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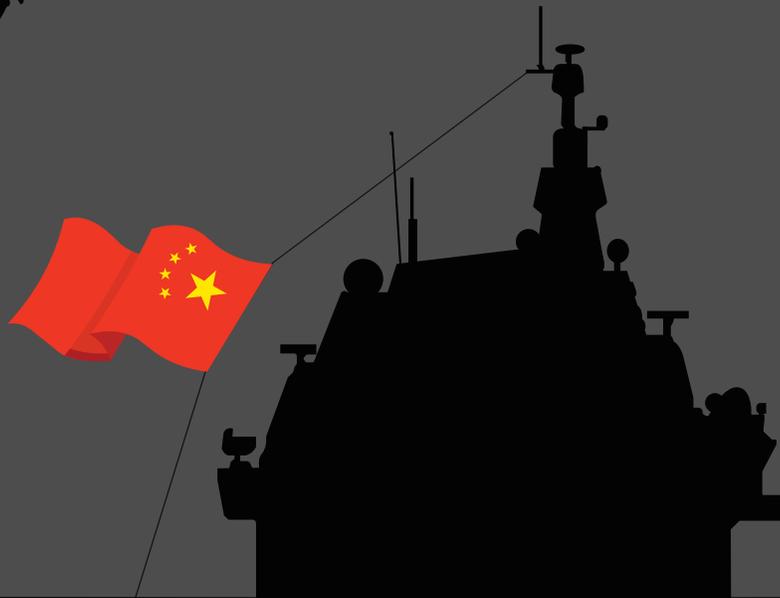
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中国海事研究所  
China Maritime Studies Institute

# NOTES: 18



## **Flooding the Zone:**

**The Use of Civilian Landing Craft (LCTs)  
in PLA Amphibious Operations**



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**CMSI NOTE #18 /// 07 January 2026**

## **Flooding the Zone: The Use of Civilian Landing Craft (LCTs) in PLA Amphibious Operations**

**Thomas Shugart<sup>1</sup> and J. Michael Dahm<sup>2</sup>**

In July and August 2025, China's People's Liberation Army (PLA) employed a unique type of civilian deck cargo ship known as a Landing Craft Tank (LCT) to transport military vehicles directly to shore as part of an amphibious landing exercise. While civilian deck cargo ships of this type have been observed in previous PLA over-the-shore logistics exercises, they had only been used to transport vehicles and equipment from port-to-port—simulating the transport of forces into a captured port—not directly to an unimproved beachhead. If the PLA develops the ability to coordinate and employ significant numbers of civilian LCTs to transport forces directly onto Taiwan beaches, it could significantly improve its over-the-shore assault capacities and logistics capabilities.

### **CMSI's Perspectives and Key Takeaways**

- Experimentation with civilian LCTs in direct beach landings is the latest innovation in the PLA's attempts to identify and train to the optimal combination of military and civilian amphibious assault and over-the-shore logistics capabilities.
- Based on satellite imagery observations, there are two main types of LCTs used in PLA exercises: a smaller, stern deckhouse version; and a larger, forward deckhouse variant—both with open cargo decks.
- LCTs may offer the PLA a type of over-the-shore lift that fills a gap between when a first echelon amphibious assault hits the beach and when the PLA might be able to capture and use a Taiwanese port or erect floating causeways or *Shuiqiao* Landing Platform Utility (LPU) vessels at a beachhead. Landing LCTs onto a beach would allow for immediate support from non-swimming logistics elements of the first echelon forces—such as trucks and heavier non-amphibious armored vehicles.

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<sup>2</sup> J. Michael Dahm is the Senior Resident Fellow for Aerospace and China Studies at the Mitchell Institute for Aerospace Studies. A retired U.S. Navy intelligence officer with over 25 years of service, he also lectures at the George Washington University where he teaches a graduate course on China's military (<https://elliott.gwu.edu/john-dahm>).

- A conservative estimate of the aggregate sealift capacity of China’s LCTs indicates that these civilian platforms could provide over-the-shore lift multiple times that of the PLA Navy’s fleet of Landing Ship Tanks (LSTs) and Landing Ship Mediums (LSMs).
- In the context of other developments related to cross-Strait operations, the integration of LCTs into direct beach landings demonstrates that the PLA continues to evolve and expand its amphibious capabilities in accordance with Xi Jinping’s 2027 “centennial military building goal” (建军一百年奋斗目标).

