphibious warfare reportedly had participants studying and training for 16 hours a day.⁴³ Additional iterations of collective training sessions are likely necessary due to the extremely short duration of this event.

The PLANMC’s efforts to develop commanders are likely underpinned by programs launched by the former Naval Marine Academy in 2011 to develop a “theoretical system of new-type amphibious operations.” This was part of an overhaul of the academy to build core institutional knowledge and amphibious warfare excellence in the PLAN, which included numerous projects on amphibious operational theory and research, equipment applications, training, and overall support to the

⁴¹ 杨涛 [Yang Tao], “海军党委引发《关于深入贯彻习主席重要讲话精神、加强海军陆战队指导帮带的决定》” [“Navy Party Committee Initiated the ‘Decision on Thoroughly Implementing the Spirit of Chairman Xi’s Important Speech and Strengthening the Guidance and Assistance of the Navy Marine Corps’”], 人民海军 [People’s Navy], December 8, 2020, 1.

⁴² 胡能, 高坤 [Hu Neng, Gao Kun], “打造胜战的‘精神刀锋’” [“Creating a ‘Spiritual Blade’ For Victory”], 人民海军 [People’s Navy], May 31, 2018, 3.

⁴³ 夏德伟, 陈冉, 夏雷 [Xia Dewei, Chen Ran, Xia Lei], 把领兵之人‘炼’成胜战之锋 – 海军陆战队紧扣实战组织四级军事主官集训 [“‘Refine’ Troop Leaders into the Frontline of Victory – Navy Marine Corps Organizes Collective Training of Four Levels of Military Officers Sticking Closely to Combat Realism”], 人民海军 [People’s Navy], February 27, 2018, 1.

PLANMC.⁴⁴ The academy has now been transformed into a PLANMC training base, and doctrinal development work has probably been subsumed under the PLANMC Headquarters.⁴⁵

Overall, the new PLANMC brigade structure demonstrates the PLANMC is not optimizing itself for a traditional amphibious assault on Taiwan's coast. Compared to the PLAA's six amphibious combined arms brigades, the PLANMC lacks heavy amphibious combat units and has instead opted for more flexible and diverse capabilities within each brigade. Examining the statements by senior PLANMC leaders on force development, changes to training programs over the past several years, and the new brigade structure, it is increasingly clear the PLANMC is developing into an expeditionary force capable of operating overseas. Nevertheless, the force will certainly be a key component of the landing forces in any joint island landing campaign and its newly reorganized battalions may be more combat effective under this new structure. The next section discusses the potential roles PLANMC brigades are likely to play.

Joint Island Landing Campaign

The Joint Island Landing Campaign (JILC) is the PLA's main operational concept for an invasion of Taiwan. Its primary objectives are to break through Taiwan's coastal defenses and establish a beachhead to enable offensive action to seize and occupy key targets or capture the entire island.⁴⁶ The JILC features multiple sub-campaigns requiring intense combat conducted jointly by all the PLA services. The campaign consists of three phases: 1) preliminary operations; 2) assembly, embarkation, and transit; and 3) the assault landing and the establishment of the campaign landing site (beachhead).⁴⁷ This report will exclude discussion of operations to seize Taiwan's offshore islands and focus on PLANMC landing operations against Taiwan itself.

The PLANMC could fulfill multiple roles in this campaign, but will not likely be the main force. Configured entirely for amphibious combat, the PLAA's amphibious combined arms brigades will likely serve as the main body of the overall landing forces.⁴⁸ The PLANMC may coordinate with these forces or conduct other separate or independent operations.⁴⁹

The following sections will examine the potential actions of the PLANMC in each of the three campaign phases.

⁴⁴ Tuo and Qiu, "Transformation and Breaking Out on a Path of Scientific Development—A Record of the Naval Marine Academy Accelerating and Adapting to Reorganization," 3.

⁴⁵ Operations research and development work and officer professional education appears to have continued, despite the re-designation of the Naval Marine Academy. When the PLA announced its list of outstanding educators, PLAN academies were listed by name (i.e. Naval Aviation University, etc.) while the former Naval Marine Academy was listed as "91976 部队." 王永杰, 吴旭 [Wang Yongjie, Wu Xu], 中央军委政治工作、训练管理部印发通报 – 表彰全军优秀教师和优秀教育工作者 ["The Political Work and Training and Administration Departments of the Central Military Commission Issued a Circular—Recognizing Outstanding Teachers and Educators in the Military"], 解放军报 [PLA Daily], September 10, 2018, http://81rc.81.cn/news/2018-09/10/content_9276433_2.htm.

⁴⁶ "Military and Security Development Involving the People's Republic of China, 2020," U.S. Department of Defense, 114.

⁴⁷ 张玉良 [Zhang Yuliang], 战役学 [Science of Campaigns], (Beijing: National Defense University Press, 2006), 293, 298.

⁴⁸ "Military and Security Development Involving the People's Republic of China, 2020," 116-117; *Science of Military Strategy*, 2013, 199, 209.

⁴⁹ 中国海军军人手册 [Handbook for Officers and Enlisted of the Chinese PLA Navy], (Beijing: Hai Chao Press, 2012), 25-26

Preliminary Operations

Prior to the amphibious assault, the PLA will likely carry out a series of preliminary (advance) operations, the goals of which would be to “paralyze” the enemy’s operational system and create favorable conditions for landing operations.⁵⁰ To this end, the joint forces will be tasked with shaping the operational environment through mine countermeasures, naval blockade, integrated firepower assaults, and so forth. For its part, the PLANMC will likely operate as part of the advance force. Specifically, it will conduct beach reconnaissance, sabotage raids, and mine clearance and obstacle destruction close to or on D-day.⁵¹

The PLANMC has significant manpower for these activities in amphibious objective areas. PLANMC reconnaissance battalions—specifically the armed recon companies (武装侦察连) and potentially recon elements assigned to the combined arms battalions—are trained to covertly approach the coastline and conduct these operations.⁵² These forces can reconnoiter beach areas, providing information on beach gradients, depths, tide and wave states, the sea bottom, ground traverse conditions, routes of enemy approach, defense works, and vertical landing areas.⁵³



Exhibit 3. 6th Brigade armed reconnaissance elements go ashore in small rafts during infiltration training.⁵⁴

Engineering elements in the combined arms battalions will take part in mine and obstacle clearance prior to the assault, utilizing amphibious breaching vehicles delivered to the PLANMC in the early

⁵⁰ *Science of Campaigns*, 299-305.

