

# **PART ONE**

## **Conventional Forces**



# Chapter 1

## New-generation Military Equipment of the PLA Ground Force

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### I. Introduction

While the development of the People's Liberation Army (PLA) Navy, Air Force, and Rocket Force has been in the spotlight, group troops, including the Ground Force and Navy Marine Corps, still play an important role for China as a traditional land power.

After the military reforms in 2015, the percentage of the Ground Force in the PLA has been reduced further to below 50%.<sup>1</sup> As mentioned in the white paper entitled "2019 China's National Defense in the New Era", in addition to the reduction in the percentage of the Ground Force in the PLA, the original 18 group armies were consolidated into 13 group. Meanwhile, the organization was transformed into the flat structure of "corps-brigade-battalion". In accordance with the commands of "mobile operations and multi-dimensional defense and attack", the PLA has transformed its Ground Force from a "regional defense type" to a "trans-theater operation type" and continued to elevate its capabilities for precise, multi-dimensional, trans-theater, multi-functional, and sustainable operations.<sup>2</sup>

In the meantime, the PLA Navy Marine Corps have been growing at an alarming rate in recent years. The number of brigades was increased from two to seven in

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<sup>1</sup> "China's Military Reform PLA Ground Force Reduced Its Manpower to Below Half," *Central News Agency*, December 19, 2017, <https://www.cna.com.tw/news/firstnews/201712190098.aspx>.

<sup>2</sup> "China's National Defense in the New Era," *The State Council Information Office of the People's Republic of China*, July 24, 2019, [http://www.gov.cn/zhengce/2019-07/24/content\\_5414325.htm](http://www.gov.cn/zhengce/2019-07/24/content_5414325.htm).

2017 by partially restructuring the Ground Force.<sup>3</sup> One of the fastest-growing troops, it is equipped with navy, sea, air, and land capabilities, as it includes Aviation and Special Forces. Given its high delivery capabilities, the PLA Navy Marine Corps deserves the same high level of attention. According to Xi Jinping’s comment on October 13, 2020 during an inspection, the PLA Navy Marine Corps focuses on the sovereignty over the lands and oceans it claims and the protection of overseas interests. As far as the development direction is concerned, the PLA Navy Marine Corps stresses that it should be “integrated and versatile in operation, swift in response, and capable of fighting under multi-dimensional conditions”.<sup>4</sup> That said, the PLA Ground Force is still considered the long-term amphibious leading force in the attack on Taiwan.<sup>5</sup> On the other hand, the PLA Navy Marine Corps is more focused on rapid projections, possibly responsible for establishing and enhancing the stronghold after landing operations so that heavy armies can press further.

The abovementioned two ground forces both emphasize the “trans-theater operations” capability. Broadly speaking, the PLA’s “trans-theater operations” cover the conventional warfare, as well as network-electronic warfare and cognitive warfare. Therefore, the PLA emphasizes innovation in “long-range capability”, “information-firepower integration warfare”, “precise strike”, and “low altitude operations”. In addition to command and control, network-electronic warfare, and battlefield situational awareness that have been highlighted in recent years, the PLA Ground Force also stresses long-range precision strike, air assaults, and light mobility forces.<sup>6</sup> Given its emphasis on information warfare, the PLA Ground Force focuses on the development of information technology and

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<sup>3</sup> David Lague, “China Expands Its Amphibious Forces in Challenge to U.S. Supremacy Beyond Asia,” *Reuters*, July 20, 2020, <https://www.reuters.com/investigates/special-report/china-military-amphibious/>.

<sup>4</sup> Meng Sun, Ching-tong Li, “Reporting from the Battle Position | A brigade of PLA Navy Marine Corps: Our Goal is to Grab the Beach and go on the Land,” *Ministry of National Defense of the People’s Republic of China*, June 2, 2021, [http://www.mod.gov.cn/big5/power/2021-06/02/content\\_4886696.htm](http://www.mod.gov.cn/big5/power/2021-06/02/content_4886696.htm).

<sup>5</sup> “PLA Embarks on Military Training at Multiple Maritime Spaces. Experts: Prevention of Further Collusion between the U.S. and Taiwan,” *Xinhua Net*, July 20, 2021, [http://www.xinhuanet.com/mil/2021-07/20/c\\_1211248201.htm](http://www.xinhuanet.com/mil/2021-07/20/c_1211248201.htm).

