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Army, Air Force to Take Turns at Helming 2 of India's Proposed Theatre Commands, Navy to Head Third

India is working on setting up two integrated theatre commands to take on Pakistan and China with the first to come up opposite western borders as well as a maritime theatre command, ThePrint has learnt.

Jaipur, home to the Army's South Western Command (SWC), will be the headquarters for the theatre command that will look after Pakistan. The other theatre command to take care of the borders with China will come up in Lucknow, which currently is the headquarters of the Central Command.

Incidentally, both the South West and the Central commands had carried out a detailed study on the theatre command structure earlier.

Sources in the defence and security establishment said that the maritime theatre command to look after India's maritime and coastal interests will come up in Karnataka's Karwar, which is close to Goa.

While the maritime command will be headed by a Naval officer, they said, the other two will see rotational appointments from the Army and the Air Force.

As reported by ThePrint last month, the Army, Navy and Indian Air Force (IAF) are "99 per cent" on board the broad contours of the theatre commands after months of dithering, multiple plans and objections.

The sources said that Chief of Defence Staff (CDS) General Anil Chauhan has been leading the discussion on theatre command with the service chiefs, while the Department of Military Affairs (DMA) is carrying out multiple meetings with various stakeholders.

The first integrated theatre command in Jaipur will be a test bed and will take into account the shortcomings, fine tuning needed and the challenges that come about, they added. The Army's South Western, Western and Southern Commands and elements from the Northern Command will come under the Jaipur-based theatre command, apart from the IAF's Western and South Western Air Commands and elements from the Central and Southern Commands.

"Eventually, all the operational commands of the Army, the Air Force and the Navy will be amalgamated into the three theatres," a source said.

All the theatre commanders will report to the CDS, the sources said, adding that there is a likelihood that they will eventually be four-star officers, if not from the beginning.

There will be other joint commands, like those for logistics, training, cyber and space, missiles and intelligence, but will be headed by three-star officers and will also report to the DMA.

Other joint commands, like those for logistics, training, cyber and space, missiles and intelligence, will be headed by three-star officers. They will report to the Chief of Integrated Defence Staff to the Chairman Chiefs of Staff Committee (CISC) who come under the CDS.

The service chiefs will be responsible for raise and sustenance issues.

As for the leader of the first theatre commander, the sources said that a decision is yet to be taken by the defence brass.

They said that there are two options — Lt. Gen. B. S. Raju, who currently heads the South Western Command, or Lt. Gen. R. P. Kalita, who is currently the Eastern Army Commander.

Going by the principle of seniority, then Lt. Gen. Kalita makes it even though the two senior officers are from the same batch. However, even if any of them makes it to the new position, the retirement age will be extended to 61 since they are to retire by October and December, the sources said, adding continuity was important to set the ball rolling.

<https://theprint.in/defence/army-air-force-to-take-turns-at-helming-2-of-indias-proposed-theatre-commands-navy-to-head-third/1664937/>



Thu, 13 Jul 2023

Big-ticket Defence Deals Likely During PM Modi's Paris Visit

As the India-France strategic partnership hits the quarter-century mark, it has been given “strong guidance” by the “common vision” of Prime Minister Narendra Modi and French President Emmanuel Macron, Foreign Secretary Vinay Mohan Kwatra said on Wednesday, ahead of Mr. Modi's two-day visit to France, starting July 13.

Mr. Modi's schedule in Paris includes interactions with the French President and other leading figures in the French government and business world, with the high point being the Bastille Day military parade, where he will be the chief guest.

“India and France have a long standing strategic partnership which actually captures the series of strategic convergences that both countries have on a range of issues. This year marks the 25th anniversary of our strategic partnership. There are several pillars of our strategic partnership and each of these pillars would come up for stock taking under the bilateral talks that the two leaders would hold,” Mr. Kwatra said, laying out the broader strategic backdrop.

Military cooperation

The PM's visit to France is being interpreted as a step towards closer military cooperation between the two countries, as India is gearing up to acquire 26 new Rafale-M fighter jets that will fit into India's maritime military plans. The Rafale-M proposal was cleared by the Defence Procurement Board in the run-up to the visit, and the Defence Acquisition Council — the highest decision-making body on procurement in the Defence Ministry — is expected to review it at a meeting on Thursday.

There are several other defence deals in the pipeline which could see movement during Mr. Modi's visit, including a proposal to buy three more Scorpene-class conventional submarines for the Navy,

and a plan to jointly develop fighter jet engines to power fifth-generation advanced medium combat aircraft, and the twin-engine deck-based fighter to operate from carriers.

The two delegations will discuss cooperation on civil nuclear issues, space, cyber security technology, counter terrorism, climate change, renewable energy, and the international solar alliance. “Reorientation of our security partnership in line with Atmanirbhar Bharat [Self-reliant India] objectives, supply chain integration between the industry and business segments of the two countries would all form part of discussions under the bilateral talks between the two leaders,” Mr. Kwatra said, describing economic ties between India and France as being in a state of “robust upswing”.

Bastille Day participation

“As part of our participation in the Bastille Day celebrations, a large tri-services contingent from India will also participate in the Bastille Day parade, along with three Indian Air Force aircraft which would also take part in the fly past,” he added. Marching contingents of the three services and a military band of 242 personnel will take part in the parade. Each service contingent will include 68 personnel, while the military band has 38. Indigenous stealth destroyer INS Chennai arrived in France on Wednesday, coinciding with the French national day.

Upon arrival in Paris at mid-day on Thursday, Mr. Modi’s first meeting will be with French Prime Minister Élisabeth Borne, after which he will meet with the President of the French Senate, Gérard Larcher. He will attend an interaction with members of the Indian community on Thursday evening, which will be followed by a private dinner to be hosted at the Elysee Palace by Mr. Macron.