⁵¹ 陈岛 [Chen Dao], 《海军兵种》系列丛书 - 海军陆战队作战百问 [*The Naval Service Series—Marine Corps*], (Beijing: Haichao Press, 2015), 186.

⁵² 海军陆战队某旅侦察兵渗透破袭 [“Reconnaissance Troops of a Navy Marine Corps Brigade in Infiltration and Sabotage Raid”], 央视网 [CCTV], March 28, 2020, <https://tv.cctv.com/2020/03/28/VIDEMe65Kt9WRZPpKx0fQhAu200328.shtml?spm=C53074552346.PLgREq4pd4yq.0.0>

⁵³ Chen, *The Naval Service Series—Marine Corps*, 186.

⁵⁴ 强军路上 我们在战位报告 ‘火蓝刀锋’锻造新质战力 [“We Report from Combat Posts on the Way to a Strong Military, a ‘Fiery Blade’ Forging New Type Combat Power”], 央视网-国防故事 [CCTV-National Defense Stories], March 31, 2021, <https://tv.cctv.com/2021/03/31/VIDEYsOkASxZPEi6JLjieCA1210331.shtml>.

2010s and other small craft. These can use line charges to clear paths toward the beach.⁵⁵ It is unclear how the underwater demolitions companies (潜水爆破连) tasked with mine and obstacle clearance under the former engineering and chemical defense battalions (工兵防化营) have been affected by the new brigade structure.⁵⁶

Additionally, these operations are a core function of the special operations brigade. These forces routinely train for covert insertion by air using rotary or fixed wing aircraft, on the surface in small inflatable craft, or underwater by submarine and special operations delivery vehicles. They are proficient in demolitions, target reconnaissance, target designation, and sabotage raids against command and control hubs, ammunition depots, or other key targets.⁵⁷ They may also sabotage enemy harbors and ships as part of the blockade effort.⁵⁸ Such amphibious raids are covert tactical operations to hit enemy ports, bases, airfields, coastal observation posts, and command and control organs.⁵⁹ The special operations brigade provides a sizeable addition to the advance operations of the PLANMC and may continue conducting special operations during and after landing operations.

When employing amphibious forces in advance operations, PLA commanders must weigh the requirements for assaulting a specific landing area and the needs of maintaining tactical surprise. Large-scale amphibious landings against Taiwan will quickly lose strategic surprise with the mobilization of forces across the strait and the commencement of bombardment. However, commanders may still seek to achieve tactical surprise in their respective landing areas. Significant advance operations could risk losing this advantage, or help support it. The PLANMC may employ some of its forces to deceive the enemy by conducting advance operations to draw attention to false landing areas, thus hiding the true landing objective area.⁶⁰

Assembly, Embarkation, Transit

This phase of operations involves movement of PLANMC brigades from their home bases into assembly areas for embarkation on assigned landing ships and ship transports. The limited number of landing ships in the PLAN will complicate the detailed planning that goes into the embarkation phase. It is unclear exactly how many landing ships will be available for the JILC and to which

⁵⁵ 廖志勇 [Liao Zhiyong], 两栖装甲破障车 [“Amphibious Armored Breaching Vehicle”], 中国人民解放军国防大学国际防务学院 [International College of Defence Studies, NDU, PLA, China], May 1, 2016, http://www.cdsndu.org/html_ch/to_articleContent_article.id=40288a8553c564450154bdb56c1c039f.html.

⁵⁶ 王剑, 周启青 [Wang Jian, Zhou Qiqing], 陆战队某旅火箭破障车首次实射开门红 [“Marine Brigade Rocket Breaching Vehicle Off to a Good Start with First Live-fire”], 人民海军 [People's Navy], September 4, 2012, 1; 曾庆 [Zeng Qing], 滩头破障显身手 – 海军陆战队某工兵防化营训练写真 [“Clearing Beachhead Barriers Demonstrate Skills—A Portrait of Training for a Navy Marine Corps Engineering and Chemical Defense Battalion”], 当代海军 [Modern Navy], no. 5 (2010), 44-45.

⁵⁷ 李有华, 孙宏韬, 黎友陶 [Li Youhua, Sun Hongtao, Li Youtao], 海军某特战团: ‘海上蛟龙’ 雷霆出击 [“Navy Special Forces Regiment: ‘Sea Dragons’ Strike with Thunder”], 当代海军 [Navy Today], no. 1 (2017), 31; 孙宏韬, 黎友陶 [Sun Hongtao, Li Youtao], 伞骑绝尘, 高空突袭破敌顽 – 直击南海舰队某特战团高空伞降训练 [“Parachuting in and Vanishing on the Ground, A View of a South Sea Fleet Special Operations Regiment’s High-Altitude Parachute Training”], 当代海军 [Navy Today], no. 12 (2016), 38-41.

⁵⁸ 揭秘中国海军陆战队 ‘蛟龙突击队’ 队员均具四栖作战和海上反恐能力 [“Revealing the Quad-phenic Combat and Maritime Counter-terrorism Capabilities of the Chinese Navy Marine Corps ‘Jiaolong Commandos’”], 央视网 [CCTV], December 20, 2017, <http://m.news.cctv.com/2017/12/20/ARTIln7zgYcODwIAyosJZEup171220.shtml>.

⁵⁹ *Science of Campaigns*, 303-304.