## Context

One of the factors that limits China’s ability to conduct a joint island landing campaign against Taiwan (i.e., an invasion) has been the Chinese military’s relative lack of investment in naval amphibious ships compared to what would likely be required for the operation to be feasible. In its recently-released 2025 report on the Chinese military, the Department of Defense reported that the PLA has not invested in the number of tank landing ships (LSTs) and medium landing ships (LSMs) that would be required for a large-scale amphibious assault, though the PLA continues to train with civilian roll-on/roll-off (RO-RO) ships as a possible means to mitigate the shortfall in sealift capacity.<sup>3</sup>

Dual-purpose civil-military RO-RO vessels—specifically, ferries and vehicle carriers operated by PRC state-owned shipping companies, are organized as strategic support fleets of the Chinese Maritime Militia.<sup>4</sup> However, due to their relatively deep draft, these large civilian RO-RO ships are unable to land forces directly onto a beach; they are limited to either off-shore delivery of amphibious assault vehicles that can swim to the shore on their own—or to landing non-amphibious vehicles such as main battle tanks or trucks via a captured port, a floating pier or, more recently, mobile *Shuiqiao*-class LPUs.<sup>5</sup>

The PLA’s organic capacity to deliver non-amphibious military vehicles directly to a beach across the Taiwan Strait is limited to its landing ships and craft—PLA LSTs, LSMs, landing craft, and hovercraft delivering forces from larger amphibious ships such as Landing Helicopter Docks (LHDs) and Landing Platform Docks (LPDs).

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<sup>3</sup> U.S. Department of Defense, “Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China, 2025, p. 46, <https://media.defense.gov/2025/Dec/23/2003849070/-1/-1/1/ANNUAL-REPORT-TO-CONGRESS-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA-2025.PDF>.

<sup>4</sup> See J. Michael Dahm, “CMSI Report No. 16: Chinese Ferry Tales: The PLA’s Use of Civilian Shipping in Support of Over-the-Shore Logistics,” *CMSI* (2021), <https://digital-commons.usnwc.edu/cmsi-maritime-reports/16/>, and “CMSI Report No. 25: More Chinese Ferry Tales: China’s Use of Civilian Shipping in Military Activities, 2021-2022,” *CMSI* (2023), <https://digital-commons.usnwc.edu/cmsi-maritime-reports/25/>. See also, Thomas Shugart, “Mind the Gap: How China’s Civilian Shipping Could Enable a Taiwan Invasion,” (<https://warontherocks.com/2021/08/mind-the-gap-how-chinas-civilian-shipping-could-enable-a-taiwan-invasion/>); and “Mind the Gap, Part 2: the Cross-Strait Potential of China’s Civilian Shipping Has Grown,” (<https://warontherocks.com/2022/10/mind-the-gap-part-2-the-cross-strait-potential-of-chinas-civilian-shipping-has-grown/>).

<sup>5</sup> See J. Michael Dahm and Thomas Shugart, “CMSI Note 14: Bridges Over Troubled Waters: Shuiqiao-Class Landing Barges in PLA Navy Amphibious Operations,” *CMSI Notes* (2025), <https://digital-commons.usnwc.edu/cmsi-notes/14/>.

## LCT Designs

The military Landing Craft Tank (LCT) was developed during World War II by the British Royal Navy and U.S. Navy. In the post-war years, surplus LCTs found their way into commercial use, particularly in China and Southeast Asia, to transport goods and heavy equipment from island to island, especially in the absence of developed ports. Over the decades since, as these vessels reached the end of their service lives, the region's shipbuilding industry began building new vessels of a similar type to serve the same function. These vessels, even though built for civilian shipping, continue to be known as LCTs.<sup>6</sup>

