# समाचार पत्रों से चयित अंश
# Newspapers Clippings

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The Indian EXPRESS

**Fri, *27 Dec 2019***

# What is BrahMos missile's latest upgrade?

***The successful testing of air-platform of BrahMos has further strengthened the tactical cruise missile triad land, sea and air for India***

***By Sushant Kulkarni***

Pune: Last week, the Defence Research and Development Organisation (DRDO) carried out two successful tests of the latest variant of the BrahMos missile, one from the land platform and the other from air. BrahMos, developed through a collaboration between India and Russia, is one of the most advanced weapons in India's armoury.


**The missile**

BrahMos is a cruise missile, meaning it can be guided towards a pre-determined land- or sea-based target. With a capability to attain speeds 2.8 times that of sound (Mach 2.8), BrahMos is classified as supersonic cruise missile. A newer version under development is aimed at flying at speeds greater than Mach 5. These are called hypersonic cruise missiles. Besides decreasing the reaction time of the enemy, higher speeds also substantially reduce the chances of the missile getting intercepted.

An amalgam of the names of the rivers Brahmaputra and Moskva, BrahMos is being produced by BrahMos Aerospace, a joint venture company set up by DRDO and Mashinostroyenia of Russia in 1998. The first version of the BrahMos supersonic cruise missile was inducted into the Indian Navy in 2005, meant to be fired from INS Rajput.

**The test**

While the missile has been in India's arsenal for long, it is continuously upgraded and updated with new hardware and software. This is what necessitates periodic tests of the missile.

DRDO scientists said that in every such exercise of a specific variant of BrahMos, different parameters are put to test. Though the exact details are not disclosed, additional hardware and software systems are tested based on the inputs from the user, against more complex targets, and under different atmospheric conditions. The test results and observations are important for future analysis and further advancement.

"India's missile development programme has made sure that its missiles are upgraded and new systems are also developed. BrahMos has undergone development through the early 2000s till date. Its land-to-land, submarine-fired and now air-fired variants have been developed stage by stage. Each new version has something additional compared to the previous version," said a DRDO scientist.

**Air-based test**

One of the tests last week was carried out from air, using the Sukhoi-30 MKI fighter jets of the Indian Air Force as the base. The missile destroyed a target at sea. This was the third air-based test of the missile and marked the completion of the integration of BrahMos missile with the Sukhoi-30 MKI aircraft.

In November 2017, the Indian Air Force had become the first in the world to successfully air-launch a Mach 2.8 supersonic surface-attack missile of this category from a fighter jet. It had destroyed an at sea-target in the Bay of Bengal at that time. This year, on May 22, an air-launch was tested again, this time against a land-based target in the Car Nicobar Islands region.

The BrahMos Air-Launched Cruise Missile (ALCM), as it has since been called, has been a significant addition in IAF's air combat capability from stand-off ranges. Stand-off range missiles are

ones that are launched at a distance sufficient to allow an attacking party to evade defensive fire expected from the target area. Officials said that stand-off range missiles, of which cruise missiles are a type, have been in the arsenal of all the major powers of the world.

Last week's test has again validated the ship attack capability of the ALCM. During the test, the missile was gravity-dropped from the fuselage of a Su-30 and the two-stage missile's engine fired up. Subsequently, the missile propelled towards a target ship at the sea, destroying it with pinpoint accuracy.

The successful testing of air-platform of BrahMos has further strengthened the tactical cruise missile triad — land, sea and air — for India.

*https://indianexpress.com/article/explained/what-is-brahmos-missiles-latest-upgrade-6186558/*

INDIAN DEFENCE NEWS

**Fri, *27 Dec 2019***

# DRDO readies India's next generation XRSAM-long range air defence missile system

Saurav Jha a prominent Indian Defence Journalist in his latest tweet has confirmed the development of very long range Surface to air missile with a reported range of 250 km dubbed as XRSAM by DRDO. The entire system shall be designed for transportability. Indian Air Force has accepted the Configuration.


XRSAM will be used to bridge the gap between MR-SAM (70 km) and S-400 (400 km) Air Defence System and will be using spin-off technologies developed for countries Anti-Ballistic missile Defence system-SAM will complement the S-400 systems in their role and filling the need for a robust Multi-Layered Air Defence System and a family of Ground Based Air Defence Weapon Systems (GBADWS).