⁶⁰ Chen, *The Naval Service Series—Marine Corps*, 188.

service they will be assigned. Numerous merchant vessels will have to be mobilized and modified appropriately to carry some of the landing forces, possibly included elements of the PLANMC.

PLANMC transregional training exercises conducted since 2014 have sought to improve rapid mobilization and transport functions within the force in coordination with service and joint military transportation departments. While these exercises have focused on transporting units over thousands of kilometers to distant training bases, they have offered significant lessons and experience in planning, preparing, and conducting force transport. The August 2015 exercises at the Malong training base in Yunnan demonstrated improvements in efficiency in moving amphibious combat units over long distances using multiple modes of transport. Scenarios were introduced during transit to increase complexity, such as response to air threats and troop dispersal and concealment.⁶¹ Repeated iterations of planning, preparation, embarkation, transit, and debarkation or transfer have provided significant data and feedback to evaluation groups assessing and optimizing the complex logistics of moving brigades and other PLAN units.⁶² Improvements to this process will be force-wide, but certainly so for the 1st and 2nd brigades, which have the most experience with these transregional exercises.

All PLANMC brigades are located close to major ports. The 1st and 2nd brigades each have access to rail or roadway networks and can reach loading sites used by the STN 6th Landing Ship *zhidui* in Zhanjiang, Guangdong with relative ease. This was publicly demonstrated during the launch of annual training in January 2018 with an amphibious mechanized infantry combined arms battalion of the 1st PLANMC brigade embarked on LPDs and LSTs. Public accounts of this exercise showed loading operations coordinated with surface and aviation forces. However, it was not realistic for a cross-strait landing.⁶³ In a real scenario, the PLANMC would likely attempt to conceal force concentration in multiple assembly and standby areas before proceeding to the embarkation point, upon which efforts would be focused on rapid and smooth loading operations to reduce exposure to adversary strikes.⁶⁴

Units of the 3rd and 4th brigades that are able to join the amphibious assault could be expected to embark aboard vessels of the 5th Landing Ship *zhidui* in the ETN. However, the apparent lack of amphibious lift from the PLAA's watercraft units for the six amphibious combined arms brigades in the ground forces suggests ETN landing ships may be reserved for their use to ensure fully-formed amphibious combat units can get ashore. A similar situation applies to the PLANMC's 5th brigade, which may not have access to PLAN landing ships.

Existing PLAN amphibious lift is inadequate to the size of the total landing forces.⁶⁵ Campaign planners will need to decide on which forces to prioritize. If the PLANMC is not the primary landing force, it may need to use alternative means to get to landing areas. Recent developments in merchant shipping may indicate efforts to address this shortcoming. For example, in July 2020 the PLANMC's

⁶¹ 尚文斌, 严家罗, 梁景锋, 黎友陶 [Shang Wenbin, Yan Jialuo, Liang Jingfeng, Li Youtao], 大漠行动 雪域荒原锻造战地之王 ["Desert Operation Forges Battlefield Primacy in the Snowy Wasteland"], 当代海军 [Navy Today], no. 2 (2016), 22-27.

⁶² 刘文平, 邵龙飞, 余文强 [Liu Wenping, Shao Longfei, Yu Wenqiang], 中国海军陆战队打造全域作战能力 ["Chinese Navy Marine Corps Creates All-Domain Combat Capabilities"], 当代海军 [Navy Today], no. 10 (2015), 10-17.

⁶³ 海军展开联合装载演练 提升协同能力 ["The Navy Conducts Joint Loading Drills to Improve Coordination"], 央视 [CCTV], January 5, 2018, <http://news.sina.com.cn/o/2018-01-05/doc-ifyqinzs9137941.shtml>.

⁶⁴ Chen, *The Naval Service Series—Marine Corps*, 122.

⁶⁵ "Military and Security Development Involving the People's Republic of China, 2020," 117.

1st brigade mobilized all personnel and equipment from Zhanjiang to conduct landing exercises off the coast of western Guangdong. Chinese reporting reveals a civilian-operated RO-RO ship at one of the 6th Landing Ship *zhidui*'s loading berths taking on combat troops and Type-05 amphibious armor. Footage shows the ability to conduct amphibious launch from the RO-RO ship.⁶⁶ This represents an important variable in the amphibious lift equation for the broader PLA and suggests that with appropriate modifications, PLANMC forces may have access to additional lift for assaulting forces.

PLANMC brigades will embark assault echelon and follow-on forces on available PLAN landing ships, while non-amphibious elements will likely transport by merchant shipping. The 6th brigade demonstrated the feasibility of this approach during a large-scale projection exercise in July 2019, embarking forces onto the NTN landing ship *dadui* and merchant RO-RO vessels using multiple RO-RO berths in Qingdao, Weihai, and Yantai. Type-05 amphibious vehicles loaded onto LSTs while trucks, towed artillery, troops, and various other wheeled equipment went on large RO-RO ships. A total of nine ships were used to transport this brigade.⁶⁷ This exercise appears focused on logistics during maritime transport and may not be reflective of preparations for landing operations; however, the assignment and disposition of shipping to move this brigade offers some valuable insights. In a cross-strait landing, assault echelon forces will form the initial waves and may depart vessels under combat conditions. Thus, these forces will be given higher priority for assigned PLAN landing ships, while non-amphibious follow-on forces such as light wheeled combat vehicles or towed artillery may have to wait aboard merchant shipping for lighterage to get ashore. It also highlights the geographic dispersal of embarkation areas across multiple port areas for a single brigade.

A significant portion of PLANMC forces can load at sea and therefore do not require a port of embarkation.⁶⁸ PLANMC amphibious vehicles train regularly in day and night well deck launch and recovery offshore in amphibious training areas.⁶⁹ This could prevent congestion in port areas and mitigate some risk of loading in enclosed harbor areas that may be subject to adversary precision strikes or mining operations. Additionally, loading for the JILC could take place under the pretext of amphibious training exercises.