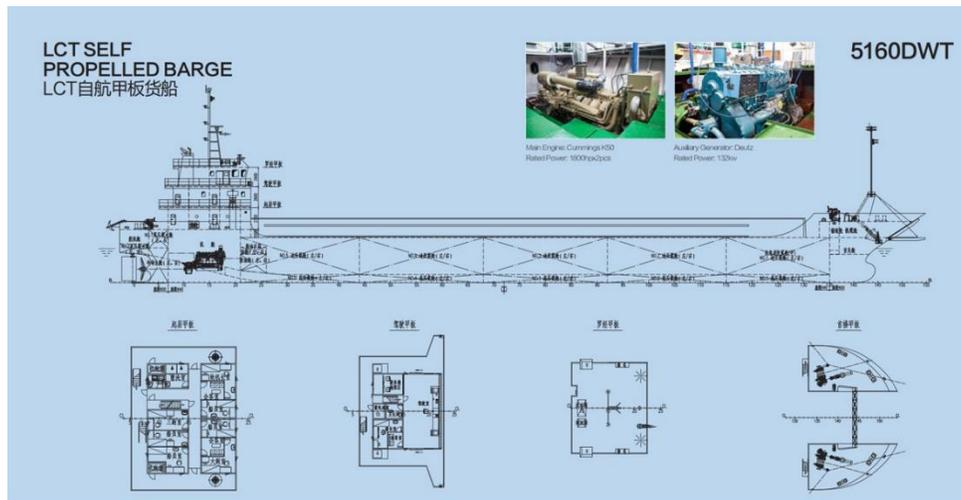
According to product advertisements on the web site of a major Chinese builder of deck cargo ships, LCTs are mainly used for transporting engineering equipment, ore, stone, sand, and trucks (see Figure 1).<sup>7</sup> They have a single flat bottom, a single deck, twin diesel engines, propellers, and rudders—all protected by twin bilge keels. There is a multi-level deck house at the bow or stern, depending on the model, and a bow ramp for delivering material and equipment directly ashore. LCT cargo capacities are advertised as ranging from 1,800 to 11,000 deadweight tons. The size of advertised LCTs range from about 250 to 440 feet (75 to 135 meters) in length, a beam of 52 to 92 feet (16 to 28 meters), and a maximum draft of 9 to 15 feet (2.7 to 4.5 meters). Shipyard images from social media show LCTs beached, with their ramps down, at a Chinese shipyard (see Figure 2).<sup>8</sup>

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<sup>6</sup> Ratson Shipbuilding, "Landing Craft Tank," accessed 19 November 2025, <https://ratson.com/en/product/index/category/1/parent/5>.

<sup>7</sup> Zhenxing Ship Building, "Self-propelled deck cargo ship, 5160 DWT," accessed 19 November 2025, <https://www.zxshipbuilding.com/index.php?c=show&id=19>.

<sup>8</sup> "New Used landing craft transport LCT for sale at [www.barge.cc](http://www.barge.cc)," <https://www.youtube.com/watch?v=49H6Oj9ySiA&list=WL&index=3>.



SPECIFICATION			
Length Overal(总长)	101.40m	Loaded Waterline Length(设计水线长)	93.60m
Legth Between Perpendiculars (两柱间长)	99.80m	Breadth (型宽)	20.78m
Depth (型深)	5.58m	Design Draft (设计吃水)	4.30m
Main Engine (主机)	CW6250ZLC-127	Rated Power(额定功率)	360KWx2pcs
Design Speed(设计航速)	7.7knots	Design Deadweight (载重量)	5160T



### LCT Self Propelled Barge LCT

The vessel is deck carrier, navigating in the major coastal ports in China, mainly used for transporting engineering auxiliary material and also used for transporting mining, stones, sands and trucks for Southeast Asia area. The vessel is to be all welded steel construction with single bottom, single deck, forward inclining stem and welded steel stern, propelled by double diesel engine, double fixed pitch propellers and twin rudders, with two bilge keels fitted at port & starboard. Three tiers of deckhouse are to be located above the bow upper deck.

Figure 1: Web advertisement for a Chinese-built LCT<sup>9</sup>



Figure 2: LCTs beached at a shipyard in China<sup>10</sup>

<sup>9</sup> Zhenxing Ship Building, “Self-propelled deck cargo ship, 5160 DWT,” accessed 19 November 2025, <https://www.zxshipbuilding.com/index.php?c=show&id=19>.

<sup>10</sup> “New Used landing craft transport LCT for sale at [www.barge.cc](http://www.barge.cc),” <https://www.youtube.com/watch?v=49H6Oj9ySiA&list=WL&index=3>.

## Operational Capabilities and Seaworthiness

LCTs are relatively slow vessels, with design speeds ranging from about 7 to 13 knots. There are no indications available that Chinese LCTs are built with any defensive capability, nor information as to whether the vessels are being built to PRC national defense standards as is now the case with larger RO-RO ships like ferries and vehicle carriers. Based on open-source images of LCTs used in previous transport exercises, it is clear that they have the ability to carry armored vehicles, though they have not yet been confirmed to carry the PLA's heaviest main battle tanks. One source specified the design load of a Chinese-built LCT's cargo deck as 16 tons per square meter.<sup>11</sup> That should be more than sufficient to accommodate China's ZTZ-99 main battle tank – a 55-ton load distributed across the tank's two tracks.