The total system will be consisting of two different surface to air missiles. One will have 250 km range another will have 400 km range.

XR-SAM is actually a spin-off of the AAD-1 Endo-atmospheric interceptor with a service ceiling of 120 km and has supposedly Anti-Ballistic Missile features though its not confirmed.

India is buying two different type of surface-to-air missile for its S-400 system: 40N6 (Range: 400 km) and 48N6 Range: 250 km). XR-SAM will have active radar homing guidance GaN (Gallium Nitride ) based UHF radars aimed at engaging Aircraft, Cruise Missiles, Unmanned Drones and even ballistic targets.

DRDO is yet to confirm if XRSAM Air Defence Missile system will consist of one or two different type of missile system yet but there are unconfirmed reports indicating that system will be capable of simultaneously engaging cruise missiles, aircraft and ballistic targets, hinting of using two slightly different missile configuration of same type.

XRSAM Air Defence Missile system might utilise same network grid deployed for Anti-Ballistic missile Defence system and might be working as part of large umbrella air defence network grid consisting of ABM, S-400 and XRSAM surveillance, guidance, tracking network of radars.

The other air defence missiles being developed by DRDO are QR-SAM - Quick Reaction SAM, MR-SAM - Medium Range, Barak-8 and LR-SAM (Long Range) SAM.

XRSAM might be ready for developmental and engineering trials by 2020.

*http://www.indiandefensenews.in/2019/12/drdo-readies-indias-next-generation.html*

THE FINANCIAL EXPRESS

**Fri, *27 Dec 2019***

# Chinese military space activities push India towards space supremacy

***With resourceful commercial players like Jeff Bezos's Blue Origin and Elon Musk's Space X projects participating in such endeavours, Space is no more scientific exploration***

***By Huma Siddiqui***

Exploitation of Space to effectively safeguard national boundaries is an inevitable development in today's world. However, due to the lack of a clear consensus on the level of militarization and weaponization of Space, soon the Space around Earth itself shall be congested, with thousands of already floating space debris limiting the available orbital paths. Apart from the Space Command development, in next two decades the US has ambitions to occupy Moon first and from there gain further easier access to Mars.

With resourceful commercial players like Jeff Bezos's Blue Origin and Elon Musk's Space X projects participating in such endeavours, Space is no more scientific exploration. In the Indian context, the past efforts of the Indian Space Research Organisation (ISRO) have helped to gain Space supremacy. In reference to a Common Operating Picture for the three services, various elements have been created with the help of ISRO.

"Creation of C4ISR functionalities and Space segment infrastructure surely is the next level of additional work cut out for the newly formed Chief of Defence Staff (CDS) to achieve optimal utilisation of military resources," says Milind Kulshreshtha, C4I expert.

**India's Military Space Perspective**

World is increasingly reliant on orbiting satellites that provide communications, navigation, intelligence and other services vital to the national economy and military. To date, India has launched over a hundred space missions to build its space assets worth billions of dollars and has indigenous Defence satellites, like GSAT-7 for Navy or GSAT-6 for Armed Forces. Further, the country has multiple dual-purpose satellites (like the recent RISAT-2BR1 launched a few days back) to support mostly Communication and ISR roles. "Even though India has been a newer entrant in the militarisation of Space, the awareness on this aspect was well founded when in 2010 MoD created an Integrated Space Cell, which is jointly operated by the three service arms, the DRDO and ISRO," he says.

Earlier this year, India had successfully demonstrated its indigenous capability to intercept a satellite in Low Earth orbit under DRDO's mission Shakti programme. This ASAT weapon was a high-speed kinetic ground-launched missile which rapidly penetrated Earth's atmosphere to reach the outer space and search/ track an Indian satellite in orbit and finally engaged to destroy it.

Military Space supremacy in the Indian sub-continent was an intent shaped by China's ASAT tests in 2007, which had made India conscious of the threat perception and vulnerabilities of civilian and military space assets. The US, Russia, China and India has till now successfully demonstrated these ASAT capabilities by shooting down their own satellites to showcase their prowess.

**Indigenous Space-Based Essential Services**

India has established its own space-based PNT (Positioning, Navigation and Timing) services very similar to Galileo global navigation system of the European Union, Russia's GLONASS or China's Beidou.