⁶⁶ This ship was equipped with an improved hydraulically driven stern ramp enabling in-water amphibious launch and recovery. 直击演训一线 – 海军陆战队某旅 渡海登陆作战演练 锤炼部队两栖作战能力 [“Seeing the Front Line of Exercises—A Navy Marine Corps Brigade in Landing Combat Exercises to Develop Amphibious Combat Capabilities in Units”], 央视网 [CCTV], August 3, 2020, <https://tv.cctv.com/2020/08/03/VIDE9NwTywxw4gbBDI7dOgWh200803.shtml>.

⁶⁷ 聚焦实战化演兵场 胶东半岛 军地联合跨海投送演练 [“Focus on Combat Realism in Exercises, Joint Military and Civilian Trans-sea Projection Exercise on the Jiaodong Peninsula”], 央视网 [CCTV], July 10, 2019, <https://tv.cctv.com/2019/07/10/VIDEHWOqXi5vvpwTERgdVX190710.shtml>.

⁶⁸ Chen, *The Naval Service Series—Marine Corps*, 121.

⁶⁹ One brigade with the former South Sea Fleet began conducting nighttime armor launch and recovery in June 2014. 万云哲, 傅文君, 周启青 [Wan Yunzhe, Fu Wenjun, Zhou Qiqing], 暗夜, 铁甲耕海犁波 – 海军陆战队某旅夜间海上浮渡装卸载掠影 [“Armor Plow into the Sea Waves at Night—A Glimpse of a Navy Marine Corps Brigade Nighttime Afloat Loading and Unloading at Sea”], 人民海军 [People's Navy], July 10, 2014, 3.



Exhibit 4. Type-05 vehicles swimming to their landing ships offshore.⁷⁰

The PLANMC will be vulnerable throughout the assembly, embarkation, and transit phase, especially from air threats. Air defense battalions can help protect the force and landing ships at embarkation areas from low-flying threats, primarily by using MANPADS. These battalions do not appear to field any vehicle-based radar or SAM systems and will likely be reliant on resources of the joint forces. An article highlighting post-reform changes to the 1st brigade described air defense elements conducting “joint air intelligence and early warning” (实施联合空情预警) to establish early warning systems during a landing exercise.⁷¹ This suggests the 1st brigade can tap into PLAN or joint early warning networks, though little information is available on how this would work in practice. Air defense battalions belonging to brigades transferred from former coastal defense units can also be seen training with older towed anti-air artillery pieces, which may eventually be replaced with more modern equipment.⁷²

During transit, PLANMC air defense elements take part in amphibious transport fleet air defense.⁷³ One PLAN report from July 2015 indicates that MANPADS units supporting fleet air defense are under amphibious task force command, which can task ship weapon mounts and PLANMC MANPADS to engage targets when within range based on ship target tracking.⁷⁴ Overall, air defense appears to be an important gap in PLANMC capabilities. However, low altitude threat coverage may

⁷⁰ 朱洪斌, 李彦林, 甘俊, 胡锴冰 [Zhu Hongbin, Li Yanlin, Gan Jun, Hu Kaibing], 100 万海里的征程-记者探秘南海舰队某登陆舰支队训练 [“The Million Nautical Mile March—Reporter Explores the Training of a South Sea Fleet Landing Ship Flotilla”], 当代海军 [Navy Today], no. 4 (2013), 30.

⁷¹ Tao and Chen, “Always be the Keenest Force,” 1-2.

⁷² “New-type Wheeled Combat Vehicles Revealed During Navy Marine Corps Live-fire Training.”

⁷³ For an ETN fleet example, see image by 李吴 [Li Wu], 人民海军 [People’s Navy], August 25, 2017, 2.

⁷⁴ For an example, see the STN landing ship zhidui LPD *Jinggangshan* acting as command ship of a landing transport task force in July 2015. 徐苗波 [Xu Miaobo], Untitled, 人民海军 [People’s Navy], July 22, 2015, 2; PLANMC embarked forces are under the command of the PLAN transport fleet commander when embarkation orders are given to the point at which the assault landing commences. Chen, *The Naval Service Series—Marine Corps*, 129.

be sufficient in the JILC as significant air power and naval screens by PLA joint forces will likely be available to protect transiting forces.⁷⁵

The exact assignment and configuration of amphibious shipping for the PLANMC in a cross-strait landing remain unclear. This is not just due to the continued lack of landing ships for such large-scale operations, but also due to the lack of clarity on force objectives in the amphibious operational area. Planned operations ashore will ultimately determine PLANMC loading plans and assigned shipping.

Assault Landing and Establishment of a Beachhead

After the amphibious fleet has safely transited the strait and arrived at its objective operational areas, the critical assault phase of operations for the landing forces then commences. This is the key phase of the JILC, the objective of which is to conduct a landing assault, secure a beachhead for assault follow-on forces, overcome enemy counterattacks, and consolidate and expand landing sites.⁷⁶ Existing PLANMC forces can probably contribute just six amphibious combined arms battalions to beach landings, indicating a more limited role among the joint landing forces. However, the new brigade force structure brings new capabilities that may entail a unique supporting role for the overall campaign.

Campaign joint command will assign PLANMC forces to landing areas as required by campaign objectives and the established landing plans. The exact locations of primary, secondary, and false landing areas are unknown. As amphibious task forces approach deployment zones and advance force intelligence comes in, task force and landing force commanders will finalize specific landing sites. Pre-reform PLA landing site requirements indicated landing sections for amphibious regiments would cover a 2 to 4 km front and battalion landing points would each cover 0.5 to 1 km. Work by the Naval Marine Academy notes battalion landing points now cover 1 to 2 km.⁷⁷ This would put the two amphibious combined arms battalions of a brigade on a 2-4 km section of beach. Indeed, one brigade's amphibious assault landing exercises in July 2020 reportedly spanned 3 km of coast off eastern Guangdong.⁷⁸

Prior to the assault phase, infiltrating PLANMC special operations units may have already attempted sabotage operations against enemy observation posts, command and control facilities, airfields, and other key sites to disrupt defenders and slow down counterattacks against the landing forces.⁷⁹ These forces may have gone ashore covertly or been inserted by air. They may even have been delivered offshore by maritime militia fleets.⁸⁰

PLANMC assault wave formations primarily comprise relatively fast amphibious armor and assault craft. The Type-05 series of vehicles, which PLANMC brigades began receiving in 2006, are capable

⁷⁵ *Science of Campaigns*, 301-303.