<sup>6</sup> “Era of Trans-theater Operations, Challenges Faced by the New PLA Ground Force,” *people.cn*, September 14, 2017, <http://military.people.com.cn/BIG5/n1/2017/0914/c1011-29535324.html>.

“information-firepower integration warfare”. This development includes such as by using Unmanned Aerial Vehicles (UAVs), to assist for target acquisitions or command control, network warfare, and enhancement of battlefield situational awareness.

With the Taiwan Strait in the middle, the PLA Ground Force can only directly attack Taiwan initially with the new long-range mutable rocket launcher. However, the invasion and occupation by ground troops remain one of the key routes to victory in the invasion of Taiwan. Therefore, Taiwan should still keep a close eye on China’s development of ground equipment to ensure effective resistance with defense planning and military deployment. This chapter will be centered on the aforesaid long-range firepower, air assault, and mobility in the exploration of the PLA’s key development of ground equipment.

## II. Development of Key Equipment

### 1. Firepower Projection Capability

#### (1) *Development of wheeled self-propelled Howitzer and general tactical vehicles*

The PLA has been highly focused on its artillery for a long time. In its 2019 China Military Power Report, the U.S. Defense Intelligence Agency mentioned that artillery is the key to the PLA Ground Force. Its importance is evidenced by over one-third of the military force based on artillery.<sup>7</sup>

In recent years, China has been developing mobility artillery by using wheeled platforms (e.g., trucks and off-road vehicles) to carry howitzer. While these vehicles are automated and digitalized to a certain degree, they are still rather simple and low-cost compared to the traditional expensive and precise self-propelled howitzers. The “mobilization” of towed artillery can effectively control costs. The major military exhibition, such as Zhuhai, have displayed similar

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<sup>7</sup> “China Military Power: Modernizing a Force to Fight and Win,” *U.S. Defense Intelligence Agency*, 2019, p. 58, [https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/China\\_Military\\_Power\\_FINAL\\_5MB\\_20190103.pdf](https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/China_Military_Power_FINAL_5MB_20190103.pdf).

Chinese systems. One example is Dongfeng Mengshi 4x4 assault vehicles (similar to hummers) equipped with 120 mm gun-mortars and 122 mm howitzers. In fact, the 6x6 truck chassis was adopted back in 2009, in conjunction with the PCL-09 track-mounted howitzers added with PL-96 122 mm howitzers.

Many new wheeled self-propelled artillery howitzers have emerged in recent years. For example, the PLA Ground Force claimed in 2019 on its Weibo that the PCL-181 truck-mounted self-propelled howitzer system<sup>8</sup>—an integrated 6x6 truck and 155 mm gun-howitzer<sup>9</sup>—was deployed in Tibet in 2017. Its 25-ton weight is lighter than the PZL-05 self-propelled howitzers. Further, the PCL-181’s export model number is SH-15, equipped with an automatic targeting system, semi-automatic loading, and digital control. Its deployment has been confirmed for the 73<sup>rd</sup>, 74<sup>th</sup>, and 75<sup>th</sup> Group Armies, as well as the Tibet Military District.<sup>10</sup> The PCL-181 can use precision munition with the support of the BeiDou Navigation Satellite System.<sup>11</sup>

Another new vehicle is the PCL-171 howitzer disclosed by China Central Television (CCTV) during the second half of 2020. The PCL-171 is integrated with 122 mm howitzers into the third-generation Dongfeng Mengshi protective tactical vehicle CTL-181A. It is equipped with semi-automatic ammunition loaders and may have already been in service in the PLA Ground Force.<sup>12</sup> Different models have been launched for 6x6 CTL-181A with a protective chassis—a medium-size tactical off-road vehicle with a payload of 3.65 tons. It is worth noting that the carriage of this vehicle has been modified for the 120 mm heavy mortar exclusively for the purpose of providing mortar maneuvering capability instead of turning it into a self-propelled mortar. Equipped with a self-propelled air defense system and

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<sup>8</sup> Gabriel Dominguez, “PLAGF Units in Tibet Fielding New Vehicle-mounted Howitzer,” *Jane’s Defence Weekly*, January 8, 2019.

<sup>9</sup> “PCL-181 155mm Self-propelled Howitzer,” *Global Security*, January 8, 2021, <https://www.globalsecurity.org/military/world/china/pcl-181.htm>.

<sup>10</sup> Gabriel Dominguez, “New Chinese 155 mm SPH Also in Service with PLA’s 74th Group Army,” *Jane’s Defence Weekly*, July 10, 2020.