The maximum sea state in which China's LCTs can operate is unclear from public sources. Smaller U.S. landing craft design criteria (~138 foot (42 meter) length) specify operations in sea state 3 (2 to 3 foot waves), with survivability in sea state 5 (6 to 8 foot waves).<sup>12</sup> There is little public information available regarding civilian LCTs' maximum range, but it seems likely these vessels will be able to make multiple Strait crossings without refueling, given that WWII-era analogues often had ranges well over 1,000 nautical miles.<sup>13</sup>

## Development and Operational Use

The use of large-deck cargo ships, including LCTs, was first observed in PLA landing exercises as early as 2023.<sup>14</sup> At the time, LCTs, like other large-deck cargo ships and many of the civilian RO-RO ferries, were used by the PLA to transport military vehicles and personnel from port to port. Figure 3 shows an LCT, the HUAYI008, preparing to offload in the port of Chaozhou, near the Dacheng Bay amphibious exercise area. In this image, the LCT is utilizing another large-deck cargo ship with a variable-height loading ramp. This ramp allows large-deck cargo ships and RO-ROs to dock regardless of the height of the tide to offload onto a quay wall or fixed-pier. Port-to-port logistics activity involving large-deck cargo ships appeared to continue as an integral part of PLA amphibious landing exercises through 2024.<sup>15</sup>

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<sup>11</sup> "Modern 9000t Multipurpose LCT Transport Barge," *Seaboats*, accessed 20 November 2025, <https://www.seaboats.net/modern-9000t-multipurpose-lct-transport-barge-1549531>.

<sup>12</sup> "Landing Craft, Utility (LCU) 1700 Class Sources Sought," *SAM.gov*, 13 August, 2025, <https://sam.gov/opp/73fd846db7984345ad0cd1d804d9cc22/view>.

<sup>13</sup> "Landing Craft, Tank (LCT)(1940-1945)," *Naval Encyclopedia*, accessed 3 January 2026, <https://naval-encyclopedia.com/ww2/uk/landing-craft-tank.php>.

<sup>14</sup> J. Michael Dahm, "CMSI Report No. 35: "Beyond Chinese Ferry Tales: The Rise of Deck Cargo Ships in China's Military Activities, 2023" (2024), *CMSI China Maritime Reports*, 35, <https://digital-commons.usnwc.edu/cmsi-maritime-reports/35>.

<sup>15</sup> 2024 PLA exercise activity is based on unpublished analysis by the authors. Significant amphibious exercise events included what the authors have referred to as the PLA's annual "amphibious landing capstone exercise" that occurred between Dongshan Bay and Dacheng Bay on 3-4 September, 2024. That year's activity also included a large port-to-port lift evolution between Hainan Island ferry terminals and the ports of Xiamen and Guang'ao from 19-30 September 2024.



Figure 3: LCT Off-load Activity, Chaozhou Port, China, 26 September 2023 (© 2025 Airbus)<sup>16</sup>

In July 2025, civilian LCTs appear to have conducted direct beach landings at the PLA's amphibious landing training area near Honghai Bay.<sup>17</sup> AIS tracking data of ships in the area between July and August 2025 indicated that LCTs were conducting landings directly onto the beach in this PLA exercise area.<sup>18</sup> Commercial satellite imagery on 16 July 2025 shows two aft-pilothouse LCTs and one forward-pilothouse LCT inbound toward the amphibious landing area beach (Figure 4). Note that vehicles are loaded toward the back of the LCTs (Figure 5). Placing more weight toward the stern of the LCT is presumably to raise the bow of the vessel, allowing it to land closer to the beach in shallow water. These same LCTs appear to have landed on the beach at Honghai Bay with full loads of as many as 24 military vehicles in a subsequent exercise on 23 August 2025.<sup>19</sup>

<sup>16</sup> Graphic reproduced from J. Michael Dahm, "CMSI Report No. 35: "Beyond Chinese Ferry Tales: The Rise of Deck Cargo Ships in China's Military Activities, 2023," 33, Airbus, Pléiades, Image ID: DS\_PHR1B\_202309260242227\_FR1\_PX\_E117 N23\_0216\_00522, September 26, 2023, Chaozhou, China, 23.557N, 117.100E, SkyWatch EarthCache, [www.skywatch.com](http://www.skywatch.com).

<sup>17</sup> The Honghai Bay amphibious landing area is also known as the Jiasheng (捷胜) amphibious landing area.

<sup>18</sup> See, for example, AIS position data: HUAYIZHIXING (MMSI: 413280040), HONG CHENG YUN 298 (MMSI: 413266790), LONG TENG YUN 2 (MMSI: 413316830), and MAO YUAN XIANG (MMSI: 413233070), 16-17 July 2025 and 23 August 2025, [www.marinetraffic.com](http://www.marinetraffic.com).

<sup>19</sup> See 23 August 2025 BlackSky satellite images in Allison Martell, David Lague, Clare Farley and Minami Funakoshi, "China's Shadow Navy Trains to Take Taiwan," *Reuters*, 20 November 2025, <https://www.reuters.com/graphics/USA-CHINA/TAIWAN-INVASION/zjqdckmlvx/>. Note that the authors of this report were consulted for the Reuters article.