⁷⁶ *Science of Campaigns*, 309-311; Chen, *The Naval Service Series—Marine Corps*, 151.

⁷⁷ This book project was launched by the PLAN's publishing house Haichao Press in 2012 and was written by personnel and faculty at the Naval Marine Academy that were involved in the series of research projects on amphibious warfare theory. Its author states it was written to be authoritative for both PLA-wide and local enthusiast readers. Chen, *The Naval Service Series—Marine Corps*, 113-114.

⁷⁸ 吴浩宇, 贾成露 [Wu Haoyu, Jia Chengwu], 抢滩登陆, 海上蛟龙冲锋急 – 海军陆战队某旅综合施训提高协同作战能力 [“Beach Landings, the Sea Dragon Charges Quickly—A Navy Marine Corps Brigade Comprehensively Implements Training to Improve Coordinated Operations Capabilities”], 人民海军 [People's Navy], July 9, 2020, 1.

⁷⁹ *Science of Campaigns*, 308.

⁸⁰ 刘自力, 陈青松 [Liu Zili, 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.

of reaching 45 kph on water and withstanding 12.7mm rounds.⁸¹ Assault gun and infantry fighting vehicle versions constitute the bulk of amphibious armor for the force with additional command, salvage, and ambulance versions. The PLANMC's 122mm self-propelled howitzer vehicle, the PLZ-07B, is also based on the Type-05 chassis and can swim to shore.⁸² Assault echelon units will be capable of launching from landing ships in the deployment zone and joining wave formations without significant transfer activities, enhancing the speed of landings.

Battalion landing groups will likely go ashore in 5-7 waves, with companies in 2-3 waves. They will be preceded by engineer elements using rocket-propelled line charges and amphibious breaching vehicles to clear and mark landing lanes.⁸³ Amphibious armor, such as ZTD-05 105mm assault guns and ZBD-05 cannon fire, will be in the first waves to lay fire on beach defenses and firing points, providing cover for infantry arriving on assault craft. These use Beidou satellite positioning to assist in movement and firing coordinates.⁸⁴ Battalion-level training activities including live fire against shore targets during periods of rough weather and low light conditions will help improve vehicle crew coordination and accuracy.⁸⁵ Additionally, since 2013 PLANMC infantry have improved coordinated strikes with the individual strike guidance system (单兵引导打击系统) to direct fires against enemy positions.⁸⁶

⁸¹ 中国海军陆战队新型两栖战车抢滩登陆无坚不摧 [“There is Nothing the Chinese Navy Marine Corps’ New-type Amphibious Combat Vehicle Cannot Overcome in Beach Landings”], 中国青年报 [*China Youth Daily*], April 10, 2009, <http://www.chinanews.com/gn/news/2009/04-10/1640411.shtml>; “ZBD-05 Amphibious Infantry Fighting Vehicle,” *Army Technology*, undated, <https://www.army-technology.com/projects/zbd-05-amphibious-infantry-fighting-vehicle/>.

⁸² PLZ-07B 两栖自行榴弹炮 [“PLZ-07B Amphibious Self-Propelled Howitzer”], 搜狐 [*Sohu*], August 23, 2017, https://www.sohu.com/a/166675745_99974130.

⁸³ Chen, *The Naval Service Series—Marine Corps*, 158; 海军探秘海军陆战队 装载航渡 准备抢滩登陆 [“Navy Explores the Marine Corps in Loading and Ferrying to Prepare for Beach Landings”], 央视网 [*CCTV*], November 27, 2019, <https://tv.cctv.com/2019/11/27/VIDEJGw1hp60RceN1h8IfuqQ191127.shtml>.

⁸⁴ 海军陆战队抢滩登陆, 两栖战车海上 ‘飙车’ 秀移动射击, 敌碉堡被一发干爆 [“Navy Marine Corps in a Beach Landing, Amphibious Combat Vehicles Show Off ‘Racing’ at Sea and Firing on the Move, Knocking Out the Enemy Bunker”], 央视网 [*CCTV*], November 22, 2019, <http://news.cctv.com/2019/11/22/VIDEFV9iVDghtSLMLNwUQsVV191122.shtml>.

⁸⁵ An August combined arms battalion training exercise reportedly took place with waves reaching over two meters. 海军陆战队跨昼夜实弹射击训练 [“Navy Marine Corps Day and Night Live Fire Training”], 央视网—新闻直播间 [*CCTV—Live News*], August 19, 2021, <https://tv.cctv.com/2021/08/19/VIDE6X1uT8YpzwToLld2ZQW210819.shtml>.

⁸⁶ 高毅 [Gao Yi], 南海舰队某陆战旅登陆演练强本领 [“A South Sea Fleet Marine Brigade’s Strong Skills in Landing Exercises”], 人民海军 [*People’s Navy*], November 7, 2012, 2; 南海舰队抢滩登陆演习 水雷重创登陆战车 [“Landing Vehicles Hit Hard by Sea Mines in South Sea Fleet Landing Exercise”], 中国军网 [*China Military Online*], October 21, 2013, http://www.81.cn/jskj/2013-10/21/content_5600354.htm.