Ukraine crisis talks

Mr. Modi and Mr. Macron have maintained close contact since they first met in June 2017. More recently, both sides have held discussions on a solution to the crisis in Ukraine, which is expected to form the backdrop of the interaction between the two delegations. The Paris visit comes just months after the two leaders met on the sidelines of the G-7 summit in Hiroshima on May 20.

Though Paris and several other major French cities have recently experienced serious anti-police riots, Mr. Kwatra said that the shadow of the riots would not fall on Mr. Modi’s visit.

Mr. Modi’s schedule for July 14 includes a meeting with the President of the French National Assembly Yaël Braun-Pivet. “The visit of the Prime Minister to France would be both rich in substance and also in form and we believe that it will set up new benchmarks in our strategic partnerships in the years ahead,” Mr. Kwatra said.

UAE visit

Following the visit to Paris, Mr. Modi is scheduled to arrive in the United Arab Emirates on July 15 where he is expected to meet President Sheikh Mohamed Bin Zayed Al Nahyan, followed by a ceremonial welcome and bilateral talks. The UAE and India concluded a comprehensive economic partnership agreement in February 2022, which has given a new dimension to the close partnership between the two countries. The UAE is a “guest country” at the G-20 summit to be hosted in Delhi in September.

<https://www.thehindu.com/news/national/big-ticket-defence-deals-likely-during-pm-modis-paris-visit/article67072616.ece>

More Submarines, Jets for Indian Navy on Cards as PM Narendra Modi Visits France

Indian Prime Minister Narendra Modi heads to France on Thursday to deepen ties with New Delhi's oldest strategic partner in the West, with a slew of high-profile defence deals expected and a new joint plan to ensure stability in the Indo-Pacific.

Modi has been invited as the guest of honour at the Bastille Day celebrations by French President Emmanuel Macron. Units from India's army, navy and air force will also participate in the parade, including two of the 36 Rafale fighter jets India bought in 2015 for nearly \$9 billion.

The visit will "provide an opportunity to chart the course of the partnership for the future across diverse sectors such as strategic, cultural, scientific, academic and economic cooperation," the Indian government said in a statement on Wednesday.

This year marks 25th anniversary of the strategic partnership between the two countries, and the announcement of the new military deals will burnish the deepening defence ties between the two nations.

France has been one of India's closest partners in Europe for decades. Paris was the only western capital to not impose sanctions on New Delhi after India conducted nuclear tests in 1998.

Ten years later, when India got Nuclear Suppliers Group waiver for its civil nuclear plans, France was the first country to sign an agreement.

India has relied on French fighter jets for four decades now. Much before buying Dassault Aviation's Rafale in 2015, India bought Mirage jets in 1980s, which still comprise two squadrons of the air force.

In 2005, India bought six Scorpene-class diesel submarines from France for 188 billion rupees (\$2.28 billion) to be built in India by Mazagon Dock Shipbuilders (MDL) in partnership with the French Naval Group, the last of which will be commissioned next year.

The ageing fleet of India's Russian-made platforms, Moscow's inability to perform maintenance work, and delays in India's indigenous manufacturing plans for parallel platforms have necessitated the two new defence deals.

For submarines, India is expected to buy three more Scorpene submarines, which will again be made by MDL and the Naval group, government sources in New Delhi and Paris said. The price of the deals has yet to be agreed.

India is also expected to agree to buy 26 Rafale jets, the sources said, without giving the deal's expected value.

The marine version of Dassault's Rafale jets, intended for India's first indigenous aircraft carrier commissioned in August 2022, outperformed the American SuperhornetF18s in tests last year for Indian requirements. During the visit, Macron will host Modi for a private dinner, as well as a state banquet at the Louvre Museum. Modi will also meet other political leaders, selected French personalities and business leaders, and interact with the Indian diaspora.

Both India and France through its island territories have deep interests in the Indian Ocean and are concerned about China's growing assertiveness in the region. Details of an announcement on a plan for the region are not known.

The visit comes less than a month after President Joe Biden hosted Modi for a state visit, during which the U.S. offered critical military technology including fighter jet engines and high altitude drones to India.

Last week Modi chaired an online meeting of leaders of the Shanghai Cooperation Group members, which included Russian President Vladimir Putin and China's Xi Jinping.

Macron, Biden, Putin and Xi, along with leaders of the other G20 members countries are expected to visit New Delhi in September for its summit to be hosted by India as its head this year.

The Indian leader will also later visit the UAE and meet President Sheikh Mohamed bin Zayed Al Nahyan, who is also the ruler of Abu Dhabi.

<https://economictimes.indiatimes.com/news/defence/more-submarines-jets-for-indian-navy-on-cards-as-pm-narendra-modi-visits-france/articleshow/101696777.cms>

ThePrint

Thu, 13 Jul 2023

Indian Rafale Jets Taking Part in Bastille Day Flypast will Send Message that India-France Ties are Strong, Close: Envoy Jawed Ashraf

Indian Rafale jets taking part in the Bastille Day flypast over the Champs Elysees, Paris, will send a message across the world that India-France ties are very strong and close, said Indian Ambassador to France Jawed Ashraf on Wednesday.

In an interaction with ANI, Ashraf said that the flypast and marching by the IAF air warriors on Bastille Day follow a long association that the two nations share, especially in the field of air power.

The Indian envoy also termed Rafale being part of the Bastille Day flypast as “very important.”

“Any ship could have come from India. We have many ships. What is important is that both our soldiers have a lot of inter-operability, a lot of trust and in this way, this Bastille Day parade sends a message to the whole world that the partnership between India and France is very close,” he told ANI.

Ashraf also underlined that the India-France partnership is about the power of values. “The military relations that we have are to protect our values, without claiming or suppressing anyone else. We call it Prime Minister’s partnership of values,” he added.

When asked about the procurement of 26 Rafale fighter aircraft and three Scorpene class conventional submarines from France, the envoy declined to comment, saying there is “a due process and approval procedure” in such deals.

