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CHINA'S VICTORY PARADE SHOWCASES PLA MISSILE CAPABILITIES

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Introduction

China celebrated the 70th anniversary of its victory over Japan in the Second World War with a grand military parade in Beijing on September 3, 2015. Normally, China holds military parades every ten years to commemorate the communist takeover of power in China in 1949. But, apparently, President Xi Jinping did not want to wait for another four years to display China's military might and send a signal to Japan, USA and regional countries. The massive parade comprised of 12,000 troops, 500 pieces of military equipment and 200 aircraft of different types. In addition almost 1000 troops from 17 foreign countries, including Pakistan, participated in the parade. India did not send any delegation of marching troops but was represented at the celebrations by Minister of State for External Affairs Gen VK Singh (Retd).

In his speech at the parade, Xi dramatically announced that the 2.3 million strong PLA will be

cut down by 300,000 troops by 2017. The cost savings as a result of these cuts will perhaps provide for further modernisation of the PLA. The Chinese announced that almost 84 percent of the military hardware on display was being shown to the public for the **first** time¹. While they may not have been displayed publicly earlier, the existence of most of the weapons was known to the public. On display were China's most advanced indigenously produced weapons including fighter aircraft like the J-10, J-11, J-15 KJ-2000 AWACS new helicopters and tanks. The Second Artillery displayed its wide array of missiles - DF-26 intermediate range ballistic missile (IRBM) with anti ship capabilities, DF-21D medium range anti ship ballistic missile, DF-15B short range ballistic missile (SRBM), DF-16 (MRBM), DF-5B liquid fuelled intercontinental ballistic missile (ICBM), and the road mobile solid fuel ICBM DF-31A. This was the first time that the Chinese had displayed two anti ship ballistic missiles (ASBM), the DF-21D with a

range of 1550 km² and DF-26 with range of **3000 km-4000 km³**.

This article discusses the capabilities of China's **DF-5B, DF-31A, DF-21 and DF-26** missiles displayed in the parade.

DF-5B and DF-31A Inter Continental Ballistic Missiles (ICBMs)

The two main ICBMs which were paraded were the new DF-5B and the DF-31A. The DF-5 ICBM was China's first ICBM capable of reaching continental USA and entered service as a silo based missile in 1981. DF-5 was a two stage storable liquid fuelled 12000 km range ICBM with a payload of 3900 kg and a single nuclear warhead of 1 to 3 MT. The missile was fitted with inertial guidance system and had an accuracy of 800m CEP (Circular Error Probable)⁴. In 1983 the Chinese leadership decided to increase the range of DF-5 by another 1000 km by reducing the payload to 3200 kg. This missile was designated the DF-5A and had a range of 13000 km with improved CEP of 500m⁵. The DF-5A is still in service and the Second Artillery has about 20 missiles in its inventory⁶. In the recent victory parade, China displayed a new liquid fuelled ICBM, DF-5B. The DF-5B has a range of 13,000 km to 15,000 km and is reported to be capable of hitting any target on earth⁷. The renewed interest in deploying a new liquid fuel missile is perhaps because of its longer range and increased payload carrying capacity. The DF-5B has an improved engine and better accuracy

compared to the DF-5A. It has also been reported that the DF-5B is China's **first** MIRV (multiple independently targetable re-entry vehicle) capable ICBM. The Chinese have officially declared it to be capable of carrying three warheads but it is probably capable of carrying five nuclear warheads⁸. It is likely that the DF-5B has been deployed for an interim period till the time the road mobile DF-41, with a range of 12,000 km to 15,000 km, is operational.

The other ICBM in the parade was the solid fuel road mobile DF-31A which is an improved version of the DF-31. The DF-31 has a range of 8000 km and accuracy of 100 m-300 m CEP⁹ and can reach targets in Europe, Asia, parts of Canada and north-western USA. China has about 12 of these in its inventory and another 24 of the new variant DF-31A. The DF-31A has an increased range of 10,000 km to 14,000 km and can be nuclear armed with 3-4 MIRV warheads with selectable explosive yields of 20, 90 or 150 kilotons (kT) each. The DF-31A is capable of targeting entire USA¹⁰. As with the rest of the missile force China's ICBMs have also been modernised with better technology. New solid fuel ICBMs like the DF-31 and the in development DF-41, are strengthening China's nuclear deterrence with more survivable **road mobile** capability.