Exhibit 5. 6th Brigade amphibious mechanized infantry battalion conducts shore-to-shore landing exercises in 2021.⁸⁷

Recent training events indicate the PLANMC is working to better integrate supporting elements into coordinated amphibious assaults under the new battalion structure. For example, a STN marine brigade conducting live combat tactics training in southeast Guangdong province in July 2020 combined multiple training subjects simultaneously to conduct an opposed landing. The assault echelon reportedly passed through “enemy barrage zones” under radio silence while communications elements (通信分队) acquired information on enemy searches for friendly radio signals and then conducted signal jamming against the defenders. Dozens of specialties were reportedly integrated into the assault training in a seamless progression, noting that previous practices focused on individual and small group training methods.⁸⁸

To enhance combat readiness, the 1st Brigade has been analyzing data collected from drills during “sea training” (海练) conducted by all combat units to solve problems in personnel allocation, ammunition consumption, equipment support, and other areas. Problems addressed include reducing personnel loads to ensure they can continue to march and fight, accounting for attrition rates, morale levels, tactics in ammunition supply, and a number of other solutions.⁸⁹ Service support elements are reportedly providing greater combat support to units on the battlefield. Personnel develop multiple proficiencies and are capable of driving and working on vehicle chassis. Their performance in exercises at Zhurihe training events has apparently shown improved flexibility and breadth of support on the battlefield.⁹⁰ Keeping equipment in operating condition will be critical since numerous breakdowns are likely to occur as equipment is stressed in combat.

The PLANMC is unable to concentrate as much force into landing areas as the PLAA amphibious combined arms brigades. As such, PLANMC brigades may conduct landing operations in support of

⁸⁷ This image likely depicts a company landing team. “Go Straight to the Front Line of Training.”

⁸⁸ Wu Haoyu, Jia Chengwu, “Beach Landings, the Sea Dragon Charges Quickly—A Navy Marine Corps Brigade Comprehensively Implements Training to Improve Coordinated Operations Capabilities,” 1.

⁸⁹ 陈岩 [Chen Yan], 复盘总结, 中军帐里起硝烟—陆战队某旅优化战法训法提升战备建设水平 [“Replay Review, Gunsmoke Rises from the Chinese Military Tent—A Marine Corps Brigade Optimizes Tactics and Training to Improve War Preparedness Levels”], 人民海军 [People’s Navy], September 15, 2020, 2.

⁹⁰ Tao and Chen, “Always be the Keenest Force,” 1-2.

PLAA landings and the overall campaign's objectives. According the *Science of Campaigns*, the JILC would combine both focused assaults and landings in multiple directions. This would attempt to confuse and disperse defending forces, preventing them from concentrating force against a few landing areas.⁹¹ PLAA forces might concentrate force in the primary landing areas, while the PLANMC targets secondary landing areas where brigades could be used to strike objectives or launch rapid offensive maneuvers inland. The threat of PLANMC flanking assaults and operations in depth may attempt to force defending forces into a passive position and complicate their ability to mass force against the heavier landing forces in the primary landing areas.⁹² In theory, this could relieve pressure on the PLAA while it consolidates and expands beachheads and prepares for the construction of landing bases and the flow of follow-on forces.

Coordination between PLAA and PLANMC units will need to improve to fully leverage such joint operations. One report on changes and improvements to post-reform joint landing operations by the STN in early 2018 noted previous problems with coordination. The report cited an instance of a PLAA battalion taking heavy losses during a joint exercise because it would not wait for the PLANMC battalion to complete its destruction of enemy firepower in depth before launching its own assault.⁹³ Furthermore, the lack of attack helicopters in the PLANMC means it will rely heavily on the PLAA's aviation brigades to provide rotary wing close air support. Efforts are underway to improve the ability of PLAA attack helicopters to operate from PLAN landing ships or civilian platforms.⁹⁴ However, efforts to better incorporate PLAA aviation into the joint landing forces appear to be largely concentrated on army landing operations with PLAN landing ships, not in conjunction with the PLANMC.⁹⁵

Beyond the Beachhead

The new structure of PLANMC brigades enables a more diverse set of capabilities designed for combat in a variety of environments. In a cross-strait invasion, these capabilities allow a greater role for brigade operations outside of the initial amphibious assault. The PLAN's Party committee's "Decision on Thoroughly Implementing the Spirit of Chairman Xi's Important Speech and Strengthening the Guidance and Assistance of the Navy Marine Corps" (discussed above) emphasizes the PLANMC is making efforts to transform itself from a coastal and sea force into one used in all domains.⁹⁶ As such, it intends to operate from the sea and air, and on land. In a cross-strait landing, this would entail PLANMC operations beyond the beaches.

⁹¹ *Science of Campaigns*, 309-310.

⁹² While not specific to an individual service, the *Science of Campaigns* JILC description contains these types of operations. *Ibid.*, 310-311.

⁹³ 张懋瑄, 刘健, 周启青 [Zhang Maoxuan, Liu Jian, Zhou Qiqing], 联战联训, 我们该如何发力 – 来自南海舰队深入推进联合训练的探索与思考 ["How We Exert Strength in Joint Warfare and Joint Training—Exploration and Reflections from the South Sea Fleet's In-depth Promotion of Joint Training"], 人民海军 [*People's Navy*], January 12, 2018, 3.

⁹⁴ *Ibid.*

⁹⁵ 刘中涛, 滑停, 周鹏程 [Liu Zhongtao, Hua Ting, Zhou Pengcheng], 东海舰队某登陆舰支队牵头组织联合登陆演练 – 立体投送凌晨展开 ["An East Sea Fleet Landing Ship Flotilla Takes the Lead in Organizing a Joint Landing Exercise—Multidimensional Delivery Starts Early in the Morning"], 人民海军 [*People's Navy*], October 24, 2016, 1.

