



MANOHAR PARRIKAR INSTITUTE FOR
DEFENCE STUDIES AND ANALYSES

MANOHAR PARRIKAR INSTITUTE FOR
DEFENCE STUDIES AND ANALYSES

मनोहर पर्रिकर रक्षा अध्ययन एवं विश्लेषण संस्थान

Strategic Digest

Vol. 2 | No. 8 | 14 May 2020

US and Chinese Missile Moves in Western Pacific

South Korea Tests Hyunmoo-4 Ballistic Missile

Long March 5B: China's New Space Launch Vehicle

Russia Deploys Submarine to the Mediterranean

Algeria-Morocco Tensions

US and Chinese Missile Moves in Western Pacific

Given its absorption in conflicts in Afghanistan and the Middle East since the September 11 terrorist attacks, the United States had largely stood by as China dramatically expanded its military capabilities during the last two decades. China's increased capabilities include ballistic and cruise missiles that give it the capacity to deny access to areas off the Chinese coast to the US military, the so-called Anti-Access Area Denial (A2AD) strategy.

DF-21D Anti-Ship Ballistic Missile Source: AndrewErickson.com



China is known to fields two types of land-based ballistic missiles with the capacity to target ships at sea. One is the *DF-21D*, which is a road-mobile anti-ship ballistic missile (ASBM) with a range of more than 1500 kilometres.

DF-26 Multi-Role IRBM Source: missiledefenseadvocacy.org



The second is the *DF-26*, a road-mobile intermediate range ballistic missile (IRBM) which has a range of about 4000 kilometres and is capable of conducting conventional and nuclear strikes on ground targets as well as conventional strikes against naval targets. China is also reportedly developing hypersonic glide vehicles which would make the interception of Chinese ASBMs more difficult.

Test-firing of conventional GLCM Source: US DoD via Reuters



The recognition in the last of couple of years that China has emerged as a strategic rival is leading the United States to reorient its armed forces towards the Chinese challenge. As part of this effort, Washington is preparing to equip the US Marines with intermediate range ground launched cruise missiles, as well as deploy these missiles which have a range of 2500 kilometres in the Asia-Pacific region. This step became possible after the Trump administration's decision in February 2019

to suspend the Cold War-era Intermediate Nuclear Forces Treaty, which had banned the deployment of land-based ballistic and cruise missiles with ranges between 500 and 5,500 kilometres. This strategy will permit the US to deal with China's serious missile threat with a missile-based stand-off posture of its own, rather than expose air and naval platforms to vulnerability.



© Manohar Parrikar Institute for Defence Studies and Analyses, GIS Section. Map not to scale.

As part of its effort to reorient the US Marines towards their original role as a naval expeditionary force with a focus on the littorals of the Indo-Pacific, the Pentagon intends to arm the US Marines with versions of the *Tomahawk* cruise missile which are now carried on naval ships. At the same time, the Pentagon is also accelerating deliveries of new long-range anti-ship missiles. Further, in a radical shift in tactics, the Marines will henceforth team up with the US Navy to attack enemy warships, with small and mobile Marines units armed with anti-ship missiles becoming ship killers. In the event of a conflict, the plan is to disperse such Marines units at key points in the Western Pacific as well as along the first island chain comprising of the Japanese archipelago, Taiwan, the Philippines and Borneo. The US strategy is to command key passages in the island chain and thus prevent the PLA Navy from operating in the South China Sea, East China Sea

