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A Daily service to keep DRDO Fraternity abreast with DRDO
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International Relations and Science & Technology

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DRDO News

DRDO Technology News



Tue, 06 Sep 2022

Pune: DIAT and NIN Sign MoU for Promotion of Naturopathy



Defence Institute of Advanced Technology (DIAT), a deemed university and an autonomous organization funded by the department of Defence Research and Development (DRDO), and National Institute of Naturopathy (NIN), Pune registered under Societies Registration Act 21, 1860 under the Ministry of Ayush, Govt of India signed an MoU on 05th Sept, 2022.

The MoU is signed for development and dissemination of knowledge through capacity building in the fields of naturopathy research, training, development and dissemination of knowledge. NIN would be the knowledge and technical partner to DIAT for the necessary purposes.

The MoU also has provision to promote and propagate Naturopathy therapies amongst the students, staff and public by setting an OPD unit including to facilitate / conduct the yoga sessions for various short-term courses being conducted at DIAT. On this occasion, Dr. C P

Ramanarayanan, Vice Chancellor, DIAT and Prof (Dr) K Satya Lakshmi, Director, NIN mentioned their partnership will surely meet all the objectives of MoU and all possible efforts will be ensured to promote the Govt of India mission in the field of naturopathy through technology.

<https://www.punekarnews.in/pune-diat-and-nin-sign-mou-for-promotion-of-naturopathy/>

Defence News

Defence Strategic : National/International



Press Information Bureau
Government of India

Ministry of Defence

Tue, 06 Sep 2022 5:29PM

Indian Army Organises Startup Symposium at Bengaluru

As part of industry outreach by the Indian Army under the “Make in India” Initiative, a Startup Symposium was organised at Bengaluru on the 5th & 6th of September 2022.

The exhibition provided an excellent opportunity to the civil industry to showcase their expertise, emerging technologies and developmental initiatives to support the defence forces. A total of 25 companies/startups with domain specialisation in Drones, Aviation, Artificial Intelligence, Communication, Surveillance and Manufacturing participated. A list of companies and the products showcased during the symposium are given below:-

<u>Ser No</u>	<u>Company Name</u>	<u>Product</u>
<u>Aviation – UAVs & Drones</u>		
1	Edall Systems	Drone – Fixed Wing & Rotary Wing (1st off)
2	Next Defence (Machani Group)	Drones – Fixed Wing & Rotary Wing, Jetpack & Electric vehicle motor.
3	Asteria Aerospace Pvt Ltd	Drones in 03 weight categories
4	Bing Bang Boom Solutions	Anti Drone Defence System & See through Armour
5	Range Aero Pvt Ltd	Autonomous UAVs & Hybrid Power UAVs

<u>Surveillance Systems</u>		
6	Elena Geo Systems Pvt Sys	NAVIC based Vehicle Tracking System
7	TASL (Tata Adv System)	Helmet Mounted Night Sight, Cooled Handheld Thermal Imager, LORROS (Long Range Recce & Observation System) & Binocular.
8	Redleaf Tech Pvt Ltd	GIS Based Street Light Management System, GIS Mapping, LiDAR (Light Detection and Ranging) & Drone Data Processing
9	Dfy Gravity Tech Pvt Ltd	Situational Awareness Pgme, Data Science Solutions & Strategic Payload Development
10	Zuppa Geo Navigation Tech	GPS Vehicle Tracking System
11	Savtoa Tech Pvt Ltd	Unmanned Boats
12	Elmack Engg Services	Surveillance – Cameras, NVR, Radar, Drones, Rugged tablets, Mob Cmptrs & RFID solutions.
<u>Electronic & Communication System</u>		
13	Alpha Design Technologies Ltd	Multi Band Cell Phone Jammer, CRIS, RCIED.
14	Astromer Technologies	MM Wave Comn, 5G (Showcasing Gigamesh device to extend the range for comn)
15	Chipspirit Technologies	Secure Communication Device / Crypto Communication (only hardware)
16	Bharat Electronics Ltd	Communication and Surveillance Solutions
17	Centum Electronics Ltd	Space EW System, Missile Seeker Electronics, Tank Electronics, Synthetic Aperture Radar.
<u>Weapon System</u>		
18	SSS Defence	Sniper Weapon System, Assault Rifle System, Legacy Weapon System Modification
<u>Virtual Reality & Artificial Intelligence</u>		
19	Kaaya Virtualization Technologies Pvt Ltd	VIRTAC Powered by Holo Suit
<u>Manufacturing & Engineering Services</u>		
20	HTL Ltd	Wiring Interconnect Solutions
21	RAY – Q Interconnection Tech India Ltd	Mil Grade components, Wiring & cable harness, Filter connectors etc.,
22	Valdel Adv Tech	Design & Devp of Composite material for Aerospace & General Industries
23	Vinyas Innovative Technologies Pvt. Ltd	Mfr & Engg Solutions. Showcasing various PCBs & Sample Boards.
<u>Miscellaneous</u>		