⁹⁶ Original Chinese is "从濒海涉海向全域运用转变." 杨涛 [Yang Tao], 海军党委引发《关于深入贯彻落实习主席重要讲话精神加强对海军陆战队指导帮带的决定》 ["Decision on 《Thoroughly Implementing the Spirit of Chairman Xi's Important Speech and Strengthening the Guidance and Assistance of the Navy Marine Corps》"], 人民海军 [*People's Navy*], December 8, 2020, 1.

The addition of air assault battalions to brigades, construction of additional LPD and LHD amphibious landing ships, and the vertical landing capabilities enabled by the aviation brigade will expand the PLANMC's ability to conduct "multidimensional landing operations" (立体登陆作战).⁹⁷ Helicopter landing zones will be used for the delivery of a battalion of troops to appropriate locations 15 to 60 km in the adversary's depth, selected to best support the main landing operations. Each landing zone will contain multiple landing sites, each of which should be 1-2 km² of area for a single helicopter wave to deliver company-sized units, probably aboard 5-6 Z-8J helicopters.⁹⁸ Selected sites will consider the disposition of enemy strength, suitability for landing and mounting a defense, and ease of target destruction and disruption of enemy reserve units entering the battlespace.⁹⁹ Recent 7th aviation brigade tactical training subjects highlight operations in adversary rear areas, focusing on adaptive training during nighttime and under radio silence, with low elevation flights to avoid adversary air defense radar detection. In addition to search and rescue, door gunnery, and materials delivery, adversarial contingencies were introduced forcing pilots to use alternate landing sites.¹⁰⁰ Transport helicopters are a shortcoming in the PLANMC's current order of battle and it is unclear if the two known flight *dadui* have received all their required aircraft. The absence of attack helicopters in the force could also leave helicopter routes unguarded. With time, the PLANMC will eventually gain the proficiency required to conduct vertical assaults from the flight decks of PLAN ships such as the Type-075 and Type-071.



Exhibit 6. PLANMC elements fast rope during vertical assault training exercises.¹⁰¹

⁹⁷ "Multi-dimensional landing" refers to the simultaneous execution of landing operations from the sea surface and air. 军事科学院 [Academy of Military Sciences], 中国人民解放军军语 [PLA Directory of Military Terminology] (Beijing: Military Sciences Press, 2011), 95.

⁹⁸ Chen, *The Naval Service Series-Marine Corps*, 115-116; Z-8 helicopters can carry approximately 24 troops and can launch this helicopter wave off the seven spots on the Type-075's deck. "Changhe Z-8 Transport Helicopter," Airforce Technology, undated, <https://www.airforce-technology.com/projects/changhez8transport/>; 南海舰队一天入列三型舰艇都是何等利器? ["What Kind of Weapons are the Three Ships Newly Commissioned by the South Sea Fleet?"], 央视网 [CCTV], April 26, 2021, <https://news.cctv.com/2021/04/26/ARTICd3uaMA8ZHOCla6BXDEz210426.shtml>.

⁹⁹ Chen, *The Naval Service Series—Marine Corps*, 116.

¹⁰⁰ 范旭东, 傅原野 [Fan Xudong, Fu Yuanye], 陆战雄鹰闯夜关—海军陆战队某舰载航空兵旅下半夜飞行训练见闻 ["Marine Eagles Break Through the Night—A Navy Marine Corps Shipborne Aviation Brigade's Flight Training in the Middle of the Night"], 人民海军 [People's Navy], July 16, 2020, 1.

¹⁰¹ 奋斗百年路 启航新征程 牢记初心使命 争取更大光荣 海军陆战队某旅: 铁翼凌空 向战而飞开新篇 ["Set Sail on a New Journey and Keep the Original Mission and Strive for Greater Glory On the Century-long Struggle. A Navy Marine

The addition of light mechanized infantry battalions allows for greater mobility inland. While not equal to the Type-05 series in amphibious combat, ZBL-09 and ZTL-11 vehicles are amphibious capable and thus may not have to wait for naval lighterage systems to get ashore.¹⁰² The PLANMC's introduction of the ZTQ-15 light tank will further bolster ground warfare capabilities, although the units receiving this tank and in what number are unclear.¹⁰³ 1st Brigade continuous firepower assault exercises in the fall of 2020 indicate the light mechanized infantry battalions will engage the adversary further inland. They reportedly introduced training scenarios in rapid and continuous maneuver while facing various adversary attacks and electronic jamming, dealing with units losing command elements, clearing obstacles, or entering minefields. Units also coordinated with air assault battalions operating in the enemy's depth.¹⁰⁴ These mobile battalions can make better use of Taiwan's roadways to push through layers of defense and possibly link up with air assault or special operations forces. Coordinated operations from ship-to-shore and ship-to-objective by amphibious, ground warfare, and air assault units could seek to paralyze Taiwan's defending forces with attacks in-depth.

Furthermore, if Taiwanese defenders fail to break the PLA on the coast and are forced inland, they may need to resort to urban defense as attackers seek to secure port facilities and airfields. Urban combat is a relatively new subject for the PLANMC. However, it is an important component of the PLANMC's "All-Domain Operations."¹⁰⁵ Urban combat subjects have been introduced into PLANMC training, such as during cold weather training at the Zhurihe Combined Tactics Training Base, which notably contains a mockup of downtown Taipei. At this training base, PLANMC units square off against opposition blue forces in order to improve "offensive combat by PLANMC combined arms assault groups against a coastal city" (海军陆战队合成突击群濒海城市进攻战斗).¹⁰⁶

Without their own close air support and potential limitations in naval gunfire support, PLANMC forces will need to bring their own firepower during the course of an inland push. Arriving in the follow-on forces, PLZ-07B self-propelled howitzers, a number of towed howitzers fielded by artillery battalions, and the FHJ-02 62mm MRL (operated by chemical defense elements) will provide a boost to forces expanding landing areas further inland.¹⁰⁷ The PLANMC has not been

Corps Brigade: Iron Wings Up in the Sky Flying into Battle to Open a New Chapter"], 央视网-军事报道 [CCTV—Military Report], July 13, 2021, <https://tv.cctv.com/2021/07/13/VIDEtNn7vj9ckM97aiAiNZC5210713.shtml>.

