

The Threat

Chinese Conventional Land Attack Missile Forces—An Update

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China defines its national defense policy as strategically defensive, proclaiming “we will not attack unless we are attacked, but we will surely counterattack if attacked.”¹ To prepare for a potential “counterattack,” China is building an increasingly formidable set of offensive capabilities for use at the operational and tactical levels of war to counter United States and allied forces in the western Pacific (hereafter WestPac).² Central to these deployments is a large force of conventional tactical ballistic and cruise missiles, mostly under the People’s Liberation Army Rocket Force (PLARF). When deployed in sufficient numbers, this force could give China the capability to stage a comprehensive integrated conventional surprise attack against fixed American and allied sites (especially air and naval bases) in WestPac. Our bases there are few, located close to China, and have limited potential for concealment or dispersion. They are also mostly unhardened (and even hardened facilities may be vulnerable to modern precision guided munitions)³ and usually possess limited, if any, defenses.

Conventional Ballistic Missiles

The bases in WestPac are especially vulnerable to attacks by ballistic missiles. China has deployed several types of such missiles:

Short range ballistic missiles (SRBM—with a range up to 1,000 kilometers). The Chinese force is more than 650 conventional SRBMs,⁴ although some recent estimates put the force as large as 1,500 missiles.⁵ However, their force of launchers is significantly smaller (200–250 launchers,⁶ each carrying one missile at a time).⁷ Historically, these missiles were short-ranged (most could reach Taiwan but not Okinawa) and unguided, but China is now deploying upgraded missiles with longer range and precision guidance.⁸ DF-11/11As, with a range of up to 530 km,⁹ are being replaced by the DF-16, with a range of up to 1,000 km,¹⁰ and some variants may have even longer ranges.¹¹ This would potentially put Okinawa, Kyushu, parts of Shikoku and Honshu, and much of Luzon within range from coastal launch sites and much of Hokkaido and Honshu within range from border areas with North Korea. Earlier versions of the DF-15 are being replaced with the DF-15B, which has a range of up to 800 km, which would put Okinawa within range.¹²

Artillery rockets. In addition, the People's Liberation Army (PLA, the Chinese land force, not the rocket force) has deployed the B-611, an artillery rocket with a half-ton warhead intended for tactical use. With a reported range of up to 250 km, it could target much of Taiwan, especially northwestern Taiwan, if launched from coastal sites. If equipped with a satellite navigation system, it may have an accuracy of 30 meters.¹³ No information is available as to the number deployed (and whatever deployments have been made were not counted in the SRBM figures). If deployed in any numbers, it could potentially supplement any PLARF SRBM attack against Taiwan.¹⁴

- **Medium-range ballistic missiles** (MRBM—with a range of between 1,000–3,000 km, which might put Guam marginally within range). In 2020, the Chinese were reported to have deployed more than 150 conventional MRBMs on 150 launchers.¹⁵ Past DOD estimates put the size of the MRBM force as large as 450 missiles.¹⁶ No detailed information is available as to the type of missiles in the force: presumably they are DF-21s, although DF-17s, possibly equipped with hypersonic warheads, may be starting deployment.¹⁷ We should note that the DF-21D antiship ballistic missile (ASBM) is a variant of the DF-21 MRBM, and no information is available as to whether ASBM launchers and missiles are counted in these overall totals. We should also note that some sources report that the SC-19 antisatellite (ASAT) system is also a modified version of the DF-21 launched from a mobile launcher,¹⁸ and no information is available as to whether these systems are included in the DOD figures.
- **Intermediate-range ballistic missile** (IRBM—with a range of between 3,000–5,500 km, which can reach beyond Guam). In 2020, the PLARF was reported to have 200 launchers and more than 200 missiles.¹⁹ We should note that the DF-26B ASBM is a variant of the DF-26 IRBM,²⁰ and no information is available as to whether ASBM launchers and missiles are included in these totals.
- **Older missiles.** While no information is available on what the Chinese have done with phased out older missiles, especially SRBMs, it is worth noting the potential use for such missiles (albeit shorter-ranged and less accurate) in wartime.

Land-Attack Cruise Missiles

In addition to ballistic missiles, China is deploying a large force of ground-launched land-attack cruise missiles (LACM). In 2020, DOD estimated this force at more than 300 long range (up to 2,000 km) LACMs,²¹ on 100 launchers,²² although the launchers carry multiple missiles.²³ These are presumably CJ-10/DH-10 and DH-10A missiles.