"In the warships and military aircraft navigation, the PNT services are very important. This is used for Combat function computations to launch weapons like SSMs. However, in the last few decades these services have become equally essential for civilian applications too and any disruption or interference of these services can lead to millions of dollars of loss. ISRO's GPS Aided Geo Augmented Navigation (GAGAN) system augments the navigation over Indian Airspace and Indian Regional Navigation Satellite System (IRNSS) is being developed for providing an independent and self-reliant satellite-based navigation services over Indian region."

The Airport Authority of India (AAI) is closely working with ISRO to establish GAGAN to meet the Civil Aviation requirements of satellite-based navigation (SATNAV) and PNT services based on these indigenous regional satellites as part of IRNSS. GAGAN is part of the AAI project for Satellite-Based Augmentation System (SBAS) for the Indian Airspace and is inter-operable with other similar international systems like from the US, UK and Japan.

The GAGAN geo-footprint covers Africa region to Australian sub-continent for providing a seamless navigation service across the region and is first Satellite Based Augmentation System in the world to serve the Equatorial region to ensure reliability and accuracy of GPS. GAGAN though primarily meant for aviation, shall provide benefits to other services like transportation, maritime, highways, railways etc. IRNSS is another application being launched by ISRO to indigenise the satellite-based navigation system to provide positioning, navigation and timing services for users over Indian region. It is designed for two types of positioning services — Standard Positioning Service (SPS) with 20m accuracy for public use and an encrypted Restricted Service (RS) for military and other authorised users.

The recent launch of the US Space Command brings in a new domain in human warfare methodology. The task of this Space Command is to effectively utilize space-based assets to achieve combat and combat support functions in offensive and defensive roles. Even though a similar effort was launched by the US to weaponize Space in 1985, it was paused to realign military resources post 9/11 terror attack and the programme was merged with the US Strategic Command in 2002.

The revival of Space Command for warfighting capabilities are attributable to the threat perceived due to rapid progress made by Russia and China in Space technology for military purpose and the huge scientific advancements in Space engineering field in the last two decades. This has led to the multibillion dollar budget outlay for a Space Command, indicating the importance gained by Space in a nation's security on Earth, with Space emerging as the fourth dimension in Defence services (after Land, Sea and Air force).

This US Space Command may be seen as a formal extension of the Space already under exploitation for passive military activities such as ISR (Intelligence, Surveillance and Reconnaissance) missions for deterrence and countermeasures. The Space assets possessed by a hostile nation is so significant that these are themselves recognized as military targets, with several nations possessing Anti-satellite (ASAT) systems to destroy them. Furthermore, the efforts to defend Space-based asset is in progress so as to avoid a conflict that either starts or extends to Space.

**Space Command Architecture**

"A Space Command structure essentially comprises of satellites of various dimensions, in constellations possessing different orbits i.e. from Low Earth Orbit (LEO) to Geo-synchronous and others. Each satellite or a space-platform in constellation shall have onboard specialised sensors and weapons so as to detect, track and engage Earth-based target on a near Real-Time basis. Such Space assets shall be integrated with military systems on Earth to form an Integrated Enterprise Space

architecture to achieve the C4ISR capability and effectively complete the 'sensor-to-shooter' loop," according to the C4 expert.

For example, satellites in LEO orbit shall be key for detection of Hypersonic and Ballistic missile launched from anywhere on Earth. "Overall, a multi-layered distributed processing architecture with satellite elements positioned between LEO and GEO orbit with redundancy characteristics and integrated with Earth stations shall be the core of the system. Achieving an optimal network for such a role is an effort which can extend to over a decade, but is an indicator that Space is the next war-fighting frontier for humans on Earth," he adds.

*https://www.financialexpress.com/defence/chinese-military-space-activities-push-india-towards-space-supremacy/1804594/*

THE TIMES OF INDIA

**Fri, *27 Dec 2019***

# As China expands presence, India seeks to catch up in western Indian Ocean

***Sachin Parashar***

New Delhi: Looking to consolidate its presence in the western Indian Ocean, a region where China continues to rapidly expand its presence both economically and militarily, India this week appointed a defence attache for its mission in Madagascar, the island nation off the coast of east Africa.