24	MSRUAS (Tech Centre)	Multi DoF Bionic Hand, Magnetorheological Damper (MR) for IN, Torque Converter – Scale Model for Infantry Battle Tanks.
25	Centre for Nano Science and Engineering (CeNSE), IISC	Nano fluidic Device (useful in Medical Tech)

The exhibition, attended by Senior Officers from all three services, highlights the endeavour of the Armed Forces and the Industry to synergise their efforts as they move towards “Atmanirbharta” in the defence sector.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1857161>



Press Information Bureau
Government of India

Ministry of Defence

Wed, 07 Sep 2022 8:54AM

Raksha Mantri Shri Rajnath Singh to Participate in India-Japan 2+2 Ministerial Dialogue in Tokyo on 8th September

To separately hold bilateral talks with his Japanese counterpart

Upon completion of his visit to Mongolia, Raksha Mantri Shri Rajnath Singh will leave for Japan on September 07, 2022 on a four-day official visit. The Raksha Mantri, along with External Affairs Minister Dr S Jaishankar, will participate in the 2nd India-Japan 2+2 Ministerial Dialogue in Tokyo on September 08, 2022. The Japanese side will be represented by Minister of Defence Mr Yasukazu Hamada and Minister of Foreign Affairs Mr Yoshimasa Hayashi.

The 2+2 Dialogue will review bilateral cooperation across domains and chart out the way forward. India and Japan are pursuing a Special Strategic and Global Partnership. This year marks 70 years of diplomatic relations between the two countries.

In addition to the 2+2 dialogue, Shri Rajnath Singh will separately hold bilateral talks with his Japanese counterpart to further strengthen defence cooperation between the two countries across various sectors. He is also scheduled to call on the Prime Minister of Japan Mr Fumio Kishida during the visit. The Raksha Mantri will also attend a community event organised by the Embassy of India in Tokyo and interact with the Indian diaspora in Japan.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1857265>



**Press Information Bureau
Government of India**

Ministry of Defence

Tue, 06 Sep 2022 4:08PM

Raksha Mantri Holds Bilateral Talks with his Mongolian Counterpart in Ulaanbaatar; Discusses Ways to Further Expand Defence Engagements

Shri Rajnath Singh inaugurates Cyber Security Training Centre, built with assistance from India, at National Defence University

Lays foundation stone of India-Mongolia Friendship School, to be constructed with Indian assistance

On the first day of engagements of his Mongolia visit, Raksha Mantri Shri Rajnath Singh held bilateral talks with his Mongolian counterpart Lt Gen Saikhanbayar Gursed in Ulaanbaatar on September 06, 2022. He also called on the President of Mongolia and Chairman of State Great Khural. The Raksha Mantri also inaugurated a Cyber Security Training Centre, built with assistance from India, and laid the foundation stone of the India-Mongolia Friendship School, to be constructed with Indian assistance.