In addition, such missiles can be carried by other platforms, although as of early 2021, the numbers of such missiles deployed on alternative platforms are not publicly available. These alternative launchers may include:

- The H-6K medium bomber, the upgraded Chinese version of the Russian-designed Tu-16 BADGER. These can carry up to six CJ-20s,²⁴ the air-launched version of the DH-10.²⁵ They are reportedly currently 36 H-6Ks in the People's Liberation Army Air Force (PLAAF) inventory.²⁶
- PLA Navy (PLAN) surface ships and submarines.²⁷
- Containers on civilian ships.²⁸

China is likely developing a next-generation ground-launched cruise missile,²⁹ the HN-2000. It is reported to be stealthy, using a satellite navigation guidance system based on the Chinese Beidou satellite system, and is equipped with advanced sensors (millimeter wave radar, imaging infrared, laser radar, and synthetic-aperture radar). It is also reported to have a range of up to 4,000 km and has a supersonic terminal flight phase.³⁰

In addition to the previously discussed long-range LACMs, China has deployed shorter-range tactical LACMs, in particular the KD-88 air-to-surface LACM, with a reported range of 180–200 km.³¹ While the PLAAF was reported in 2019 to have only a small supply of tactical air-to-surface missiles,³² we should expect the Chinese to deploy these in much larger numbers in the future.

Finally, the PLARF has continued to deploy additional missile units (11 brigades between May 2017 and early 2020).³³ While no information has emerged as to their equipment, which presumably includes ICBMs as well as shorter-range missiles, we can anticipate their forces will increase.

While the requirements for a comprehensive conventional first salvo are formidable (one estimate was that it would take a barrage of 45 missiles with submunitions to destroy more than 80 percent of the aircraft at even an unhardened base),³⁴ there is no reason to believe that the Chinese are incapable of deploying the forces necessary to undertake such an attack. We need to act accordingly. Since the armistice that ended the Korean War, US bases in the Republic of Korea have

functioned under the assumption they could be subject to attack on short notice, and during the Cold War American and Allied bases in West Germany faced similar threats. Past American efforts to counteract these threats relied on a combination of passive measures and active defenses, rapid repair, and reconstitution. The United States and its allies need to duplicate those measures at their WestPac bases, including Guam, and, more selectively, at other Pacific region facilities (or at those that support the Pacific region). Our personnel at those bases (and on US ships in the region) need to think of themselves as being in a forward area. The front line is no longer just Korea, and our bases in the region are no longer peacetime bases. ✪

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Notes

1. The State Council Information Office of the People's Republic of China, "China's National Defense in the New Era" (hereafter Chinese 2019 White Paper), 25 July 2019, <http://www.xinhuanet.com/>.

2. The People's Liberation Army (PLA) organizational concept for its military strategy is "campaigns," defined as a series of battles fought under a unified command to achieve a local or overall objective. Chinese military writings have identified numerous possible campaigns, including, for instance, a blockade campaign, a landing campaign, an antilanding campaign, and an anti-airstrike campaign. *The Science of Campaign*, (2006) English Translation Volume 1 (Beijing, 4th Watch Publishing Company, 2018)

3. Eric Heginbotham et al, *The U.S.-China Military Scorecard* (Santa Monica, CA: RAND, 2016) 63, fn 59. <https://www.rand.org/>.

4. Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2020 Annual Report to Congress* [hereafter *Annual Report to Congress 2020*], 1 September 2020, 59, <https://media.defense.gov/>.

5. In 2019, the DOD estimated the size of the SRBM force as being between 750 and 1,500 missiles. Office of the Secretary of Defense, *Annual Report to Congress, Military and Security Developments Involving the People's Republic of China 2019* [hereafter *Annual Report to Congress, 2019*], May 2019, 47, <https://news.usni.org/>. In 2015, the U.S.-China Economic and Security Review Commission estimated at least 1,200. U.S.-China Economic and Security Review Com-

mission, *2015 Report to Congress of the U.S.–China Economic and Security Review Commission* [hereafter *2015 Report to Congress*], November 2015, 351, <http://news.usni.org/>.

6. The figure of 200 launchers is from *Annual Report to Congress 2020*, 59. The 250 figure is from “Sphere of Impact,” *Defense News* 34, no. 10 (3 June 2019), 11.

7. Missile Threat, “DF-15 (Dong Feng-15 / M-9 / CSS-6),” *CSIS Missile Defense Project*, n.d., <https://missilethreat.csis.org/>.

8. The DF-15C was reported to have a terminally guided warhead as early as 2011. Presumably, other missile types have been similarly equipped. See: Ron Christman, “Conventional Missions for China’s Second Artillery Corp,” in *Chinese Aerospace Power*, ed. Andrew Erickson and Lyle Goldstein (Annapolis, MD: Naval Institute Press, 2011), 309.

9. Jacob L. Heim, “The Iranian Threat to Air Bases,” *Air & Space Power Journal* 29, no. 4 (July–August 2015), 52, <https://www.airuniversity.af.edu/>.