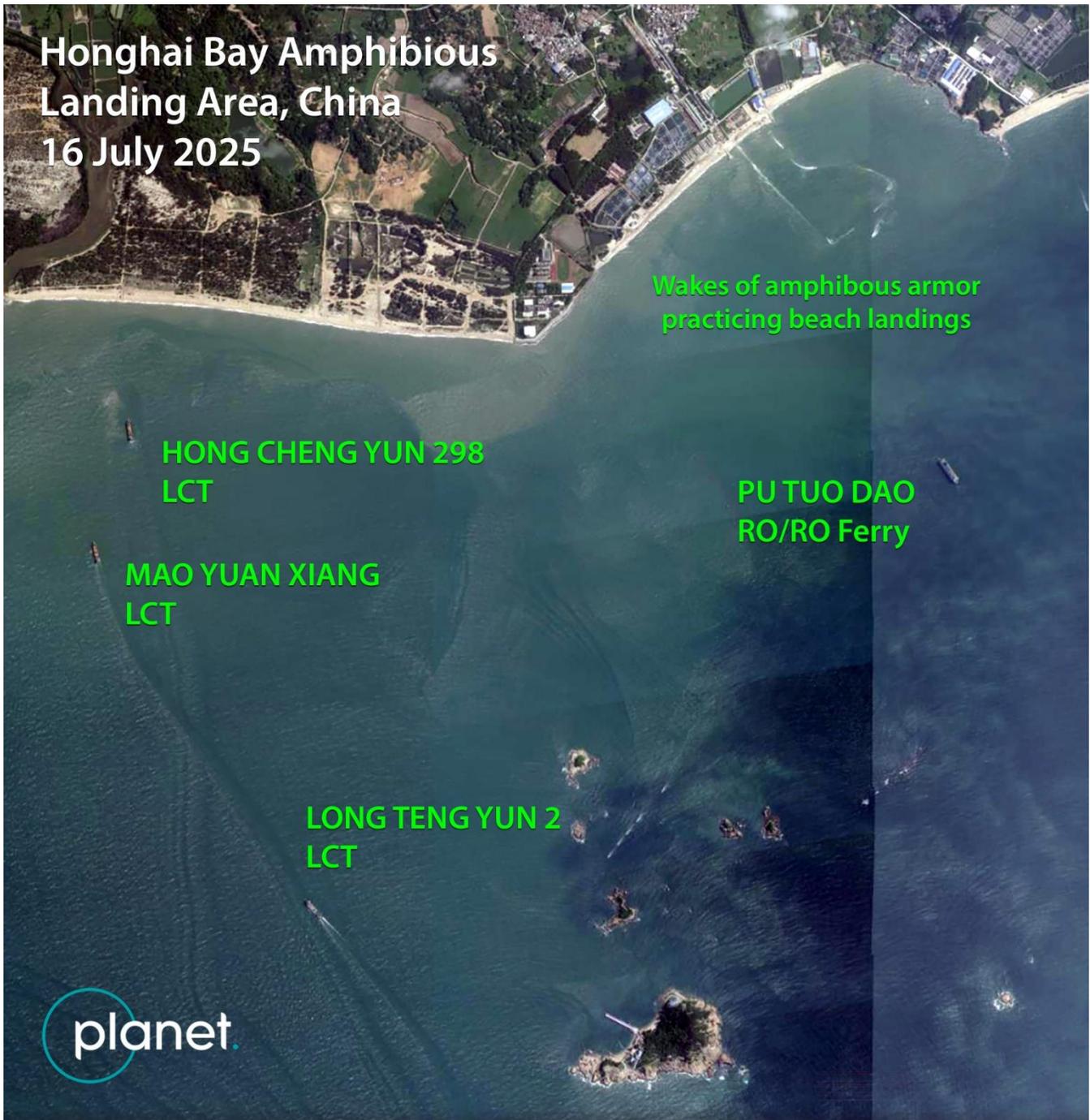


Figure 4: LCT Beach Landing Activity, Honghai Bay, China, 16 July 2025 (© 2025 Planet Labs PBC)<sup>20</sup>

<sup>20</sup> Planet Labs PBC, SkySat, Image ID: 20250716\_011310\_ssc13\_u0001, 17 July 2025, Honghai Bay, China, 22.678N, 115.422E, *Planet Explorer*, [www.planet.com](http://www.planet.com). AIS position data: HONG CHENG YUN 298 (MMSI: 413266790), LONG TENG YUN 2 (MMSI: 413316830), MAO YUAN XIANG (MMSI: 413233070), and PU TUO DAO (MMSI: 413127000), 16 July 2025, *AISLive*, [www.spglobal.com](http://www.spglobal.com).