Bilateral talks

After reaching Mongolia on the night of September 05, 2022 to become the first Indian Defence Minister to visit the country, the hectic day of engagements began for Shri Rajnath Singh with a ceremonial guard of honour at the Ministry of Defence in Ulaanbaatar. It was followed by delegation-level talks between the Raksha Mantri and his Mongolian counterpart. They discussed effective & practical initiatives to further expand bilateral defence engagements and deliberated on regional & global issues of mutual interest.

Both Ministers reaffirmed their commitment to fully implement the Strategic Partnership based on mutual trust & understanding, common interests and shared values of democracy & rule of law. The two Ministers also reiterated their resolve to reinvigorate the India-Mongolia Joint Working Group (JWG), which will meet in India later this year.

Call ons

Shri Rajnath Singh called on the President of Mongolia & Commander-in-Chief of Armed Forces Mr Ukhnaagiin Khurelsukh, wherein they recalled their strong bonhomie and previous interaction in 2018 when together they laid the foundation stone for the ongoing Oil Refinery

project being undertaken by assistance from India. He also met the Chairman of State Great Khural of Mongolia Mr G Zandanshatar.

Cyber Security Training Centre

Another highlight of the day was the inauguration of Cyber Security Training Centre, built with assistance from Government of India, at National Defence University in Ulaanbaatar by the Raksha Mantri. The Raksha Mantri was briefed about the facilities at the Centre by the officials. He also interacted with the personnel of the Mongolian Armed Forces being trained at the Centre.

India-Mongolia Friendship School

Shri Rajnath Singh, along with Minister of Education and Science of Mongolia, laid the foundation stone of the India-Mongolia Friendship School, which is being established with the assistance from Government of India.

It may be recalled that India established diplomatic relations with Mongolia in 1955. Mongolia has declared India as a strategic partner and “spiritual neighbour”. In 2015, “strategic partnership” between the two Asian democracies was declared during visit of Prime Minister Shri Narendra Modi. Defence is an important element of bilateral engagements with Mongolia.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1857131>



Tue, 06 Sep 2022

Taragiri, Third of Indian Navy's Stealth Frigates Under P-17a to be Launched on September 11

Taragiri, the third Stealth frigate under the Indian Navy's Project 17A is all set to get launched at Mazagon Dock Shipbuilders Ltd (MDL) on September 11. The development of the vessel is being viewed as a milestone in the government's push for Aatmanirbhar Bharat. According to the details shared by MDL, the indigenous component in Taragiri is 75 per cent.

"The ship will be integrated with a large number of indigenous equipment and machinery sourced from major industrial houses in the country as well as over 100 MSMEs. Indigenization efforts received a renewed thrust with the 'Make in India' policy," MDL said in a press release.

Taragiri's keel was laid on September 10, 2020 and the delivery is expected by August 2025. Weighing 3510 ton, Taragiri has been designed by Indian Navy's in-house Bureau of Naval Design.

Taragiri: The lethal platform

According to the details shared by the manufacturer, the vessel is about 150 metre long and 18 metre wide and is propelled by a combination of two gas turbines and two diesel engines. Taragiri can achieve a maximum speed of 28 knots at a displacement of 6670 ton.

Taragiri will be fitted with supersonic surface-to-surface missile system which will make it a lethal platform against the enemy warships. The vertical launch and long range surface to air missile system mounted on the vessel will counter the threat of incoming enemy aircraft and anti-ship cruise missiles. In what adds more teeth to the platform, two 30 mm rapid-fire guns will provide the ship with close-in-defence capability.

"An SRGM Gun will enable her to provide effective naval gunfire support. Indigenously developed triple tube light weight torpedo launchers and rocket launchers will add punch to the ship's anti-submarine capability," the manufacturer said.