This followed MEA's decision earlier this month to bring the countries in the region under one umbrella, namely the Indian Ocean Region Division which handles Sri Lanka, Maldives, Mauritius and Seychelles. This division will now also deal with Madagascar, Comoros and the French Reunion in the western Indian Ocean.

The government is hoping these moves will help it make strategic inroads into the western Indian Ocean, a region China sees as its gateway to Africa. The appointment of a defence attache follows defence cooperation agreements which India signed with both Madagascar and Comoros recently.

The government is also looking to use the Indian Coast Guard (ICG) more and more for its outreach to these island nations collectively known as Vanilla Islands (along with Seychelles, Mauritius and Mayotte). As a part of these efforts, an ICG ship, Vikram, arrived at Madagascar's port city Toamasina on a goodwill visit.

Both Madagascar and Comoros, which are often hit by cyclone, have expressed interest in involving the ICG more in humanitarian assistance and disaster relief operations.

In the first high-level visit by an Indian leader to Comoros, Vice President Venkaiah Naidu travelled to Comoros in October this year. The visit saw India and Comoros formally acknowledging the potential for enhancement and expansion of defence ties, especially in the maritime domain to ensure `` collaborative security and economic growth'' for all littoral countries in the Indian Ocean Region.

Four Indian naval ships had visited Madagascar this year. This followed a defence MoU India signed with Madagascar in 2018. The 2 countries are currently said to be discussing several defence projects under the MoU for capacity building and training of Madagascar's defence personnel. As a sign of the significance India attaches to western Indian Ocean, the government is also said to be considering organising a summit here with the Vanilla Island nations.

India's focus on western Indian Ocean has come not a moment too soon with China emerging as a major player in the region, which it sees as its bridge to Africa, otherwise dominated by the US and France.

India last year offered Madagascar $80.7 million Line of Credit for agriculture and mechanisation and is looking to provide countries in the region help in building infrastructure projects in energy, roads and port development.

*https://timesofindia.indiatimes.com/india/eye-on-china-india-appoints-defence-attache-in-madagascar/articleshow/72987279.cms*

The Tribune
VOICE OF THE PEOPLE

**Fri,** ***27 Dec 2019***

# Staid practices hampering defence modernisation

***Defence acquisition is a mission for committed professionals and not for administrative generalists or indeed for uniformed specialists working on rotating assignments, burdened with other chores and pressures. In the US and elsewhere, it is a profession where people train, specialise and work full-time. The US even has a Defence Acquisition University***

***By Air Marshal BD Jayal (Retd.)***

Arecent panel discussion on 'Make in India and the nation's security' featured General VP Malik, who was the Army Chief during the Kargil war. Few will forget his promise to the nation, when faced with a herculean challenge, of 'we will fight with what we have', also discreetly conveying the message to the civil leadership that the defence management, procurement and production systems had failed to deliver, leaving the Army to fend for itself. Not surprisingly, during the panel discussion, he again cautioned the people that unless India becomes self-reliant in defence, its security forces would continue to be vulnerable.

Another panellist, who had been a senior member in the defence acquisition system, suggested a dedicated and overarching organisation to deliver on defence needs and the panel moderator reflected on the irony that the country has launched ballistic missiles but is unable to make the INSAS rifle. If these are the sentiments of those who have been practitioners, then clearly the self-reliance in defence production, that has been an avowed objective of governments since independence, continues to evade us.

It is worth revisiting recent history to fathom why indigenising defence production is proving to be so challenging to successive defence ministers, all of whom mean well, and of late, appear to have taken positive steps towards this end. In 2015, the government appointed the Kelkar Committee to study the public-private partnership concept and make recommendations. This was followed by the Dhirendra Singh Committee which looked at the Make in India concept in the field of defence manufacturing and recommended a strategic partnership model wherein the government would select Indian private enterprises to exclusively make designated military platforms.

Consequently, the ninth version of the Defence Procurement Procedure or DPP-2016 devoted a chapter to strategic partnership, which followed soon after. Whilst the idea evokes optimism amongst most stakeholders because of the dynamism that the private sector will bring, as subsequent events including the drawing of the Rafale controversy into the political arena showed, any attempt to involve the private sector in the defence procurement and production domain will continue to be a challenge.