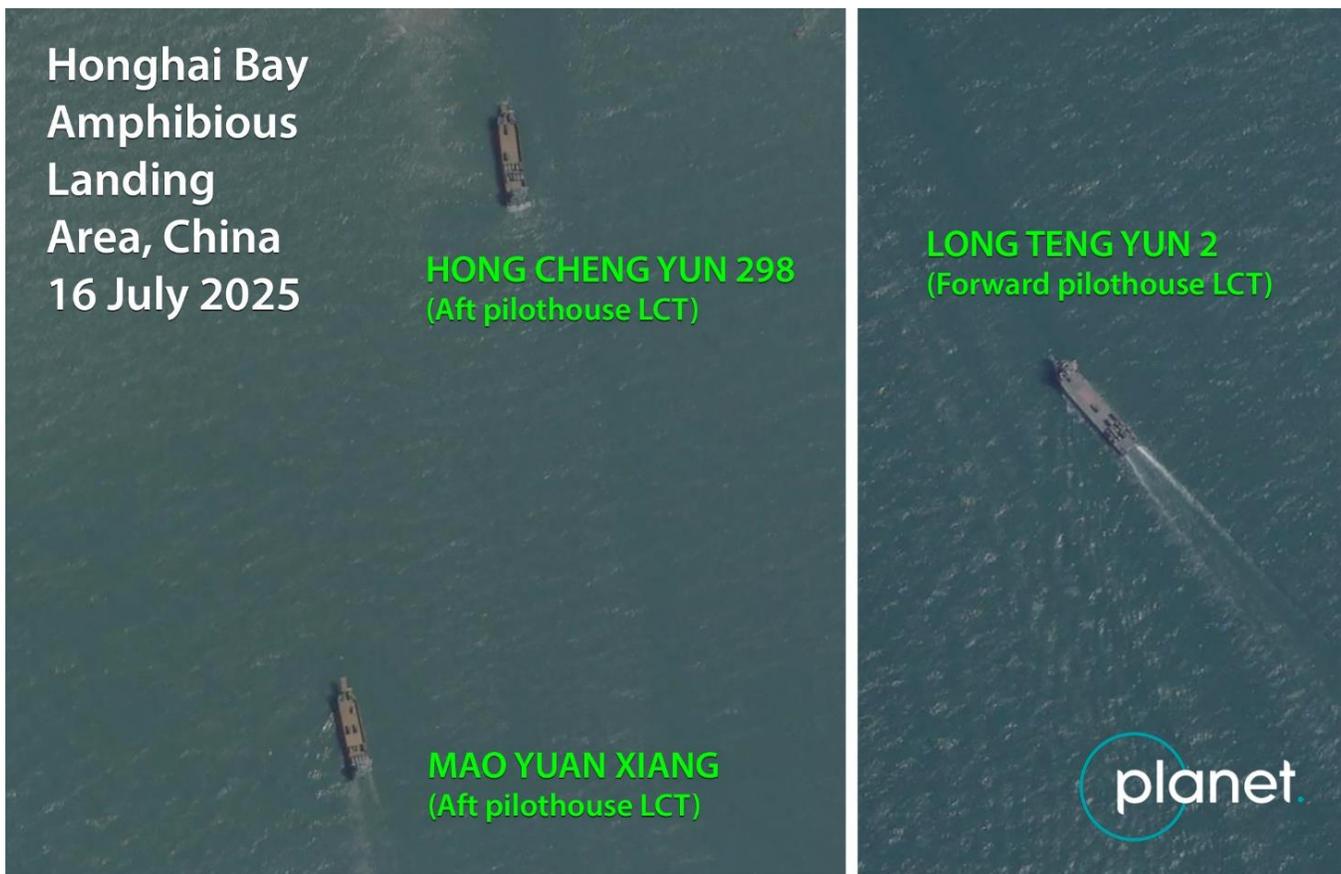


Figure 5: LCTs with Military Vehicles Embarked, Honghai Bay, China, 16 July 2025 (© 2025 Planet Labs PBC)<sup>21</sup>