Notably, Indian Rafale jets that will take part in the Bastille Day flypast over the Champs Elysees, Paris, reached France a couple of days back.

Taking to Twitter, France's ambassador to India, Emmanuel Lenain said, "A warm welcome to France for the Indian Rafale jets that will soar in the skies of Paris on Friday for #BastilleDay!"

The French traditional military parade is held in Paris during Bastille Day on July 14. PM Modi's visit will coincide with the 25th anniversary of the "strategic partnership" between France and India.

At the invitation of France President Emmanuel Macron, PM Modi will be the Guest of Honour on France's National Day on July 14.

Also, in a major development, the Defence Ministry has given an initial nod to the plans to buy 26 Rafale fighter aircraft and three Scorpene class conventional submarines from France.

The proposals were approved by the Defence Procurement Board of the Defence Ministry and will now be taken up by the Defence Acquisition Council for discussion most likely on July 13, government sources told ANI.

The deals, once accorded Acceptance of Necessity by the DAC, are likely to be announced during Prime Minister Narendra Modi's visit to France this week, the sources said.

As per the proposals, the Indian Navy will get 22 single-seated Rafale Marine aircraft along with four trainer aircraft.

The Navy has been pressing for acquiring these fighter aircraft and submarines urgently as they have been facing shortages in view of the security challenges around the country.

The aircraft carriers INS Vikramaditya and Vikrant have been operating the MiG-29s and need the Rafales for operations on both carriers.

Meanwhile, the three Scorpene class submarines would be acquired under the repeat clause by the Navy as part of Project 75 where they would be built in the Mazagon Dockyards Limited in Mumbai.

The deals are estimated to be worth over Rs 90,000 crore but the final cost would be clear only after the contract negotiations are completed which will be held after the deal is announced.

India is likely to seek price concessions in the deal and would be insisting on having more 'Make-in-India' content in the plan, sources said.

Indian envoy Ashraf also said Prime Minister Narendra Modi attending Bastille Day celebrations in France is a sign that the India-France strategic partnership is very close, strong and its role will increase in time to come.

PM Modi will be the Guest of Honour at the Bastille Day Parade of France on July 14, where the tri-services of the Indian armed forces contingent would be participating.

French National Day, or Bastille Day, occupies a special place in French consciousness. This day commemorates the Storming of the Bastille Prison in 1789 during the French Revolution. The Bastille Day Parade is the highlight of the Bastille Day Celebrations.

Meanwhile, Foreign Secretary Vinay Mohan Kwatra on Wednesday said Prime Minister Narendra Modi will leave for his France, UAE visit on Thursday.

The Prime Minister will first visit France from July 13-14 at the invitation of French President Emmanuel Macron.

<https://theprint.in/world/indian-rafale-jets-taking-part-in-bastille-day-flypast-will-send-message-that-india-france-ties-are-strong-close-envoy-jawed-ashraf/1666976/>

Atmanirbhar Emphasis on France Defence Tie-ups

Prime Minister Narendra Modi and French President Emmanuel Macron will look to further enhance defence cooperation between India and France by focusing on co-development, co-designing and co-production of equipment and exploring ways to link this cooperation with India's Atmanirbhar Bharat, the government said on Wednesday ahead of Modi's departure for Paris.

Modi will kick off his sixth visit to France, a long-standing strategic partner of India, on Thursday with a meeting with French Prime Minister Elisabeth Borne before joining a private dinner that Macron will host for him in the evening at the Elysee Palace.

Modi will be the 'Guest of Honour' at the Bastille Day Parade on July 14, where a tri-services Indian armed forces contingent would be participating. On the same day, Modi will hold formal talks with Macron who will host a state banquet later in the evening at the Louvre.

The Prime Minister is also scheduled to meet the Presidents of the Senate and the National Assembly of France. He will separately interact with the Indian diaspora in France, CEOs of Indian and French companies, and prominent French personalities.

The visit is likely to see substantive outcomes in defence, energy, space and also people-to-people cooperation with France looking to make it easier for Indian students to study in France.

A deal for the purchase of 26 Rafale-M fighter jets by the Indian Navy is expected to be the most significant outcome, if it's announced during the visit. The two countries are also likely to announce an agreement for jointly developing an aircraft engine in India.

France has promised to support India's Atmanirbhar initiative like no other country with more than considerable transfer of technology and proposals for co-development of next generation defence equipment.

"It is natural that when two leaders meet, there will be discussions on how to take the defense cooperation between the two countries in the direction of co-production, code-signing, co-development, and how to align it with the Atmanirbhar Bharat initiative," said foreign secretary Vinay Kwatra ahead of the visit.

Vinay Kwatra said the visit will be rich in "substance" and set new benchmark for strategic partnership between the two countries. He described the recent riots in several French cities as an "internal matter" and said that had no impact on the visit.

On the 1,650MW nuclear power reactors in Jaitapur in Maharashtra, he said both sides are engaged in intense discussions to resolve all issues including those relating civil nuclear liability, cost and techno commercial matters

The Defence Acquisition Council (DAC) headed by defence minister Rajnath Singh is expected to give a go ahead to the major defence deals that are expected to be announced during Modi's visit to Paris. "This year marks the 25th anniversary of the India-France Strategic Partnership, and Prime Minister's visit will provide an opportunity to chart the course of the partnership for the future across diverse sectors such as strategic, cultural, scientific, academic and economic cooperation," said the government in a statement.

<https://timesofindia.indiatimes.com/india/atmanirbhar-emphasis-on-france-defence-tie-ups/articleshow/101710900.cms>

Wed, 12 Jul 2023

JIMEX 23: Unique and Strong Maritime Exercise Strengthening India-Japan Naval Cooperation

The recently concluded 7th edition of the Japan India Maritime Exercise 2022 (JIMEX 23) showcased a unique and strong display of naval cooperation between the Indian Navy and the Japan Maritime Self Defence Force (JMSDF). Held in the Bay of Bengal, the exercise witnessed advanced-level exercises in surface, sub-surface, and air domains, along with the participation of ships, submarines, fighter aircraft, and maritime patrol aircraft. JIMEX 23 marked a significant milestone in enhancing interoperability and revalidating common procedures between the two navies.