This is borne out by a recent media report highlighting how in six years, no major Make in India defence project has taken off because of bureaucratic bottlenecks, commercial and technical wrangling and a lack of requisite political push. These shortcomings have a historical reason, some going back decades and unless we attempt to understand and address these, our Make in India vision will continue to stagnate. That the Defence Minister has formed yet another committee to review the DPP-2016, indicates that formulating newer and more complex procedures appears to have become an end in itself rather than merely a means to an end.

The first challenge is to understand that defence manufacturing is in a special category and needs to be treated as such. This is best exemplified by what Jacques S. Gansler, who steered such consolidation in the US, had to say in their context: "In order to understand the economic operations of the US defence industry, it is first absolutely essential to recognise that there is no free market at work in this area and that there cannot be one because of the dominant role played by the federal

government. The combination of a single buyer, a few large firms in each segment of the industry, and a small number of extremely expensive weapon programmes, constitutes a unique structure for doing business." Drawing from this experience and applying our own conditions both in the public and private sector, we first need to arrive at our own 'unique structure' of doing business in the field of defence production which must have unanimity across the political system for it to succeed.

The second challenge dates back to the Bofors scandal of 1987 and the attendant political controversy that resulted in a defence procurement eco-system where procrastination has become the mantra. The Services have termed this as the Bofors syndrome, a mindset where few in the decision-making chain would venture to take decisions for fear of falling prey to the shenanigans of others in the complex chain of decision-making.

The unique feature of this syndrome is that it works smoothly where government-to-government procurement contracts are concerned, but goes into deep freeze when faced with an open tender purchase. But with the recent political controversy surrounding the government-to-government agreement for the purchase of Rafale aircraft, this avenue may also become a victim to the Bofors Syndrome.

The next challenge is to recognise that defence acquisition is a complex process involving multiple stakeholders and involves diverse resources and decision-making systems and should aim to provide on-performance, on-time and on-cost capabilities to the armed forces. This is a mission for committed professionals and not for administrative generalists or, indeed, for uniformed specialists working on rotating assignments, burdened with other chores and pressures. In the US and elsewhere, defence acquisition is considered a full-time profession where people train, specialise and work full-time. The US even has a Defence Acquisition University committed to creating acquisition professionals.

In the foreword to the DPP-2016, Manohar Parrikar said, "The DPP is not merely a procurement procedure, it is also an opportunity to improve the efficiency of the procurement process, usher in change in the mindset of the stakeholders and promote growth of the domestic defence industry.' The biggest challenge to the Make in India aspect in defence production, hence, remains the outdated mindset.

Whatever the official claims, to impartial observers, the underlying spirit of successive DPPs is no longer 'delivering and sustaining effective and affordable war-fighting capabilities to users within a specified time frame'. Instead, each successive version is being driven by a procedural, legal and defensive mindset where following the book appears to be an end in itself, leaving the armed forces bereft of modernisation and left to 'fight with what they have.'

*https://www.tribuneindia.com/news/staid-practices-hampering-defence-modernisation-17591*