<https://www.timesnownews.com/india/taragiri-third-of-indian-navys-stealth-frigates-under-p-17a-to-be-launched-on-september-11-article-94029028>



Tue, 06 Sep 2022

Bangladesh Shares Wish List of Military Hardware for Procurement From India

Marking some progress on the delayed implementation of the \$500 million defence Line of Credit (LoC) extended by India to Bangladesh, Dhaka has recently shared a wish list of military platforms and systems that its armed forces would like to procure from India, according to official sources. This includes a diverse range of equipment, including a floating dock, and logistics ship and oil tanker for the Bangladesh Navy, among others.

"Bangladesh is modernising its military, inducting new weapons and improving infrastructure in line with its 'Forces Goal 2030'. India has the capability to meet a significant part of these requirements, which will also boost defence cooperation between the two countries," one official source said. The LoC extended in 2018 is for utilisation by April 2029. Though progress has

been slow, a number of types of equipment are under various stages of consideration, the source noted.

Talking of the wish list, the source said that the Bangladesh Army has approved procurement of three items, so far, under the LoC — five Bridge Layer Tanks (BLT-72) at a cost of approximately \$10 million; seven portable steel bridges (Bailey) at a cost of around \$2.2 million; and 11 Mine Protective Vehicles from the Tata Group at an approximate cost of \$2.2 million.

Other items proposed to be procured by the Bangladesh Army are Mahindra XUV 500 off-road vehicles; door hard top vehicles from Mahindra at an approximate cost of \$2.35 million; heavy recovery vehicles; armoured engineer reconnaissance vehicles; and bullet proof helmets. Other proposals include modernisation and extension of automobile assembling unit for a Bangladesh machine tools factory, which is a proposal from Shapoorji Pallonji and Company Private Limited; two types of explosives at a cost of over ₹4 crore; 21 types of raw materials at a cost of around ₹3 crore; and 10 types of tools at a cost of ₹6.6 crore.

The Bangladesh Navy has proposed the procurement of a logistics ship, floating dock, oil tanker, and an ocean-going tug, the source stated.

Defence cooperation and the implementation of the LoC will come up for discussion at the highest levels during the ongoing visit in India of Bangladesh Prime Minister Sheikh Hasina, sources said.

Stressing on India's expanding indigenous defence industrial base, sources said India is keen to offer artillery guns, mortars, rockets and missiles, support vehicles, electronic and engineering equipment, radars, helicopters, military rakes, and ship building services.

In addition, Bangladesh can also be offered India's expertise in sea and airport infrastructure development among others, a second source said.

There is also lot of scope for cooperation in high technology sectors in which India has expertise and is keen to offer it to our neighbours, the source said, and these include Information Technology and cyber space, satellite and space technology, maintenance and overhaul, development of local defence industry, and training. "Towards this, there can be increase in military exercises as well as more visits at the senior military level," the source added.

Last month, the two countries held the fourth India-Bangladesh annual defence dialogue and tri-Service staff talks, during which the implementation of the LoC was reviewed by both sides and there was also significant focus on defence industrial cooperation and capability building.

In May 2018, Defence public sector undertaking, Garden Reach Ship Builders of Kolkata had signed a Memorandum of Understanding with Khulna Shipyard Limited of Bangladesh to provide assistance and know-how in the design and construction of warships.

Bangladesh has purchased arms from China, including two conventional diesel electric submarines. China has emerged as one of the top arms suppliers globally, and especially for countries in India's neighbourhood.

In a bid to counter this, India has of late significantly expanded its military diplomacy and assistance for capacity building and capability development for countries in the Indian Ocean Region.

<https://www.thehindu.com/news/national/bangladesh-shares-wish-list-of-military-hardware-for-procurement-from-india/article65856825.ece>



Wed, 07 Sep 2022

Two Cheers for India's Indigenously-Built Aircraft Carrier

By Satya Narayan Misra

India has a dubious reputation of being the largest importer of conventional arms (SIPRI Yearbook). Dr APJ Abdul Kalam, heading a committee to suggest improving India's self-reliance quotient, assessed our SRI (Self-Reliance Index) to be 30% only (1993) and suggested a roadmap to improve it to 70% by 2005.