The recently concluded 7th edition of the Japan India Maritime Exercise 2022 (JIMEX 23) showcased a unique and strong display of naval cooperation between the Indian Navy and the Japan Maritime Self Defence Force (JMSDF). Held in the Bay of Bengal, the exercise witnessed advanced-level exercises in surface, sub-surface, and air domains, along with the participation of ships, submarines, fighter aircraft, and maritime patrol aircraft. JIMEX 23 marked a significant milestone in enhancing interoperability and revalidating common procedures between the two navies.

JIMEX 23 served as a platform for the Indian Navy and JMSDF to engage in complex exercises, demonstrating their expertise and cooperation in all aspects of maritime warfare. The exercises were conducted across surface, sub-surface, and air domains, encompassing a wide range of scenarios and tactical maneuvers. The involvement of fighter aircraft, maritime patrol aircraft, and a submarine further added to the complexity and realism of the exercises.

The successful conclusion of JIMEX 23 underscored the commitment of both navies to enhance interoperability and strengthen the common procedures shared between them. The exercises served as an opportunity to refine joint operational tactics, communication protocols, and coordination, ultimately bolstering the ability of the Indian Navy and JMSDF to operate seamlessly together.

The significance of JIMEX 23 extends beyond the exercise itself, highlighting the strong naval cooperation between India and Japan. Through exercises like these, both nations foster mutual trust, understanding, and synergy, paving the way for deeper strategic ties and joint operations in the future.

The exercise's success also serves as a testament to the growing strategic partnership between India and Japan. As two maritime nations with shared security concerns and a commitment to the rules-based international order, the naval cooperation demonstrated during JIMEX 23 reinforces their common objectives in maintaining peace, stability, and prosperity in the Indo-Pacific region.

JIMEX 23 serves as a unique and strong example of the growing maritime collaboration between India and Japan. The exercise showcased the readiness and capabilities of both navies to address evolving security challenges and demonstrated their commitment to maintaining a secure and open maritime environment.

The successful conclusion of the 7th edition of the Japan India Maritime Exercise 2022 (JIMEX 23) marks a significant milestone in the naval cooperation between India and Japan. Through complex exercises conducted in the surface, sub-surface, and air domains, both navies demonstrated their interoperability and commitment to shared maritime security objectives. The

exercise highlighted the strength of the India-Japan strategic partnership and their collective efforts to ensure peace, stability, and prosperity in the Indo-Pacific region. JIMEX 23 sets a unique and strong precedent for future naval cooperation, fostering mutual trust, understanding, and collaboration between the Indian Navy and the Japan Maritime Self Defence Force.

<https://www.financialexpress.com/business/defence-jimex-23-unique-and-strong-maritime-exercise-strengthening-india-japan-naval-cooperation-3166338/>



Thu, 13 Jul 2023

Senate Defence Act Draft Opens Door for Deeper US Cooperation with India

As part of the National Defence Authorisation Act (NDAA), the umbrella legislation that determines the United States (US)'s defence budget and priorities, the Senate Armed Services Committee (SASC) has asked Pentagon to ensure that India is “appropriately considered for security cooperation benefits” consistent with its status as a major defence partner.

In particular, the draft NDAA asks the US defence secretary to deepen cooperation with India in areas such as artificial intelligence (AI), undersea domain awareness, air combat and support, munitions, and mobility. It lists out a set of areas, including counter-terror operations, maritime and border security operations, and military intelligence operations where the Pentagon should consider a reciprocal agreement with India to build capacity.

It asks Pentagon to explore eligibility for Indian companies to bid on contracts for “maintenance, repair and overhaul” of Department of Defence (DOD)'s equipment located outside the US, a significant step which, if realised, will open up doors for India's mushrooming private defence firms.

To be sure, this version of NDAA, while passed on a bipartisan basis by the Senate Armed Services Committee, is not the final act yet. The House of Representatives is in the process of finalising its own version of the NDAA, and eventually, the two versions, passed by the two chambers, will be reconciled in conference before the text is finalised.

The build-up

But the Senate's version is understood to have the sanction of the chamber's top political leadership. It is based on inputs from DOD and is a result of the intense engagement between the US Congress and India in recent months.

The Senate majority leader, Chuck Schumer, led what was the most high-powered Congressional delegation to India in diplomatic history earlier this year, where he highlighted the centrality of the partnership with India in the competition with China and met Prime Minister Narendra Modi. Jack Reed, the chair of the SASC, was a part of the delegation.

During his state visit to Washington DC last month, Modi addressed a joint meeting of the Senate and the House where his reference to deeper India-US defence ties was greeted with a standing ovation and applause. He met Schumer during an interaction with the Congressional leadership in the Capitol and also interacted with Schumer at the state dinner hosted by President Joe Biden, where the Senate majority leader was seated at the head table with the President and the PM.

The two countries have also unveiled and operationalised the initiative on critical and emerging technologies (ICET), under which a key component is a defence industrial cooperation road map. During defence secretary Lloyd Austin's visit to New Delhi in June, this road map was finalised and during Modi's visit, in a rare gesture, the White House expedited the approval of the co-production of GE's F414 jet engines in India with an unprecedented element of tech transfer.

The NDAA text

The NDAA draft asks the defence secretary, in coordination with the Secretary of State and other relevant heads of agencies, to explore four particular lines of effort to ensure India benefits from its status as a major defence partner.

The first is "eligibility for funding to initiate or facilitate cooperative research, development, testing, or evaluation projects" with the DOD in AI, undersea domain awareness, air combat, and support, munitions, and mobility.