hindustantimes

**Fri, *27 Dec 2019***

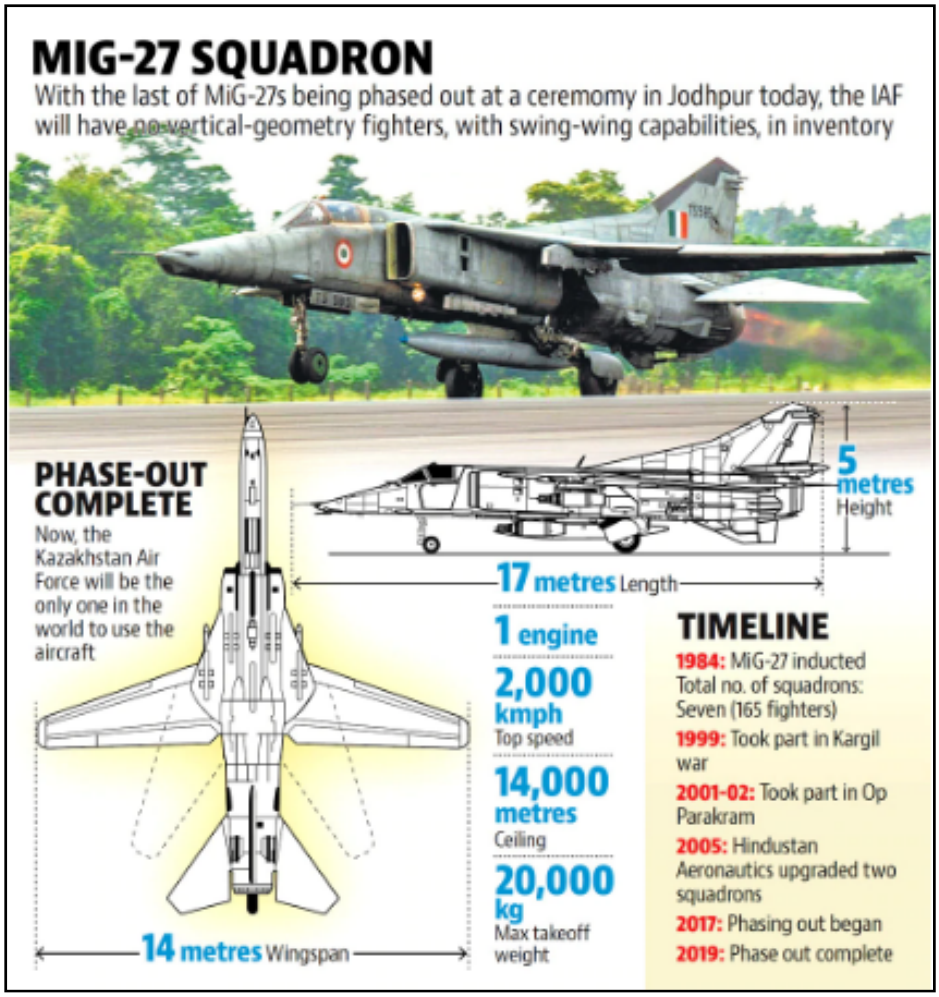
# After 35 years in action, MiG-27 last sortie today

***With IAF retiring its MiG-27s, the Kazakhstan Air Force will be the only one in the world to use the aircraft***

***By Rahul Singh***

New Delhi: The Indian Air Force (IAF) will on Friday phase out the last of its MiG-27 jets at a ceremony to be staged at the Jodhpur air force station, 35 years after it inducted the ground attack fighters. With the MiG-27 flying into the sunset, the air force will have no variable-geometry fighters -- with swing-wing capabilities -- in its inventory.

More importantly, the phasing out of the last MiG-27 squadron will bring the count of IAF's combat units to just around 30, the lowest in decades. IAF requires 42-plus combat squadrons to fight a two-front war. The phasing out of the last MiG-27 squadron serves as a reminder that IAF needs to swiftly upgrade its capabilities with new warplanes, two air force officers said, asking not to be named.




With IAF retiring its MiG-27s, the Kazakhstan Air Force will be the only one in the world to use the aircraft. "These aircraft have made immense contribution to the nation, both during peace and war. The fleet earned its glory in the historic Kargil conflict when it delivered rockets and bombs with accuracy on enemy positions," the defence ministry said in a statement released in Jaipur on Thursday.

Several MiG-27 pilots HT spoke to said the single-engine fighters were used for the first time to attack targets at high altitude during the 1999 Kargil war with Pakistan. Then flight lieutenant K Nachiketa was taken prisoner of war during the Kargil war after his MiG-27 went down.

"It was an experiment as the fighters had never struck targets at high altitudes. The MiG-27s were successful during Kargil and helped build pressure on the infiltrators. The fighters bombed out a lot of targets," said Air Marshal KK Nohwar (retd), director general, Centre for Air Power Studies. He commanded a MiG-27 squadron in the early 1990s and has flown more than 400 hours on the swing-

wing fighters. The MiG-27s could swing their wings from 16 degrees to 72 degrees depending on the mission -- flying at 45-degree sweep, making a getaway after delivering payloads at 72 degrees and taking off and landing at 16 degrees. A swing wing is important for aircraft with supersonic capabilities because such aircraft also have to sometimes fly at subsonic speeds. A swept wing reduces drag and offers a streamlined shape during supersonic flights. At subsonic cruising speeds, it could be unswept. However, subsequent platforms, with fly-by-wire abilities, made swing-wing aircraft , which were heavier and more complex, redundant.