<sup>11</sup> “PCL-181 155mm Self-propelled Howitzer,” *Global Security*, January 8, 2021, <https://www.globalsecurity.org/military/world/china/pcl-181.htm>.

<sup>12</sup> Gabriel Dominguez, “Footage Suggests 122 mm CTL181A-based SPH is in PLAGF Service,” *Jane’s Defence Weekly*, December 10, 2020.

a vehicle-launched bridge, this vehicle is poised to become the shared platform for light/ medium combined arms brigades.

Meanwhile, the CM-501GA tactical cruise missiles and the CM-501XA loitering munition appeared in the 2019 International Defense Exhibition & Conference (IDEX), which may be adopted by the PLA. These are also expected to be integrated with 6x6 vehicles and equipped with the vertical launch system (VLS).<sup>13</sup> According to the CCTV report on July 24, 2021, the Tibetan PLA also used the new 4x4 modular 20-tube multiple rocket launcher (MRL). As it is on 122 mm or 220 mm rockets, the similarity with the NORINCO SR-7 multiple rocket launcher (MRL) suggests its origination from that system.<sup>14</sup> In fact, similar systems were seen in January 2020 on the Tibet Military District's WeChat official account. The deployment in the troop was earlier than the said date. All the abovementioned equipment shows the trend of mobilization. These light and fast fire power can venture into the areas not easily accessible to heavier units. They are the likely opponents in Taiwan's defense of its national territories.

## (2) *Long-Range Multiple Launch Rocket System*

The long-range multiple launch rocket system has been closely watched for a long time due to its ability to directly attack Taiwan across the strait. At the military parade for the 70<sup>th</sup> Anniversary of the Founding of The People's Republic of China in 2019, new long-range firearms similar to the Norinco AR-3 were presented. According to South China Morning Post's quote from the Modern Ships magazine, these are called "PCL-191."<sup>15</sup> The modularized launch system can be loaded with eight 370-mm rockets at a range of 350km or two 750-mm Fire Dragon 480 at a claimed range of 500km. It was deployed at the PLA's Eastern Theater at the end of 2019.<sup>16</sup> Similar Fire Dragon 480 750-mm ballistic missiles appeared at

<sup>13</sup> Neil Gibson, "PLA Set to Adopt New Tactical Missile System," *Jane's Defence Weekly*, March 6, 2019.

<sup>14</sup> Gabriel Dominguez, "New MRL System in Service with PLA's Tibet Military Command," *Jane's Defence Weekly*, July 27, 2021.

<sup>15</sup> Some reports and analyses call this long-range rocket launcher "PCH-191" or "PHL-16."

<sup>16</sup> Minnie Chan, "China's New PCL191 Multiple Launch Rocket System Casts Shadow over Taiwan Strait," *South China Morning Post*, December 7, 2019, <https://www.scmp.com/news/china/military/article/3041007/chinas-new-pcl191-multiple-launch-rocket-system-casts-shadow>.

the 2018 Defense Services Asia Exhibition, called the “Fire Dragon 280A.” This type of missile is 7.38 meters long and equipped with 480 kg high-explosive/ pre fragmented warheads, capable of accommodating different kinds of warheads. It uses an inertial navigation system and is supported by a satellite positioning system (i.e., BeiDou Navigation Satellite System), allowing a circular error probable (CEP) of about 30 meters. Based on the range of 290km claimed at that time,<sup>17</sup> this could be the same type of missiles or the predecessor.

Meanwhile, the PHL-03 300-mm long-range rocket launcher in service for years has also seen performance improvement. According to CCTV in October 2020, the range of PHL-03’s new guided rocket has extended from 130km to 160km. It also claims to have high information and intelligence capabilities.<sup>18</sup> In early 2021, CCTV reported that the PLA’s 79<sup>th</sup> Group Army used the PHL-03 to hit a moving target on the seas.<sup>19</sup> The 80<sup>th</sup> Group Army’s long-range fire system was equipped with UAV reconnaissance and target capability in June 2021 to demonstrate its multi-wave missile strike and joint fire strike capabilities on the seas<sup>20</sup> and anti-ship potential.

China’s long-range fire system adopts both non-guided and guided rockets, with the export model of guided rockets claiming to have an accuracy of 30m CEP.<sup>21</sup> It uses an inertial navigation system and is guided with a satellite positioning system (i.e., BeiDou Navigation Satellite System), creating a threat to stationary facilities or equipment with limited mobility.