The second is "eligibility to enter into reciprocal agreements with the Department of Defence for the cooperative provision of training on a bilateral or multilateral basis in support of programs for the purpose of building capacity". It specifies eight areas of cooperation in this regard, including counterterrorism operations; counter-weapons of mass destruction operations; counter-illicit drug trafficking operations; counter-transnational organised crime operations; maritime and border security operations; military intelligence operations; air domain awareness operations; and cyberspace security and defensive cyberspace operations.

The third line of effort that the Senate asks the Pentagon to pursue with regard to India is its "eligibility to enter into a memorandum of understanding or other formal agreement with the Department of Defence for the purpose of conducting cooperative research and development projects on defence equipment and munitions".

And finally, it mandates DOD to explore "eligibility for companies from India to bid on contracts for the maintenance, repair, or overhaul" of DOD equipment located outside the US.

The NDAA draft also instructs the defence secretary to provide, by March 1, 2024, a briefing to the relevant committees of the Senate and House on the status of "security cooperation activities with India" in the areas outlined above.

Explaining the significance of the proposed legislation, Sameer Lalwani, a senior expert on South Asia at the US Institute of Peace, who has extensively worked on India's defence architecture and the bilateral relationship, said, "Following a highly substantive state visit by Prime Minister Modi, this is welcome reciprocal move by the US Congress to deepen the US-India defence relationship. The legislation goes beyond expressions of optimism to provide guidance on specific modalities and areas of concentration."

Highlighting the next steps, Lalwani added, "But after assessing India's eligibility, Congress may then have to tackle potential regulatory or procedural hurdles and appropriate the requisite resources to ensure these efforts of joint research, training, and sustainment remain robust and sustained over time."

<https://www.hindustantimes.com/india-news/us-senate-urges-pentagon-to-deepen-security-cooperation-with-india-in-defence-and-technology-fields-101689135321822.html>

Anti-Satellites(ASAT) Weapons and Hypersonic Missiles: Emerging Trajectories for Future Conflict

Maj Gen (Dr) Ashok Kumar, VSM(Retd)

As the nations advance technologically , economically and educationally, invariably they focus on their military strength in all possible domains. This is done not only to defend one's own national interests within the country but also outside the country. Invariably, some of these assets have dual use profile wherein one facet is utilised for the developmental activities while the second facet has military capability linkages.

Launch of satellites by various countries in the world has revolutionised space in an unprecedented manner. Today, not only the developed nations but also all the nations have the option to put their satellites in orbit for meeting their national requirements. Miniaturisation of satellites along with reducing costs of the launch have resulted in a large number of stakeholders putting their satellites into space. In addition to the Government organisations, there is a growing presence of private players as well in this field.

Large number of satellites in space with multiple sensors have given wide capabilities to the nations owning these satellites. Some of these are available on commercial basis as well wherein these can be hired on the charged basis. As countries have their exclusive satellites for the space exploration as well as leveraging it for the warfighting for employment of long range vectors (nuclear as well as conventional), they are also being seen as potential targets for any future conflicts. This has resulted in leading countries of the world to develop ASAT capabilities for utilisation against adversaries while protecting their own assets. ASAT capabilities have been possessed by four countries in the world so far to include the USA, Russia, China and India. It has been currently demonstrated by being used against their own satellites by shooting them down but since the capability has been developed and tested, it can be used against satellites of an adversary country should the need arise. Israel is also supposed to have developed this capability though its overt profile is not known.

Russia tested ASAT as early as in 1968 in some form and the capability was declared operational in 1973. It carried out the destruction of a satellite physically in Nov 21. As against this, the USA destroyed a physical satellite using ASM-135 which was released from a F- 15 Eagle aircraft in Sep 1985. China has been focussing more on weaponization of these capabilities as this capacity is seen to be an important constituent for a nation's military power especially if it aspires to become a superpower at some date. With this aim in mind towards its aspirational growth, China used SC-19 missile system in Jan 2007 to shoot its own ageing satellite to prove and demonstrate this capability. SC-19 is using the DF- 21 missile system to execute these tasks. The focus of China is most pronounced in the field of ASAT weaponization as compared to any other country in the world. India has become the fourth country in the world to demonstrate this capability after Russia, USA and China wherein it carried out ASAT test in Mar 2019 as part of its ballistic missile defence as part of Mission Shakti.

Since ASAT capabilities are primarily leveraging the advanced missile technologies, the countries having developed missile technologies are likely to develop ASAT capabilities as well sooner than the later should they decide. ASAT has a wide range of applications to include defensive as well as

offensive uses. While India has demonstrated this capability and showcased it as part of 'ballistic missile defence', it remains predominantly a defensive orientation as of now.

Focus on hypersonic missiles

The nations are focussing on hypersonic missiles to carry forward their offensive intent. Hypersonic missiles travelling at Mach 5 and beyond speeds are difficult to detect and reach their targets much before the activation of their countermeasures being effective. There are a number of countries in the world to include Germany, Australia, North Korea, South Korea, Iran, Israel, Brazil, Japan and India which are actively pursuing this capability. As against this, Russia, USA and China have already developed these hypersonic missiles. In fact, there is reported use of these missiles during the ongoing Russia-Ukraine war. Though objective inputs about the efficacy of these missiles are not available, they appear to generate a lot of interest between the competing nations. It is a well known fact that China is attempting to become the superpower of the world wherein it wants to replace the USA from this pole position. In addition to multiple other fields, China has focussed substantially on development of hypersonic missiles where it appears to have moved ahead of the USA also in this particular area. The development has resulted in the USA re-focusing in this particular field of hypersonic missiles. An indirect race between the USA and China has already commenced.

Clubbing ASAT and hypersonic missiles has been done as both these are based on leveraging the advanced missile technology. While they may have distinct roles but there are overlapping areas as well in their employment. The changing geo-political landscape throws multiple challenges as well as the opportunities. Whether these capabilities are used for deterrence, defensive or offensive purposes will depend on the national interests of those countries who possess them.