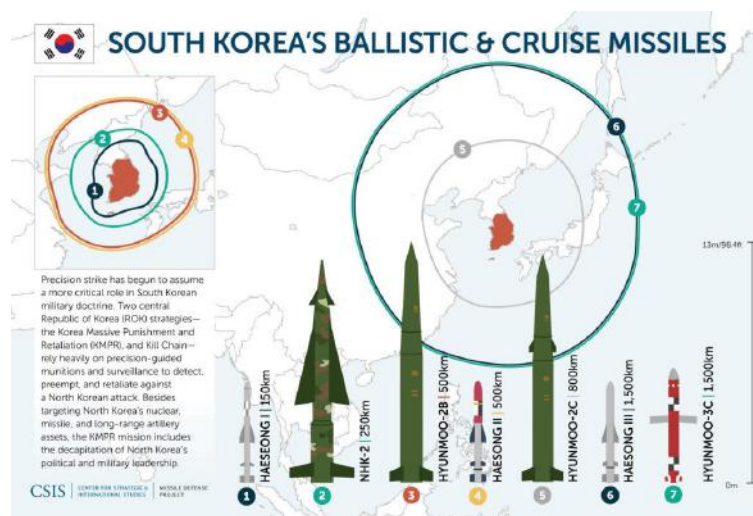
and Yellow Sea or attempt to break out into the western Pacific. Japan and Taiwan have already deployed ground-based anti-ship missiles for this purpose.

South Korea Tests Hyunmoo-4 Ballistic Missile

In mid-March 2020, South Korea conducted the first test-firing of the *Hyunmoo-4* ballistic Missile. Overseen by the Agency for Defence Development, South Korea's indigenous defence research and development organisation, the test took place at the Anheung test site located on the west coast of the country. Two missiles were test-fired, but one failed. No specific reason was mentioned for the failure. *Hyunmoo-4* has been reported as being capable of carrying a payload as large as two tonnes to ranges up to 800 kilometres. It is being speculated that the larger payload may allow for the accommodation of an earth-penetrating conventional warhead, which could hold North Korean leadership targets at risk at several underground facilities. The antecedent to *Hyunmoo-4* is the 800 km range *Hyunmoo-2C* ballistic missile tested in 2017. This missile is believed to provide South Korea the capacity to strike from within its borders any part of North Korea.

The reported payload of two tonnes became permissible in 2017 after Washington and Seoul agreed to eliminate the warhead limit for South Korean missiles as stipulated in the 1979 US-South Korea guidelines. These guidelines had placed defined limits on the payload and range of South Korea's domestically developed missiles in order to avoid a regional arms race. Although the range limitations stipulated by the guidelines continue to remain operative, it is believed that the development of a missile like the *Hyunmoo-4* that is capable of carrying a heavy payload could enable South Korea in the future to use the same booster with a reduced payload to significantly extend the missile's range to that of a medium-range ballistic missile.

Source: <https://missilethreat.csis.org/country/south-korea/>



These developments in the South Korean ballistic missile programme need to be seen against the backdrop of two developments. One is North Korea's demonstration of its nuclear and thermonuclear weapons capability as well as the ability to launch ballistic missiles that can target the continental United States. And the second is the Trump administration's persistent demand that allies like South Korea bear more of the defence and financial burden of tackling common adversaries. The former

development has raised questions about the credibility of US extended deterrence to South Korea, and the latter about the continuation of US defence commitment to allies. South Korea has no choice but to continuously enhance its defence and deterrent capabilities under these circumstances.

Long March 5B: China's New Space Launch Vehicle

Taking off from the Wenchang Space Launch Centre, China's new large carrier rocket *Long March 5B* made its maiden flight on 5 May. It lofted the prototype for the new-generation manned spacecraft (crew capsule) and a cargo return capsule into space, inching China's manned space programme a step closer to the building of a space station. China's three-step manned space programme was initiated in 1992. It has completed 16 major missions till date, with a 100 percent success rate. The first step involved sending an astronaut into space, and the second the testing of orbital docking and extra vehicular activity. The latest successful mission has 'inaugurated' the third step – assembling and operationalising a permanent manned space station, which is due by 2022.

Long March-5B blasts off
Source: globaltimes.cn



Flying without astronauts, the mission tested the avionics, re-entry controls, heat shielding and the recovery system of the 8.8-metre-long, 21.6-tonne prototype spacecraft, which is designed to carry six to seven astronauts and be reused for up to 10 flights. It will eventually replace the *Shenzhou* spacecraft. After a three-day unpiloted orbital test flight, the crew capsule landed in China's Inner Mongolia

autonomous region on 8 May. The only glitch was the malfunctioning of the cargo return capsule during its return to Earth.