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<sup>17</sup> Gabriel Dominguez, “DSA 2018: China’s Norinco Reveals Fire Dragon 280A Tactical Missile,” *Jane’s Defence Weekly*, April 17, 2018.

<sup>18</sup> Gabriel Dominguez, “Update: PLAGF Brigade under Xinjiang Military Command Receives New PHL-03 MRLs,” *Jane’s Defence Weekly*, May 10, 2021.

<sup>19</sup> “Chinese PHL03A Long Range Rocket System Destroys Ship Target,” *Army Recognition*, January 4, 2021, [https://www.armyrecognition.com/defense\\_news\\_january\\_2021\\_global\\_security\\_army\\_industry/chinese\\_phl03a\\_long\\_range\\_rocket\\_system\\_destroys\\_ship\\_target.html](https://www.armyrecognition.com/defense_news_january_2021_global_security_army_industry/chinese_phl03a_long_range_rocket_system_destroys_ship_target.html).

<sup>20</sup> “Military Drills at All Fronts! The 80th Group Army’s Long-range Firearms Strike Targets on the Seas,” *Xinhua Net*, June 11, 2021, [http://www.xinhuanet.com/mil/2021-06/11/c\\_1211196532.htm](http://www.xinhuanet.com/mil/2021-06/11/c_1211196532.htm).

<sup>21</sup> Lt. General P.C. Katoch (Retd), “China Deploys Long Range MLRS,” *SP’s Land Forces*, May 6, 2021, <https://www.spslandforces.com/experts-speak/?id=761&h=China-Deploys-Long-Range- MLRS>.



## 2. Development of Armored Vehicles

Among the armored cars, the recently deployed Type 15/ ZTQ-15 light tank from Taiwan, related to the VT-5 light tank for exports, is worthy of attention. The PRC Ministry of National Defense announced its deployment at the press conference on December 27, 2018.<sup>22</sup> At the military parade in 2019 for the 70<sup>th</sup> Anniversary of the Founding of The People's Republic of China, China deemed it one of the armaments based on the new and high-tech.<sup>23</sup> The 30-tons class ZTQ-15 is equipped with a 1,000 HP diesel engine. The use of the hydropneumatic suspension system allows for high mobility as it accommodates complicated terrains. Its 105-mm rifled guns can fire traditional ammunition and anti-tank missiles.<sup>24</sup> When used in conjunction with the armor-piercing fin-stabilized discarding sabot (APFSDS), it can shoot through c. 500-mm rolled homogeneous armors (RHA)<sup>25</sup> at a normal operating distance. The ZTQ-15 comes with modernized fire control and is highly digitalized. Its gun stabilizer system was the centerpiece of propaganda in the military programs of CCTV. While modular and attachable composite armors and explosive reactive armors (ERAs) provide protection to the vehicle, it also comes with a laser warning system to send out alerts when aimed at by the enemy's laser (for distance measurement or by guided missiles).

Given its lighter weight, the ZTQ-15 is suitable for the terrains in Tibet or South China, where heavy vehicles are not appropriate. Alternatively, it can join the amphibious operations during landing. It is deployed at the PLA troops in Tibet, Xinjiang, and Yunnan, as well as by the PLA Navy Marine Corps. Before the Chinese government's official confirmation of this tank in 2018, the ZTQ-15 with

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<sup>22</sup> "Ministry of National Defense: 15 Light Tanks Have been Deployed at the Troops," *Ministry of National Defense of the People's Republic of China*, December 27, 2018, [http://www.mod.gov.cn/info/2018-12/27/content\\_4833052.htm](http://www.mod.gov.cn/info/2018-12/27/content_4833052.htm).

<sup>23</sup> The State Council Information Office of the People's Republic of China, "China's National Defense in the New Era," *people.cn*, July 24, 2019, <http://politics.people.com.cn/BIG5/n1/2019/0724/c1001-31253793.html>.

<sup>24</sup> Franz-Stefan Gady, "China's People's Liberation Army Inducts New Lightweight Tank," *The Diplomat*, January 2, 2019, <https://thediplomat.com/2019/01/chinas-peoples-liberation-army-inducts-new-lightweight-tank/>.

<sup>25</sup> Samuel Cranny-Evans, "PLAGF's 75th Group Army Receives Additional Type 15 Lightweight Tanks," *Jane's Defense Weekly*, September 22, 2020, <https://www.janes.com/defence-news/news-detail/plagfs-75th-group-army-receives-additional-type-15-lightweight-tanks>.