There are multiple challenges as far as employment of these weapons are concerned. As technology further evolves, most of them may be efficiently handled. Whatever be the final profile, an era of star wars has already begun.

<https://www.financialexpress.com/business/defence-anti-satellites-asat-weapons-and-hypersonic-missiles-emerging-trajectories-for-future-conflict-3167383/>



Wed, 12 Jul 2023

China Sends Large Group of Warplanes, Navy Ships to Taiwan in Forceful Display

China sent navy ships and a large group of warplanes, including fighter jets and bombers, toward Taiwan over two days, the island's defence ministry said on Wednesday, before its annual military exercises aimed at defending itself against a possible invasion.

The Chinese People's Liberation Army sent 38 warplanes and 9 navy vessels around Taiwan, between 6 am Tuesday to 6 am Wednesday. From Wednesday morning until noon time, the military flew another 30 planes, among which included J-10 and J-16 fighters.

Of these, 32 crossed the midline of the Taiwan Strait, an unofficial boundary that had been considered a buffer between the island and the mainland. Later on Wednesday, another 23 planes crossed the midline.

Taiwan is scheduled to hold the annual Han Guang exercise later this month, in which its military will hold combat readiness drills against preventing an invasion. It will also conduct the annual Wan'an exercises aimed at preparing civilians for natural disasters and practising evacuations in case of an air raid.

China claims self-ruled Taiwan as its own territory and in recent years has shown its displeasure at political activities in Taiwan by stepping up the number of military planes sent toward Taiwan. In the past year, it has also started sending its navy vessels, as well as drones to circle the waters near the island.

On Tuesday and Wednesday's manoeuvres, the PLA flew H-6 bombers in a large loop to the south of Taiwan, travelling past the island before looping back towards China's southern coast.

Its largest military drills in recent years were in response to former US House Speaker Nancy Pelosi's visit to Taiwan last August. It fired missiles over the island in a significant escalation and the military exercises disrupted trade lanes in the Taiwan Strait and forced airplanes to reroute their flights.

In April, the PLA held large-scale combat readiness drills in the air and waters around Taiwan in response to the island's President Tsai Ing-wen meeting with the current US House Speaker Kevin McCarthy.

<https://www.indiatoday.in/amp/world/story/china-sends-large-group-warplanes-navy-ships-taiwan-forceful-display-2405669-2023-07-12>

R. REPUBLICWORLD.COM

Wed, 12 Jul 2023

Philippines Mulls Rise in Defence Budget to Tackle China's 'Harassment' near Disputed Reef

The Philippines is contemplating a potential rise in its defence budget in response to Chinese "harassment" of the nation's ships near a reef in the disputed South China Sea as Beijing cautioned that any efforts to involve a third party in resolving the maritime dispute might escalate the resource-abundant waterway into a "sea of war", reported South China Morning Post (SCMP).

SCMP quoted Filipino Representative Joey Salceda, head of the ways and means committee, who said Congress should be informed about the progress made by the Department of National Defence in enhancing maritime capabilities before approving the military budget for the upcoming year.

Salceda further urged the department to clarify the resources needed to attain a sufficient level of readiness in addressing China's aggression. He also mentioned that his panel has the financial capacity to increase funding while actively seeking additional assistance from European countries.

"It doesn't matter what we can afford. We can explore different sources," he said. "What matters is how far we have gone and what steps we still need to take."

Salceda stated that Manila plans to acquire the US-made High Mobility Artillery Rocket System and India's BrahMos anti-ship cruise missiles this year in order to enhance its military capabilities. This move is aimed at bolstering the Philippines' military posture. Additionally, the coastguard has pledged to increase patrols in order to "drive away" numerous Chinese fishing vessels near the resource-rich Recto Bank in the South China Sea.

Chinese Coast Guard ship obstructs Philippine Coast Guard vessel

On July 5, the Philippines lodged allegations against China's coast guard, accusing them of engaging in harassment, obstruction, and "dangerous maneuvers" directed towards Philippine vessels.

Philippine coast guard boats were assisting a naval operation on June 30 when they were "constantly followed, harassed, and obstructed by the significantly larger Chinese coast guard vessels", Philippine coast guard spokesperson Jay Tarriela, said in a tweet.

The incident occurred in the vicinity of the Second Thomas Shoal, which is a submerged reef that the Philippines claims sovereignty over. The Philippines maintains a small number of troops who reside on a dilapidated American ship from World War Two deliberately grounded in 1999 as a symbol of their claim.

In response to the incident, China countered that the Philippine coast guard had entered its waters without authorisation.

China asserts its sovereignty over nearly the entire South China Sea by delineating a "nine-dash line" on its maps, which encroaches upon the exclusive economic zones (EEZ) of Vietnam, the Philippines, Malaysia, Brunei, and Indonesia. However, in 2016, the Permanent Court of Arbitration ruled that the "nine-dash line" has no legal foundation.

"The Chinese coast guard vessels carried out law enforcement activities in accordance with the law to safeguard China's territorial sovereignty and maritime order," Chinese Foreign Ministry spokesperson Wang Wenbin told a regular press conference.

<https://www.republicworld.com/world-news/rest-of-the-world-news/philippines-mulls-rise-in-defence-budget-to-tackle-chinas-harassment-near-disputed-reef-articleshow.html>

THE ECONOMIC TIMES

Wed, 12 Jul 2023

Russia Launches More Air Strikes on Kyiv and elsewhere in Ukraine as NATO Meets

Russia launched a wave of kamikaze drone attacks on Kyiv and other cities for a second night in row, Ukraine's military said on Wednesday, hours before President Volodymyr Zelenskiy was due to meet NATO leaders at a summit in Lithuania.

Russia launched a total of 15 of the Iranian Shahed drones on Ukraine overnight, with Ukraine's defence forces shooting down 11 of them, the country's Air Force said on the Telegram messaging app.