DF-21 and DF-26 Ballistic Missiles

An interesting display in the parade was the prominence of two anti ship ballistic missiles

(ASBM) - **DF-21D and DF-26** - by the Chinese. Both these missiles are solid fuel road mobile systems and have variants for targeting ship or land targets, with nuclear or conventional warheads. The showcasing of two ASBMs at the parade indicates perhaps to the US Navy and other regional Navies to beware of Chinese capabilities.

The DF-26 missile which has a range of about 3,000 km to 4,000 km was displayed for the first time in the victory parade¹¹. The Chinese have announced that the DF-26 is an anti ship ballistic missile (ASBM) and can strike at large and medium ships. This means that from China's east coast the DF-26 is capable of threatening US Navy ships in the Western Pacific Ocean right up to Guam and from Kunming it can cover South East Asia, India and the Bay of Bengal. The long nose of the DF-26 indicates that the design caters for a manoeuvrable warhead in the terminal phase. No accuracy figures have been given for the DF-26 but the announcement at the parade that it can attack medium size ships indicates that it is accurate enough to target destroyer class of ships and larger aircraft carriers. The DF-26 is a derivative of the DF-21D ASBM which was labelled as an "aircraft carrier killer" for possible use against American aircraft carriers if they try to intervene in a Taiwan contingency. For a ballistic missile to manoeuvre in the terminal stage and home onto a moving ship requires real time ISR data from satellites, unmanned reconnaissance platforms or surveillance ships in

that area. This is a challenging task, firstly to deploy the necessary ISR capabilities to acquire the data and secondly to feed it in to the missile in the very short terminal phase. It is not clear whether China really has these capabilities or they are still in the development phase. There are no reports of the Chinese having carried out any trials of the DF-26 or the DF-21D on a moving target at sea. The United States has been aware of the existence of the DF-26 since 2007¹² and the US DOD annual report of 2015 on China's military capabilities does mention the development of a "new advanced IRBM with the capability to strike targets at ranges up to 4,000 km¹³. Therefore, the US may have surely found ways to counter the missile.

The DF-21 is China's main MRBM with a number of variants for different roles and an estimated inventory of 75-100 missiles¹⁴. The DF-21D has a maximum range of 1550 km; no accuracy figures have been disclosed but it is believed that its CEP will be less than 20 m¹⁵. Another version of DF-21 is DF-21C which has an accuracy of 50 m and can carry a payload of up to 2000 kg. According to one report DF-21 are deployed in Delingha which is about 1500 km from the Indian border¹⁶. From Delingha these missiles with a range of about 1750 km to 2150 km can cover parts of northern, central and eastern parts of India.

Analysis

The display of China's modern weaponry at the victory day parade has conveyed to the world its military capabilities. While Xi Jinping may have spoken about China's "peaceful" intentions, their belligerent and assertive stands in disputes in the South China Sea and East China Sea have created tensions in the region. With India the undercurrent of hostility remains due to the unresolved border dispute and China's nexus with Pakistan.

China's ICBMs with a range of 15,000 km can cover Europe, Russia and entire continental USA. Regional countries like Japan and India and US bases in Guam, can be threatened with the intermediate range ballistic missiles (IRBM) of DF-26 class and the medium range ballistic missile (MRBM) of DF-21 class. While the Second Artillery nuclear missiles provide China a credible nuclear deterrent, its conventional strike capability is the one which will come to the fore in regional conflicts. China has been able to improve the accuracy of its missiles with advances in information technology. Second Artillery has also improved the survivability of its missiles by making them road mobile using solid fuel propellant.