10. David Xia, “A Comprehensive Analysis of Chinese Ballistic Missile Systems Displayed on Victory Day Parade,” *IndraStra Global*, 20 September 2015, <https://www.indrastra.com/>.

11. See: *2015 Report to Congress*, 352.

12. Xia, “A Comprehensive Analysis of Chinese Ballistic Missile Systems.”

13. John Pike, “B-611/BP-12A/Toros/Yildirim,” *Global Security*, 28 October 2013, <https://www.globalsecurity.org/>.

14. In addition, the PLA has recently started deploying another artillery rocket system, sometimes called the PHL-16 or PCH-191, with a reported maximum range of 220 km, which would put limited areas of northwestern Taiwan within range. “PHL-16 Multiple launch rocket system,” *Military Today*, <http://www.military-today.com/>.

15. *Annual Report to Congress 2020*, 59.

16. *Annual Report to Congress, 2019*, 47. The low end of the estimate range was 150 missiles.

17. Missile Defense Project, “DF-17,” *Missile Threat*, Center for Strategic and International Studies, 23 June 2020, <https://missilethreat.csis.org/>.

18. Santosh Kosambe, “Mission Shakti aka Project XSV-1: India’s First Anti-Satellite Test (ASAT),” *Researchgate*, January 2019, <https://www.researchgate.net/>.

19. *Annual Report to Congress 2020*, 59.

20. Andrew S. Erickson, “China’s DF-21D And DF-26B ASBMs: Is The U.S. Military Ready?,” *19FortyFive*, 15 Nov 2020, <https://www.19fortyfive.com/>.

21. *Annual Report to Congress 2020*, 59; and *Annual Report to Congress, 2019*, 47. The latter source estimated the forces to be as numerous as 540 missiles.

22. *Annual Report to Congress 2020*, 59.

23. CJ-10 transporter/erector/launchers (TELs) carry three missiles. Jeffrey Lin and P.W. Singer, “China’s New Mystery Missile and Launcher,” *Popular Science*, 11 August 2015, <http://www.popsci.com/>.

24. *Annual Report to Congress, 2015*, 12. Some sources say they can carry up to seven missiles each. See: Jeffrey Lin and P.W. Singer, “China Shows Off Its Deadly New Cruise Missiles,” *Popular Science*, 10 March 2015, <http://www.popsci.com/>.

25. Dennis M. Gormley, Andrew S. Erickson, and Jingdong Yuan, “A Potent Vector: Assessing Chinese Cruise Missile Developments,” *Joint Force Quarterly* 75,, no. 4 (30 September 2014), 104, <http://ndupress.ndu.edu/>.

26. Franz-Stefan Gady, "China's Air Force Can Now Launch Long-Range, Precision Strikes," *The Diplomat*, 15 October 2015, <http://thediplomat.com/>. No signs of additional procurement since then.

27. For surface ships, *see*: "Navalized DH-10 LACM," *China Defense Blog*, 25 July 2012, <http://china-defense.blogspot.com/>. For submarines, *see*: John Pike, "Type-093B/Type-093G VLS LACM Shang-class," *Global Security*, 30 April 2019, <https://www.globalsecurity.org/>.

28. Bill Gertz, "China Building Long-Range Cruise Missile Launched from Ship Container," *Jackson Press*, 30 March 2019, <http://thejacksonpress.org>.

29. Ian Easton, "The Assassin Under the Radar: China's DH-10 Cruise Missile Program," *Project 2049 Institute*, 1 October 2009, <https://project2049.net/>. Evidently, there is some uncertainty as to the current status of the program. Gormley, Erickson, and Yuan did not mention an HN-2000, although they did describe a "possible DH-2000," a submarine-launched 500-km-range LACM. *See* Gormley, Erickson, and Yuan, "A Potent Vector," 102.

30. "Key Element in the Taiwan Straits Military Situation" (Taihai junshi taishi de guanjian), 36. Quoted in Easton, "The Assassin Under the Radar." China evidently started deploying a large new cruise missile several years ago, but it remains undetermined if this is the HN-2000, how many, if any, have been deployed, and whether these are counted in the DOD figures for LACMs. Lin and Singer, "China's New Mystery Missile."

31. Gormley, Erickson, and Yuan, "A Potent Vector," 102.

32. *Annual Report to Congress, 2019*, P. 47.

33. P.W. Singer and Ma Xiu, "China's Missile Force Is Growing at an Unprecedented Rate," *Popular Science*, 25 February 2020, <https://www.popsci.com/>.

34. As discussed in Chapter 9 of Roger Cliff, *China's Military Power* (New York: Cambridge, 2015), 197.