"At 72-degree sweep, the MiG-27s could strike targets and swiftly exit the combat zone. In that wing position, the fighter looked like an arrowhead," said Nohwar. The IAF operated 165 MiG-27 fighters, around 40 of which were upgraded by state-owned Hindustan Aeronautics Limited 2005 onwards. The phasing out began a few years ago. The Number 29 Squadron in Jodhpur is the only air force unit operating the upgraded MiG-27s. The safety record has come into question over the past two decades with IAF losing a dozen jets to accidents. "The MiG-27 swing-wing fighter aircraft has been the backbone of ground attack fleet of IAF. The upgraded variant of this last swing-wing fleet has been the pride of IAF since 2006. All the other variants such as MiG-23 BN and MiG-23 MF and the pure MiG-27 have already retired from the IAF," a ministry spokesperson said. He added that fleet took part in Operation Parakram, the military's largest mobilisation after the 1971 Indo-Pak war, in 2001-02. HAL gave the aircraft an avionics upgrade, superior navigation systems and improved targeting accuracy with the integration of Israeli and Russian technology. A serving IAF officer and a MiG-27 pilot said the phasing out of the fighters would be an important part of the country's military aviation history.

*https://www.hindustantimes.com/india-news/after-35-years-in-action-mig-27-last-sortie-today/story-5vlWkeR7cWY1N9aeVtOhrL.html*

THE TIMES OF INDIA

**Fri, *27 Dec 2019***

# India-China military ties 'improving', thanks to Modi, Xi efforts: PLA

Beijing: China's People's Liberation Army (PLA) said on Thursday that its ties with the Indian military are "improving" with the strategic dialogue, practical cooperation and exchanges, "thanks" to the efforts of Prime Minister Narendra Modi and President Xi Jinping.

Providing an upbeat picture of the relations between the two militaries, which shared arduous and at times testing ties guarding the 3,488-km long Line of Actual Control (LAC), defence spokesperson Col Wu Qian said the just concluded joint counter-terrorism drills in, and the two militaries have plans to conduct various exchanges and celebration activities," he said.

"We are willing to work together with the Indian side to follow the guidance of our heads of state and promote the military to military relationship continue to develop along the right track and make more contributions to the growth of the bilateral relations, " he said.

On December 21, the two sides concluded the 8th round of their Hand-in-Hand joint exercise focussing on counterterrorism joint training. The drills were successfully concluded in Shillong, Meghalaya drawing a "full circle" for the military engagements, Col Wu said.

"This joint training is to implement the consensus of the national and military leaders of the two countries and to strengthen the friendship of their troops and to promote regional peace and stability, " he said.

"During the joint training, soldiers from the two sides had mixed team training exercises and exchanged experiences in counter terrorism operations, and humanitarian assistance, and disaster relief. They also had exchanges in culture, history, sports and culinary areas, " he said.

"Through their joint training, the two sides improved their capabilities to jointly address security threats and conduct diversified military missions. The exercises and training showed determination of the two sides to fight terrorism and to protect stability in the region. It also helped to strengthen mutual trust and cooperation between the two militaries," he said.

*https://timesofindia.indiatimes.com/india/india-china-military-ties-improving-thanks-to-modi-xi-efforts-pla/articleshow/72982741.cms*

the pioneer

**Fri, *27 Dec 2019***

# India, Japan vow to deepen maritime cooperation

India and Japan have vowed to deepen maritime cooperation and also held consultations on disarmament, non-proliferation and export control.

The 5th Round of India-Japan Maritime Affairs Dialogue was held in Tokyo on Tuesday with the Indian delegation led by Indra Mani Pandey, Additional Secretary (Disarmament and International Security Affairs), Ministry of External Affairs, while Japanese delegation was led by Ambassador Yamanaka A Osamu, Deputy Assistant Minister, Deputy Director-General in Foreign Policy Bureau.

The two sides exchanged views on various topics of mutual interest in maritime domain and identified the means for further strengthening their maritime cooperation, a Ministry of External Affairs statement said.

Both sides reiterated the importance of the dialogue as an important mechanism between the two countries for consultations on issues of mutual interest in maritime affairs and agreed to hold the next round of talks on a mutually convenient date in India, it said.

Meanwhile, the 8th Round of India-Japan bilateral consultations on disarmament, non-proliferation and export control was held in Tokyo on December 23.