¹⁰² "NORINCO ZBL-09 (Snow Leopard) 8x8 Wheeled Armored Personnel Carrier (APC)," *Military Factory*, July 3, 2019, https://www.militaryfactory.com/armor/detail.asp?armor_id=1079.

¹⁰³ 在习近平强军思想指引下 我们在战位报告 海军陆战队某旅：从两栖劲旅到全域精兵 ["Under the Guidance of Xi Jinping's Thought on Strengthening the Army, We Report from Combat Posts, A Navy Marine Corps Brigade: From a Crack Amphibious Force to an All-Domain Elite"], 央视网-军事报道 [CCTV-Military Report], June 2, 2021, <https://tv.cctv.com/2021/06/02/VIDE11UKlaVIFQXS9VxVJg1210602.shtml>.

¹⁰⁴ Tao Jiawei, "Go Directly to the Root of the Problem in Full Force," 2.

¹⁰⁵ 梁庆松, 邵龙飞, 周启青 [Liang Qingsong, Shao Longfei, Zhou Qiqing], 真打真练, 寒区砺兵'实'当头 ["Real Combat, Real Training. 'Real' is the Pledge for Troops Grinding in Cold Regions"], 人民海军 [People's Navy], March 4, 2014, 1.

¹⁰⁶ 郭新华, 刘文平 [Guo Xinhua, Liu Wenping], 从 3 次跨区训练看陆战队全域作战本领 ["Seeing the Marine Corps' All-Domain Operations Skills Through 3 Instances of Trans-regional Training"], 人民海军 [People's Navy], October 21, 2015, 4.

¹⁰⁷ 牛涛 [Niu Tao], 赶紧收藏! 一波海军陆战队炮兵实弹射击美图来袭 ["Collect it Now! A Wave of Beautiful Navy Marine Corps Artillery Live Fire Photos is Coming"], 解放军新闻传播中心 [PLA News Broadcast Center], May 7, 2019, <https://baijiahao.baidu.com/s?id=1632870653451945095&wfr=spider&for=pc>; 官媒曝光我军最小多管火箭炮, 个小威

known to operate any vehicle-based MRLs. However, this may soon change. The amphibious landing competition held by the PLAN in July 2018 displayed a Type-81 122-mm wheeled MRL in service with the PLANMC.¹⁰⁸ It is unclear which units are equipped with this capability and how many are in service. However, the addition of the Type-81 MRL to any of the brigades could enable greater firepower support for inland operations.

Conclusion

The PLANMC does not appear to be optimizing itself for a traditional amphibious landing against Taiwan. The force is smaller than the PLA group armies trained and equipped for a cross-strait invasion. With multiple types of battalions in each brigade, it is not configured for large-scale opposed landing operations. Compared to the PLAA's aviation brigades, the single marine corps aviation brigade, lack of close air support, and the still unconfirmed number of air assault battalions provide very limited vertical envelopment capabilities. More importantly, the expanding missions of the PLANMC are focused overseas. As such, the PLANMC on its own will not be the force that breaks Taiwan.

Nonetheless, the PLANMC will play its part if a cross-strait invasion is launched and various force improvements will benefit its utility in the JILC. Headquarters is leading an effort to revamp the abilities of battalion commanders and staff, hoping it can improve coordination of battalion operations. New training programs are increasing the abilities of the force to transport over long distances and operate in various environments, including urban areas. Innovations in transport using RO-RO ships may allow additional amphibious lift for PLANMC forces, providing solutions for an enduring challenge for the overall JILC. The newly created brigades will eventually bring additional capabilities to the equation.

With the above limitations in mind, PLANMC scheme of maneuver ashore might be focused on smaller-scale landing operations combining ship-to-shore and ship-to-objective maneuver and special operations throughout the depth of amphibious objective areas in support of the larger campaign. Operations could focus on rapid multi-dimensional landings and maneuver to control vital objectives and conduct frontal and rear attacks against defenders.¹⁰⁹ The PLANMC is also uniquely positioned to provide ample amphibious reconnaissance and special operations forces for preliminary operations.

力大, 纵火能力惊人 [“Official Media Reveals the PLA's Smallest Multiple Rocket Launcher, Small and Powerful with Amazing Firepower”], 搜狐 – 军事黑科技 [Sohu.com—Military Black Technology], July 16, 2018, https://www.sohu.com/a/241488349_455745.

¹⁰⁸ 凌弘毅 [Ling Hongyi], 中国 ZBD-05 式两栖装甲步战车大展雄风 – 现场直击 ‘2018 国际军事比赛’ 之 ‘海上登陆’ 赛 [“China's ZBD-05 Amphibious Armored Infantry Fighting Vehicle Shows its Glory—Seeing the ‘Amphibious Landings’ of the ‘2018 International Military Competition’ on Site”], 现代兵器 [Modern Weaponry], no. 10 (2018), 44.

¹⁰⁹ 史益星, 吴志丹 [Shi Yixing, Wu Zhidan], 两栖作战, 战争舞台的 ‘长青树’ [“Amphibious Operations, an ‘Evergreen Tree’ on the Stage of Warfare”], 解放军报 [PLA Daily], October 2, 2018, http://www.81.cn/jmywyl/2018-10/02/content_9302793.htm.

Senior PRC and PLAN leadership have publicly attached great importance to the PLANMC. The first commandant of the force stated it would “strive to become a strategic dagger that General Secretary Xi and the Central Military Commission can trust and upon which they can rely heavily.”¹¹⁰ With significant support for their development, the PLANMC will be expected to fulfill a greater role in future operations, including a large-scale amphibious landing against Taiwan.

¹¹⁰ Kong Jun, “People’s Daily Observation Tower: Highlighting the Features of the Service and Tempering a Strategic Dagger.”

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