Ihor Taburets, the military head of the Cherkasy region southeast of Kyiv, said on the Telegram messaging app that as a result of the drone strikes, two people were injured after a fire broke out in a non-residential infrastructure facility.

"A difficult night ... The enemy attacked our area with 'Shaheds'," Taburets said on the Telegram messaging app.

It was not immediately known how many drones were launched on Cherkasy and how many on Kyiv.

"The 504th day of the full-scale invasion of the Russian Federation into Ukraine. The enemy launched another air attack on the capital," Serhiy Popko, head of Kyiv's military administration said on the Telegram messaging app.

Air raid sirens blasted over Kyiv and across Ukraine for several hours and fighting continued as NATO leaders gathered for a summit which the Kremlin criticised, warning that Moscow would respond to protect its own security.

Zelenskiy will attend the inaugural session of the NATO-Ukraine Council on Wednesday in the Lithuanian capital Vilnius. The council was established to bring Kyiv and the 31-member transatlantic military alliance closer.

"Our defence is the first priority," Zelenskiy said on the Telegram channel late on Tuesday ahead of the meeting. "More protection for our warriors - more protection of life for all Ukraine."

Ukraine's Armed Forces said in its daily morning update that Russian forces carried out 65 air strikes and fired at least 71 times from heavy weapon rocket systems at Ukrainian troop positions and populated areas along the frontline over the past day.

Reuters could not independently verify the battlefield report. Russia's TASS news agency cited military groupings saying that they had repelled several Ukrainian attacks in the Luhansk region over the past day.

A night earlier, Russia launched 28 drones on Kyiv and the southern port of Odesa, with Ukraine's air defence shooting down 26 of the Shahed drones.

<https://economictimes.indiatimes.com/news/defence/russia-launches-more-air-strikes-on-kyiv-and-elsewhere-in-ukraine-as-nato-meets/articleshow/101688761.cms>

THE ECONOMIC TIMES

Thu, 13 Jul 2023

North Korea Says Conducted New Test of Solid-Fuel ICBM

North Korean leader Kim Jong Un personally oversaw the successful test of the country's newest intercontinental ballistic missile, state media reported Thursday, days after Pyongyang threatened to down any US spy planes that enter its airspace.

A beaming Kim, wearing a white suit and flanked by his wife and key aides, was shown in state media images applauding enthusiastically after the launch of the solid-fuel Hwasong-18 on Wednesday.

The ICBM, which North Korea has fired only once before, in April, flew 1,001 kilometres at a maximum altitude of 6,648 km before splashing into the East Sea, also known as the Sea of Japan, the official Korean Central News Agency reported.

The launch was a "grand explosion" that shook "the whole planet", KCNA said. State media footage showed the missile blasting off into the sky.

Kim vowed that "a series of stronger military offensive" would be launched until the United States and South Korea change their policies towards North Korea, the agency added.

Citing the "unstable situation" on the Korean peninsula, Kim also called for "more intense efforts" to boost North Korea's nuclear arsenal.

The confirmation of the launch -- which the South Korean military had reported on Wednesday -- came with relations between the two Koreas at one of their lowest points ever.

Diplomacy is stalled and Kim has called for ramping up weapons development, including tactical nukes.

In response, Seoul and Washington have boosted security cooperation, vowing that Pyongyang would face a nuclear response and the "end" of its current government were it to ever use its nuclear weapons against the allies.

Seoul described Wednesday's launch as "a grave provocation that damages the peace and security of the Korean peninsula". The United Nations, the United States and its allies also strongly condemned it. "This launch is a brazen violation of multiple UN Security Council resolutions and needlessly raises tensions and risks destabilising the security situation in the region," US National Security Council spokesperson Adam Hodge said in a statement.

Pyongyang in February tested the Hwasong-15, which flew a similar 989 km.

- 'Provocative' US actions - Wednesday's launch came after North Korea on Monday accused a US spy plane of violating its airspace and condemned Washington's plans to deploy a nuclear missile submarine near the Korean peninsula.

Pyongyang claimed the US had "intensified espionage activities beyond the wartime level", citing "provocative" spy plane flights over eight straight days this month.

"There is no guarantee that such shocking accident as downing of the US Air Force strategic reconnaissance plane will not happen in the East Sea of Korea," a North Korean defence spokesperson said.

Kim's powerful sister Kim Yo Jong also slammed the purported US spy aircraft airspace violations, and warned that North Korea would take "decisive action" if its maritime military demarcation line was crossed.

The United States said in April that one of its nuclear-armed ballistic submarines would visit a South Korean port for the first time in decades, without specifying an exact date.

South Korea and the United States are set to start their major annual joint military exercises, known as Ulchi Freedom Shield, next month.

North Korea regards all such exercises as rehearsals for invasion and has described them as "frantic" drills "simulating an all-out war against" Pyongyang.

"I expect the North to continue firing missiles similar to Hwasong-18 through the end of August while the joint South Korea-US military exercises are scheduled," Choi Gi-il, a professor of military studies at Sangji University, told AFP.

Although conducting ICBM launches is expensive, particularly given the dire economic conditions in North Korea with reports of food shortages and starvation, Choi said Pyongyang had "got enough missiles ready" to continue its testing blitz.

South Korean President Yoon Suk Yeol is in Lithuania this week to attend the NATO summit, seeking stronger cooperation over North Korea's growing threats.

<https://economictimes.indiatimes.com/news/defence/north-korea-says-conducted-new-test-of-solid-fuel-icbm/articleshow/101712887.cms>

THE TIMES OF INDIA

Thu, 13 Jul 2023

All Stages of Chandrayaan-3 Mission Equally Critical, we Hope Rover will have a Life More than 14 Earth Days: ISRO Chief

With stage set for the launch of India's Rs 615-crore Chandrayaan-3 Moon mission at 2.35 pm on Friday and Isro completing a 24-hour "launch rehearsal" simulating the entire launch process for the spacecraft sitting on board 'fat boy' LVM-3 rocket, Isro chairman Sreedhara Panicker Somanath speaks to TOI's Surendra Singh on the critical operations of lander and rover, focus areas of the one-month-long mission and if Isro is also studying signs of extra-terrestrial life on the Moon besides learning about the lunar surface. Excerpts:

Q1. Besides studying the moon crust composition, thermal properties of the lunar surface and the dynamics of the Moon system, will Chandrayaan-3 also plan to study signs of extraterrestrial life on the Moon?