## Sealift Capacity

One of the key questions about China’s new use of LCTs to deliver forces directly ashore is how much additional sealift capacity they bring—individually and in aggregate. Based on satellite imagery, it appears there are two main types of LCTs in China: a smaller, stern deckhouse version; and a larger, forward deckhouse variant. A smaller LCT typically has an open deck that measures roughly 236 feet (72 meters) long by 62 feet (19 meters) wide, while a typical larger one has a deck area roughly 308 by 69 feet (94 by 21 meters). This works out to a deck area of about 14,500 square feet (1,350 square meters) for a smaller type LCT, and about 21,500 square feet (2,000 square meters) for a larger one. By comparison, estimates of the vehicle capacity of the PLA Navy’s Type 072 LSTs range from 7,500-8,000 square feet (700-750 square meters).<sup>22</sup> China’s larger RO-RO ferries, like those of the Bo Hai Ferry Group, have roughly 54,000 square feet (5,000 square meters). A dedicated RO-RO vehicle carrier like those used in PLA exercises previously may have more than 270,000 square feet (25,000 square meters) of deck capacity. In other words, each Chinese LCT may be able to deliver to the beach—under suitably benign conditions—two to three times as many vehicles as a typical PLA Navy LST.

It is in aggregate capacity that China’s LCTs could make the most significant impact on the PRC’s ability to generate the necessary sealift capacity to conduct a large-scale landing on Taiwan. To

<sup>21</sup> Ibid.

<sup>22</sup> “Type 072 Yukun-class large landing ship,” *globalsecurity.org*, accessed 20 November 2025, <https://www.globalsecurity.org/military/world/china/yukan.htm>; and “LST – Landing Ship, Tank,” *globalsecurity.org*, accessed 20 November 2025, <https://www.globalsecurity.org/military/world/china/ship-amphibious-lst.htm>.

determine that potential aggregate capacity, we attempted to generate rough bounds on the likely number of LCTs that could be available for PLA use. This was a challenging task as, in contrast to China's larger RO-RO ferries and vehicle carriers, publicly available information on the numbers, owners, and locations of China's LCTs is limited and incomplete. Nevertheless, we were able to establish some rough data points.

First, using open-source data on Chinese deck cargo ship production, combined with an examination of commercial satellite imagery, we were able to find 11 shipyards that appear to have produced LCTs in recent years. Counting the LCTs visible in commercial imagery (from varying dates) in those images, we identified 125 LCTs of various sizes.<sup>23</sup> Next with the assistance of analysts at the Center for Strategic and International Studies (CSIS), we obtained data that indicated that there are currently at least 152 active, currently PRC-flagged deck cargo ships (of all types, not just LCTs). Regardless of flag-state, at least 252 active deck cargo ships are operated by Chinese-owned companies.<sup>24</sup> Examining AIS vessel data, a search of PRC-flagged shipping indicated that there are more than 1,800 shallow-draft (between 7 and 16 feet, or 2 and 5 meters) PRC-flagged cargo ships (of all types, not just deck cargo ships) with dimensions that encompass those of the most common LCT types: length of 250 to 440 feet (75 to 135 meters), beam of 52 to 92 feet (16 to 28 meters).<sup>25</sup>

If only 125 LCTs—about 7% of the total estimated number of China's shallow-draft cargo ships—were available for use in a cross-Strait landing, they could provide roughly 180,000 square meters of deck space for military vehicles per cross-Strait lift—enough to carry roughly three of the PLA Ground Force's heavy combined arms brigade per wave. This figure assumes that 90% of the LCTs were of the smaller stern-deckhouse type, and 10% were of the larger, forward-deckhouse type. For comparison, this is more than six times the aggregate vehicle capacity of *all* of the PLA Navy's LSTs and LSMs. It is also roughly equal to the aggregate vehicle capacity of all of China's PLA-associated civilian RO-RO ferries, i.e., those whose companies are part of China's Maritime Militia, or whose vessels have previously taken part in PLA exercises.

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<sup>23</sup> We conducted this count by examining the most recent imagery available on either Google Earth or via Planet Labs PBC. Shipyards where LCTs were visible included the following:

- Anhui Chizhou Xin Feiyang Shipbuilding
- Fujian New Shenghai Shipyard
- Hexing Shipyard
- Jiangsu Haizhongzhou Shipbuilding
- Lianyungang Helitong Shipbuilding
- Lianyungang MRMT Shipyard, Guannan
- Taizhou Hongtai Ship Industry
- Wenling Yuanyang Shipyard
- Yangzhou Wanlong Shipbuilding
- Zhejiang Tianshi Shipbuilding
- Zhejiang Zhenxing Shipyard

<sup>24</sup> We are grateful for the assistance of CSIS's Matthew Funaiolo, Brian Hart, Bonny Lin, and Aidan Powers-Riggs in assembling this data.

<sup>25</sup> Data source: filtered marinetraffic.com vessel search.