PLA Navy Marine Corps camouflage was already seen online.<sup>26</sup> In the June 2021 report, CCTV formally acknowledged the use of this tank by the PLA Navy Marine Corps.<sup>27</sup>

### 3. Development of Helicopters

In recent years, PLAGF Aviation has been introducing many new-generation models. The Z-10 attack helicopter and the Z-20 utility helicopter can generally be deemed the military highlight in the 13<sup>th</sup> Five-Year Plan.<sup>28</sup> The Z-20, similar to Black Hawk(UH-60), started service in early 2018, signaling an important milestone.<sup>29</sup> This type of helicopter is highly versatile and can serve as a common platform for different military forces and special units. Until early 2021, it was known that Z-10 had been deployed at the Tibet Military District, PLA Central Theatre, and PLA Southern Theatre. The modified model was seen, with the exhaust port for engines facing upward to reduce infrared signals to the ground.<sup>30</sup> Meanwhile, the anti-ship Z-20F also has a derivative Navy Z-20S, equipped with eight KD-10 anti-tank missiles, suggesting that the PLA Navy Marine Corps may deploy it for attack missions.<sup>31</sup>

China is also developing and improving old models. For example, the Z-8L comes with a wider body than the Z-8G’s, and its warhead is equipped with new photoelectric turrets, the electronic warfare system, and radar warning receivers (RWRs) for better survivability. However, it retains the original electronic warfare systems, such as missile approach warning systems, terrain-following radar, satellite communications, and antennas for BeiDou Navigation Satellite System/

<sup>26</sup> Gabriel Dominguez, “PLAN Possibly Equipping Marine Corps with New Lightweight Battle Tank,” *Jane’s Defence Weekly*, July 18, 2018.

<sup>27</sup> Zhao Lei, “New Light-duty Tank Delivered to PLA Navy’s Amphibious Force,” *China Daily*, July 9, 2021, <https://www.chinadaily.com.cn/a/202107/09/WS60e7a425a310efa1bd660b96.html>.

<sup>28</sup> Jon Grevatt, “Progression Plan: China’s Advanced Technology Objectives,” *Jane’s Defence Weekly*, February 2, 2021.

<sup>29</sup> Mike Yeo, “Chinese Media Reveals Specs of Harbin Z-20 Helo,” *Defense News*, October 14, 2019, <https://www.defensenews.com/global/asia-pacific/2019/10/14/chinese-media-reveals-specs-of-harbin-z-20-helo/>.

<sup>30</sup> Gabriel Dominguez and Andreas Rupprecht, “Update: Footage Suggests PLA’s Xinjiang Military Command Operating Z-20 Helicopters,” *Jane’s Defence Weekly*, February 8, 2021.

<sup>31</sup> Andreas Rupprecht, “Image Emerges of Another Z-20S Helicopter Prototype,” *Jane’s Defence Weekly*, July 26, 2021.

GPS.<sup>32</sup> The Z-8L may be deployed by the PLA Ground and Navy Marine Corps on amphibious assault ships.<sup>33</sup> This helicopter was showcased on July 1, 2021 at the 100<sup>th</sup> anniversary of the founding of the Communist Party of China<sup>34</sup> and serviced in the harassment of Taiwan at the end of August.<sup>35</sup> China's Z-11 in early "reference" to Eurocopter AS350 has also seen the updated Z-11WB light attack helicopter/ reconnaissance helicopter. It was heard that volume production began in December 2020,<sup>36</sup> which should have been in service already. Further, its training models have appeared at the Chinese People's Liberation Army Aviation School.<sup>37</sup>

### III. Battlefield Values and Impacts

In sum, the development of the ZTQ-15, vehicle-mounted howitzers, and air assault force speaks of the PLA's emphasis on trans-theater operations and stronger projection capability. The long-range fire attack ensures the PLA Ground Force to have certain long-range strike capability instead of relying on the Rocket Force completely.

Even the improved old PHL-03 and PCL-191 only have a range of over 160km and can barely attack the target along the western coast of Taiwan. If the range can reach 500km, it will pose a significantly greater threat to stationary and semi-mobile important facilities and equipment in western Taiwan. While long-range fire attacks accompanied with inertia navigation and satellite assistance can achieve

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<sup>32</sup> Gabriel Dominguez and Andreas Rupprecht, "Update: Images Show Wide-body Variant of Z-8G Helicopter Undergoing Load-carrying Trials," *Jane's Defence Weekly*, August 8, 2020.