The 53.7-metre-long Long March 5B has increased China's payload carrying capacity to low-Earth orbit from about 14 to 22 tonnes, placing it at par with leading launch vehicles around the world. *Long March 5B* will be the prime launch vehicle for space station modules, while the spacecraft it has carried for testing will find applications in both low-Earth orbit and deep-space exploration missions. This was the fourth flight of the heavy-lift *Long March 5* programme, and a debut for the 5B variant. The rocket made its first flight in 2016, whereas the second suffered a failure in July 2017, and the third took off in December 2019. It is also scheduled to launch China's upcoming robotic Mars mission (*Tianwen*) in July 2020.

Russia Deploys Submarine to the Mediterranean

The Russian Navy's Project 636.3 diesel-electric submarine *Rostov-on-Don*, dubbed the 'black hole' for its low sound emission, has embarked on its deployment in the Mediterranean Sea. It is expected to shortly join the Russian Navy's permanent Mediterranean task force headquartered at Tartus, Syria, which is the only Russian naval base outside of the territories of the former Soviet Union. Two Russian submarines are usually deployed as part of this task force, with their deployment lasting an average of 18 months and the crew rotated every third month. Under the terms of the 49-year agreement with Syria, Russia is permitted to station up to 11 warships in Tartus.



© Manohar Parrikar Institute for Defence Studies and Analyses, GIS Section. Map not to scale.

Russia's deployment of these submarines reflect its growing naval footprint in the Mediterranean. At a time when the military has emerged as a key instrument of Russia's foreign policy, particularly in the context of its ongoing rivalry and contestation with the West, these naval deployments help Moscow project power beyond the immediate neighbourhood. A Mediterranean presence allows Russia to track American and NATO maritime deployments, apart from engaging in naval diplomacy with littoral states. It also helps negate the Western message of Russia being isolated on the global stage. Notably,

the Project 636.3 conventional submarines are proverbial force multipliers, having delivered *Kalibr* cruise missile strikes against terror targets in Syria.

Algeria-Morocco Tensions

Tensions have flared up between the two North African Arab states of Algeria and Morocco over the disputed Western Sahara region (two thirds of which is under Moroccan control) following Algeria's recent 'live ammunition' military exercise allegedly conducted too close to their disputed border. This accusation has added to a growing Moroccan tirade against Algeria for fomenting separatism in the Moroccan Western Sahara territory close to the disputed border.



© Manohar Parrikar Institute for Defence Studies and Analyses, GIS Section. Map not to scale.

According to Moroccan press reports, Algeria conducted the military exercise on 5 May in an Algerian town south of Tindouf, which allegedly hosts separatist leaders of the Polisaria Front. Footage of the exercise broadcast on state-owned Algerian Television reportedly showed the use of heavy weaponry, including missile launchers, mounted machine guns, tanks, helicopters, and other armed vehicles. The footage also showed drones flying too close to the Moroccan Western Sahara sand wall. Amidst this charged

environment, Morocco has belatedly blamed Algiers for influencing the German Parliament (Bundestag) last year to issue a report that termed the Moroccan presence in the disputed territory as an “occupation” and “annexation”.

For its part, Algeria is seeking to revise its Army doctrine, which has so far prohibited it from taking part in military operations abroad, even as part of peacekeeping missions. Last week, Algerian President Abdelmadjid Tebboune (who succeeded Abdelaziz Bouteflika – ousted last year after remaining in power for two decades) reportedly tabled a draft amendment to Article 29 of the Algerian Constitution that seeks the lifting of restrictions on the military’s involvement in missions abroad.

It should be noted here that Algeria’s military expenditure has been reported to be the highest in Africa. At US\$10.3 billion in 2019, the Algerian defence expenditure accounts for 44 per cent of North Africa’s total defence expenditure. Algeria also bears the highest military burden in the whole of Africa by allocating six per cent of its Gross Domestic Product for defence expenditure. Finally, in 2019, North African states together spent an estimated US\$23.5 billion on defence, representing 57 per cent of Africa’s total defence expenditure.