## Vulnerabilities and Challenges

There are no outward indications that the LCTs used in recent PLA exercises have been up-armored to increase survivability in a contested environment. Adding steel plates around engine rooms or the pilot house may better allow LCTs to operate in the face of small arms fire but would likely offer little protection against guided missile attack. Vehicles on their open decks, especially non-armored vehicles, would also be vulnerable to indirect fire (e.g. mortar or artillery) attacks as well as attacks from small drones. A precise drone attack disabling an LCT's ramp or a single vehicle at the bow might trap the other vehicles onboard.

Among the most significant challenges facing the PLA in a cross-Strait amphibious operation is the limited numbers of suitable landing beaches in Taiwan, and the size of those beaches. At most locations along Taiwan's coast, the limiting factor in how many troops, tanks, and trucks the PLA can deliver into a beachhead is not necessarily a shortage of PLA amphibious lift but instead may be the number of ships the PLA can land in confined landing areas. Introducing a very large number of smaller LCTs into already crowded landing areas may create significant traffic management challenges for the PLA.

Depending on the slope of the landing beach and location, LCT operations may be limited to several hours a day on either side of which is typically twice-a-day high tides. LCT operations as well as other observed amphibious and over-the-shore logistics activity during the July and August 2025 exercises appear to have occurred during a relatively narrow window surrounding the morning high tide at the amphibious landing area.<sup>26</sup> In any case, all amphibious ships—military or civilian—that conduct beach landings run the risk of becoming grounded as the tide recedes. This is more than an inconvenience, as the grounded vessel may become a target for enemy attack and potentially a hulking obstacle on the beach that impedes other landing ships and over-the-shore operations.

## Conclusion & Implications

For the PLA, these are early days for the use of LCTs in beach assaults, and there is probably much for them to learn about their capabilities and limitations. Since 2020, the PLA appears to have added one or two innovations each year, such as the off-shore deployments of amphibious armor from civilian ferries, the use of floating causeways and self-propelled floating causeways, the development of *Shuiqiao*-class LPUs, and the integration of civilian deck cargo ships into PLA exercises. Experimenting with civilian LCTs to conduct direct beach landings is yet another innovation as the PLA attempts to identify and train to the optimal combination of military and civilian amphibious assault and over-the-shore logistics. In the context of other developments related to cross-Strait operations, the integration of LCTs into direct beach landings demonstrates that the PLA continues to evolve and expand its amphibious capabilities in accordance with Xi Jinping's 2027 "centennial military building goal" (建军一百年奋斗目标).

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<sup>26</sup> Historical tide information for Honghai Bay was not immediately available. However, comprehensive tide forecasts for the Hong Kong area, 70 NM southwest of Honghai Bay, provide a rough idea of when high tide was on 16 July 2025 – 12:26 pm local time, and 23 August – 08:48 pm local. See "Waglan Island: Times and Heights of High and Low Tides," in *Tide Tables for Hong Kong, 2025*, Hong Kong Observatory (2025), pp. 139-140, [https://www.hko.gov.hk/en/tide/tide\\_tables/2025/files/TideTable2025.pdf](https://www.hko.gov.hk/en/tide/tide_tables/2025/files/TideTable2025.pdf).

LCTs may offer the PLA a specific type of over-the-shore lift that fills a gap between when a first echelon amphibious assault hits the beach and when the PLA might be able to capture and use a Taiwanese port, or to erect floating causeways or land *Shuiqiao* LPUs at a beachhead. Landing LCTs onto a beach would allow for immediate support from non-swimming logistics elements of the first echelon forces, as well as heavier non-amphibious armored vehicles. PLA amphibious combined arms brigades still include dozens of non-swimming wheeled vehicles that would need to be delivered to a beachhead to provide fuel, ammunition, and other supplies immediately after an amphibious assault.

Civilian LCTs may offer the PLA a critical capability and fulfill a long-sought requirement to reliably deliver a large volume of first echelon forces into amphibious landing areas. In the context of other developments that include improvements to amphibious base infrastructure, the increased use of a diverse array of civilian vessels to support amphibious operations, and other PLA capability developments, the use of LCTs is another example of the PLA significantly increasing capabilities to conduct a large-scale cross-strait operation—if they are ordered to do so—in the coming years.<sup>27</sup>

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## **Sources and Methods**

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<sup>27</sup> Regarding the increase in base infrastructure, see, for example, Niharika Mandhana and Camille Bressange, “How China’s New Naval and Air Sites Would Aid an Attack on Taiwan,” *Wall Street Journal*, 4 September 2025, <https://www.wsj.com/world/china/china-taiwan-military-naval-air-sites-4a02c450>.