The Indian side was led by Pandey, while Japanese delegation was headed by Ambassador Hisajima Naoto, Director-General, Disarmament, Non-Proliferation and Science Department, Ministry of Foreign Affairs.

During the consultations, the two sides exchanged views on issues of mutual interest in these fields, the MEA said.

*https://www.dailypioneer.com/2019/india/india--japan-vow-to-deepen-maritime-cooperation.html*

DefenceNews

**Fri, *27 Dec 2019***

# Mass deliveries of fifth-generation Su-57 fighter to Russian troops to begin in 2020

The first large-scale deliveries of the fifth-generation Su-57 fighter jet to Russia's Aerospace Force will begin already next year, CEO of the state hi-tech corporation Rostec said in a material published by RBC media group on Thursday.

"Large-scale work awaits us in 2020 to stabilize the aircraft industry… The first large-scale deliveries of the fifth-generation Su-57 aircraft will begin. Of course, these are challenging tasks that will truly mobilize us," the chief executive said, commenting on the plans for the next year.

Russia's Sukhoi Aircraft Company signed a contract with the Defense Ministry at the Army international arms show near Moscow on August 22, 2018 for the delivery of the first two Su-57 fighters to the Russian troops. Then-Deputy Defense Minister Alexei Krivoruchko said that the first serial-produced Su-57 out of 15 such planes scheduled for delivery was set to arrive for the troops in 2019.

At the Army-2019 international arms show, the Defense Ministry signed a new contract with the Sukhoi Aircraft Company on the manufacture and the delivery of 76 Su-57 multirole fighters for the Russian troops.

The Su-57 is a fifth-generation multirole fighter designed to destroy all types of air, ground and naval targets. The Su-57 fighter jet features stealth technology with the broad use of composite materials, is capable of developing supersonic cruising speed and is furnished with the most advanced onboard radio-electronic equipment, including a powerful onboard computer (the so-called electronic second pilot), the radar system spread across its body and some other innovations, in particular, armament placed inside its fuselage.

The Su-57 took to the skies for the first time on January 29, 2010. Compared to its predecessors, the Su-57 combines the functions of an attack plane and a fighter jet while the use of composite materials and innovation technologies and the fighter's aerodynamic configuration ensure the low level of radar and infrared signature.

The plane's armament will include, in particular, hypersonic missiles. The fifth-generation fighter jet has been successfully tested in combat conditions in Syria.

*https://www.defencenews.in/article/Mass-deliveries-of-fifth-generation-Su-57-fighter-to-Russian-troops-to-begin-in-2020-808601*

THE TIMES OF INDIA

**Fri, *27 Dec 2019***

# China, Russia, Iran to hold joint naval drills

Beijing: China, Russia and Iran will hold joint naval drills starting Friday in the Gulf of Oman, Beijing and Tehran said, at a time of heightened tensions since the US withdrew from a landmark nuclear deal with Tehran. Set to take place from December 27 to 30, the military exercises aim to "deepen exchange and cooperation between the navies of the three countries", Chinese defence ministry spokesman Wu Qian told reporters Thursday.

Wu said the Chinese navy would deploy its Xining guided missile destroyer - nicknamed the "carrier killer" for its array of antiship and land attack cruise missiles - in the drills.

But he did not give details on how many personnel or ships would take part overall.

For Iran, the drill's purpose was to bolster "international commerce security in the region" and "fighting terrorism and piracy," said senior armed forces spokesman Brigadier General Aboldazl Shekarchi.

The exercise would "stabilise security" in the region and benefit the world, state news agency IRNA quoted him as saying on Wednesday.

The US reimposed crippling sanctions on Iran in May last year after withdrawing from the international deal aimed at tackling the Islamic Republic's nuclear programme, prompting Tehran to hit back with countermeasures.

Remaining parties to the badly weakened 2015 deal include China, Russia, Britain, France and Germany.

China's foreign minister said the exercises were part of "normal military cooperation" between the three countries.

In June, US President Donald Trump authorised a military strike after Iran shot down a US drone, only to call off the retaliation at the last moment.

*https://timesofindia.indiatimes.com/world/china/china-russia-iran-to-hold-joint-naval-drills/articleshow/72979484.cms*