A: No life as we know of it is possible on the Moon. So, this is not in consideration now.

Q 2. What are the key focus areas during the entire Chandrayaan-3 journey from Earth to Moon where Isro will be extra vigilant?

A: We are vigilant throughout. All stages are equally critical, including the rocket launch. But more discussion and review took place on soft landing as we have not done before.

Q 3. Learning from Chandrayaan-2 mistakes, Isro made so many changes in the lander this time to withstand the wear and tear during the final descent, are you confident Vikram will have a safe landing?

A: Yes. Changes (made in the lander) are for overcoming the issues and to improve reliability and failure tolerance.

Q 4. Will the Pragyan rover have a life of more than 14 Earth days on the Moon surface?

A: Possible by our assessment. Will see after the first day and night (on Moon).

Q 5. If this moon landing mission is successful, will you then plan to bring lunar rocks and send astronauts?

A: Will see in the future if adequate science and commercial objectives can be identified.

Q 6. Will Isro share key data that you will receive from the lander & rover with other space agencies and also put them in public domain?

Yes. After a certain lock-in period, as is done for all science missions world over.

<https://timesofindia.indiatimes.com/india/all-stages-of-chandrayaan-3-mission-equally-critical-we-hope-rover-will-have-a-life-more-than-14-earth-days-isro-chief/articleshow/101711735.cms>

India Space Congress Shows the Need to Bridge Gender Gap —ISRO must Stand up, Men must Sit Down

In a half-empty conference room, five women spoke about overcoming gender bias in space. But they kept getting interrupted by men in the audience.

The Indian government has opened up the space sector to private companies and startups, but women are still fighting for a seat at the decision-making table — a gap that was clearly visible at the three-day India Space Congress in New Delhi. Male speakers dominated many discussions on Tuesday. And the lone panel chaired by women entrepreneurs and scientists in the space sector—called Breaking Barriers, Inspiring Futures: Women in Space—saw dismal attendance.

Panellist Isabelle Mauro, director general of the Global Satellite Operators Association (GSOA), expressed her frustration at yet again being relegated to a “women’s panel”.

“We need to stop having women’s panels altogether. We need to stop talking among ourselves. We need to be able to talk about business and economics, rather than talking about gender,” she said.

ISRO must stand up

ISRO came under scrutiny for failing to involve women in key space missions. Dr Susmita Mohanty, who co-founded India’s first private space start-up Earth2Orbit in 2009, wanted to know why women were overlooked in the Gaganyaan programme, India’s ambitious maiden crewed mission to space.

“This is the 21st century. India has the highest number of female pilots in the world, and yet ISRO chose not to include women in the Gaganyaan mission,” said Mohanty, the only space entrepreneur in the world to have started companies on three different continents in Asia, Europe, and North America.

When fellow panellist N Ranjana, the chief of Directorate of Systems and Technology Analysis (DSTA) at DRDO, started adding to Mohanty’s point, a gentleman in the audience interrupted the panel to offer an explanation.

“The first batch of women fighter pilots had only graduated in 2014, whereas recruitments for Gaganyaan started in 2018. At that time, the age and experience requirements for the astronauts was more than what any female fighter pilot had,” he said.

Mohanty stood by her argument, citing the example of Mercury 13 where thirteen female pilots in the US had passed all the rigorous astronaut screening tests in 1959. The programme was run by William Randolph Lovelace II, an American physician who studied aerospace medicine, and was curious to find out if women pilots could clear screening tests designed for male fighter pilots.

All the women passed the tests, although none of them ever flew to space. The only exception was Wally Funk – who flew aboard the Blue New Shepard 4 mission Flight 16 in 2021 – at the age of 82.

Mohanty pointed out that ISRO was repeating the same mistake that NASA made in the 1960s. More initiatives were needed by the space agency and others involved to bridge the gender gap, she said.

Even though women head significant projects at ISRO, the organisation has never had a female director in any of its five centres.

“It took 50 years for the first all-women space walk (by NASA) to happen, and people were celebrating. I think it was something to be embarrassed about – it should not have taken that long,” Mohanty said. “We do not lack women in the tech industry; what we lack are leaders.”

Missing out

Other panellists blamed this on the deep-rooted patriarchal mindset that often set women back in their STEM entrepreneurship.

Devleena Bhattacharjee, the founder of Maharashtra-based Numer8 Analytics, recalled approaching a bank for a business loan and being asked to provide PAN details of a male family member. She also spoke about a woman’s ‘assigned’ role as a primary caregiver, which often takes precedence over career.

“Empathy and compassion come very naturally to us. That makes us take a step back and take career breaks for the sake of our families,” she said.

Women face societal pressure to get married the moment they start a career. And when they battle those to stay in the job while managing the home, there comes the pressure to have children when they are just settling into their profession, Bhattacharjee explained, adding that maternity leave sets women back by almost a year.

“That role of a caregiver also needs to be shared by men across professions,” she said.

N Ranjana, however, was of the opinion that things were moving much faster today than 30 years ago.

“We often fail to identify the inherent strengths in women. Women are often much more hardworking – especially because they feel they have to prove themselves. We (at DRDO) are always trying to push women, and I am positive that we are going to have women leaders in the space sector very soon,” she said.

<https://theprint.in/feature/around-town/india-space-congress-shows-the-need-to-bridge-gender-gap-isro-must-stand-up-men-must-sit-down/1665223/>

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