<sup>33</sup> Liu Xuanzun, "China Unveils First Indigenous 15 Ton-class Transport Helicopter; Amphibious Assault Role Expected," *Global Times*, August 25, 2020, <https://www.globaltimes.cn/content/1198797.shtml>.

<sup>34</sup> "China Publicly Debuts Z-8L Heavy-Lift Helicopter," *Aviation Week*, July 1, 2021, <https://aviationweek.com/defense-space/aircraft-propulsion/china-publicly-debuts-z-8l-heavy-lift-helicopter>.

<sup>35</sup> Yu-hsuan Huang, "Two Z-8 Helicopters as the New Joiners to Harass Taiwan. Approaching the Midline of the Taiwan Strait and Over Taiwan's Airspace," *Up Media*, August 27, 2021, [https://www.upmedia.mg/news\\_info.php?SerialNo=122839](https://www.upmedia.mg/news_info.php?SerialNo=122839).

<sup>36</sup> Andreas Rupprecht and Gabriel Dominguez, "Update: CHAIG's Z-11WB Light Attack Helo to Enter PLA Army Aviation Service 'Soon'," *Jane's Defence Weekly*, January 4, 2021.

<sup>37</sup> Andreas Rupprecht and Gabriel Dominguez, "Update: Image Suggests Training Variant of Z-11 Helo in Service with PLA Army Aviation Academy," *Jane's Defence Weekly*, May 10, 2021.

strikes with certain precision, the costs of ammunition also go up. Weapons that can be considered short-range ballistic missiles (SRBM), such as Fire Dragon 480, may be even more expensive. Although they may still be cheaper than the Rocket Force’s ballistic missiles, the feasibility of deployment in large quantities is another issue. This type of standoff weapons (SOWs) are less of a threat to forces of good mobility. Nonetheless, they are major problems for airports, radar stations, command and control nodes, and key infrastructure and facilities.

As far as the force projection is concerned, the ZTQ-15 is a rare gem light tank among modern battle tank, given its design and weight of 30 tons. In the foreseeable future, perhaps only the Mobile Protected Firepower (MPF) light tank and its comparable under development by the U.S. Armed Forces will have the mobility and terrain negotiating capability to achieve effects in the Taiwan Strait conflict. A new Y-20 transport aircraft can carry two vehicles. During an amphibious operation and despite its lack of amphibious capability, the ZTQ-15’s advantage of easy projection can still greatly enhance the fire power and protection in the first wave of invasion assault. It could be the heaviest military vehicle encountered by Taiwan’s armies in the initial phase defense against invaders. Although a 30-plus ton vehicle can only carry limited weaponry, its laser warning device, composite armor, and explosive reactive armor (ERA) have certain protective effects. Its modernized range and electronic system also enhance awareness advantages, which likely creates a first-mover advantage against the old-fashioned, yet-to-be-improved tanks owned by the ROC Armed Force. Equipment such as wheeled Self-propelled howitzers boosts the firepower of the light/ medium combined arms brigade. The strengths in mobility and projection enable the rapid deployment of significant fire support, while the development of a shared platform simplifies logistics. In addition, vertical assault forces such as helicopters expand the PLA’s capability in deep battles. In the Taiwan Strait environment, air assault is essential to the invasion of Taiwan, where there are no large amphibious landing points. If the PLA can improve projection capabilities to a certain degree, it may even take the plunge and deploy ground troops even with partial advantages at sea and in the air. Therefore, it is necessary to devise relevant countermeasures and

responses sooner rather than later.

#### **IV. Conclusion**

This chapter attempts to explore the possible ground threat from the PLA in Taiwan's defense of its national territories. The equipment mentioned above provides China with more options in ground deployment and force projection. The long-range fire attack is essentially the epitome of the evolution of long-ran precision weaponry. That said, the many aforesaid strengths of light mobile vehicles complement heavy corps. The advantage in mobility compensates for the shortcomings of heavy units in complex and difficult terrains and the insufficiency in amphibious capabilities. Heavy units can provide subsequent and necessary support and progress deeper into the assault. In the modern battlefield, a high degree of information and network capabilities are required to enhance awareness through the collaboration of various platforms, in addition to human training. Only by doing so can the equipment work its military strengths. Therefore, the development of robust and relevant capabilities other than platforms is currently the most critical task for the PLA.