China's 53 Missile Base at Kunming and 56 Missile Base at Xining are the ones which are of concern to India due to their location and capability of striking at India. Indian targets in the north, east and central India are within reach of their DF-21 ballistic missile. The DF-26 can target the entire country. No missile brigade has

been observed to be permanently located in Tibet but these are mobile systems and can be moved to Tibet if required. The missile brigades at Delingha and Da Qaidam near Golmud are connected to Tibet by the Qinghai-Tibet Railway (QTR) line and the road network to Lhasa. They can easily be moved up to Tibet to enhance their reach into India. IAF needs to have adequate long range precision strike capability and persistent ISR resources to locate and destroy these missile sites.

China's ballistic missiles will be a major threat to the IAF but they cannot incapacitate us and take out all IAF airfields or other targets like command and control centres. IAF has a large number of airfields in the east and west, so even if some airfields are down, operations can continue from other locations. Similarly, command and control centres and other targets have adequate backup systems for operations to continue. Another point to note is that these missiles are available only in small numbers and depending upon its accuracy and other factors, much more than just one missile will be required against one target.

The best defensive strategy against China's missiles is to deter them by developing similar capabilities so that India can strike counterforce targets in China. India needs to step up on development of conventionally armed MRBM/IRBM Agni ballistic missiles and Nirbhay cruise missiles. Another way to counter China's missiles is to intercept them in the terminal

phase. This is a technologically challenging task and also requires sufficient resources. India's DRDO (Defence Research and Development Organisation) is developing a ballistic missile defence (BMD) system. As and when these systems are inducted, they will provide some ABM (Anti Ballistic Missile) capability against China's ballistic missiles.

Second Artillery missile capabilities pose a security threat to India but this is a challenge which India must accept and develop its capabilities adequately to resist any attempts at coercion by China, either on its own, or in a nexus with its "all weather friend" Pakistan.

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])

Notes

¹ Xinhuanet, "Highlights of China's military parade to mark end of WWII," http://news.xinhuanet.com/english/2015-09/03/c_134584176.htm, September 3, 2015, accessed on September 2, 2015.

² Range figures are from IHS Jane's Weapons: Strategic 2013-2014.

³ Range figures are from Eric Tegler, "China's New Ballistic Missile Puts Guam in the Crosshairs," <http://www.popularmechanics.com/military/weapons/a17182/chinas-missile-df-26/> September 2, 2015, accessed on September 2, 2015.

⁴ Jane's Strategic Weapon Systems ISSUE 55-2011, pp, 17-18.

⁵ Ibid.

⁶ Military Balance 2015.

⁷ Staff Reporter, "PLA's new DF-5B liquid-fuel ICBM 'can hit any target on Earth'" in *Want ChinaTimes*, August 16, 2015, <http://www.wantchinatimes.com/news-subclass->

[cnt.aspx?id=20150816000155&cid=1101](http://www.wantchinatimes.com/news-subclass-cnt.aspx?id=20150816000155&cid=1101), accessed on September 14, 2015.

⁸ Wendell Minnick, "China's Parade Puts US Navy on Notice", in *DefenseNews*, September 3, 2015, <http://www.defensenews.com/story/defense/naval/2015/09/03/chinas-parade-puts-us-navy-notice/71632918/>, accessed on September 14, 2015.

⁹ IHS Jane's Weapons: Strategic 2013-2014.

¹⁰ Ibid.

¹¹ Ibid. n. 3.

¹² Ibid, n. 3.

¹³ U.S. D.O.D. "Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2015" http://www.defense.gov/pubs/pdfs/2012_cmpr_final.pdf, accessed on September 14, 2015.

¹⁴ U.S. D.O.D. "Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2012" http://www.defense.gov/pubs/pdfs/2012_cmpr_final.pdf, accessed on September 4, 2014.

¹⁵ IHS Jane's Weapons: Strategic 2013-2014, p. 13.

¹⁶ Hans M. Kristensen "DF-21C Missile Deploys to Central China", September 28, 2010, <http://fas.org/blogs/security/2010/09/df21c/>, accessed on September 4, 2014.