However, by 2005, it had crept to 32% and is around 35% now. As the PM commissioned the INS Vikrant, the indigenously built aircraft carrier, on September 2, it was redeeming to find that 76% of it is indigenously built. The 260 meters long, 60-meter-wide carrier is equivalent to two football fields.

The steel used has been supplied by SAIL in tandem with DMRL, a DRDO laboratory, with an excellent track record in indigenization. The steel used is equivalent to three Eiffel Towers. Most importantly, the gearbox has been manufactured by Elecon Engineering Company, an Indian MNC headquartered in Anand, Gujarat. The Control Movement System has also been supplied by Tata Power in collaboration with a Russian Company. Despite time slippages in both gearbox and Control Movement Systems, the indigenization of such critical sub-systems is indeed commendable. The engine will be powered by US LM 2500 gas turbines. The Kalam Committee had highlighted that India's reliance on Germany for gearboxes for naval systems should be done away with. INS Vikrant has fructified that wish list. The Indian Navy has always been at the forefront of indigenization unlike the Air Force, where most of its fighter aircrafts are either directly purchased (Mirage, Jaguar) or produced by availing of Technology Transfer (SU 30).

The Cochin Shipyard which has built the aircraft carrier has taken the design from the Directorate of Naval Design. 26 Mig 29, 4 Kamov helicopters, 2 ALH, and 4 Multi-role helicopters will operate from the deck of the carrier. The Indian Navy has always aimed to be a blue water navy so that it can project its power across the high seas.

The USA is a blue water Navy with 81 carriers. It tried to intimidate India during our war with Pakistan in 1971 by moving its seventh Fleet into the Bay of Bengal. It was due to India's strategic friendship with the USSR, that its 10th Operative Battle Group moved in and the USA had to abort its mission.

Now that India has three IACs (Virat, Vikramaditya and Vikrant) and the Navy is pitching for a fourth IAC, INS Vishal, its dream of becoming a blue navy is getting substantially realized and dark memories of the Seventh Fleet are getting dissipated. The Mig 29s of Russia have become the template of Indo-Russian friendship as they are the frontline attackers from the deck of Vikramaditya inducted in 2013 and INS Vikrant now.

This takes us to the larger issue of the low overall Self Reliance Index in India. Herbert Wulf in a perceptive article 'Arms Production in the Third World' observed that self-reliance passes through five stages viz Off Shelf Purchase, Co-Production, Local Production of simple components, License Production and Indigenization. As far as India is concerned, Wulf believes that India's track record in absorbing technology in licence production has been rather limited.

This is clearly manifest in our licence production arrangement with SU 30, where the indigenization is a measly 7% as against an expectation of 70% by now. The HAL has become an assembler of subsystems imported from Russia, instead of indigenously producing parts and components and moving up the value addition chain. As regards indigenization, Wulf believes, it is almost nonexistent in critical subsystems because of the poor record of our indigenous R and D capability in the laboratories of DRDO.

The Kalam Committee identified critical areas of technology where our import dependence is almost 100%. In the case of Gas Turbine engines, the deficient areas are single crystal blades, special coating in blades, and FADEC. In missiles, it's the uncooled FPA seekers, which are the eyes of the missiles. In aeronautics, it's smart structures and stealth technology.

In material, it's nanomaterial and carbon fibers. In sensors, it is AESA radar, RLG and INGPS. Three decades later we are hamstrung in each of these critical subsystems. The Kaveri engine which was to power the indigenously built LCA has failed the design test. It is powered by an American GE 414 engine. The passive seekers which are needed by weapon systems of the three services are nowhere in sight. Carbon fibers that are used in HAL are imported from Japan. The LRDE, Bangalore laboratory is nowhere in making AESA radar. Nor is DRDL able to make potent guided air-to-air missiles, where we depend completely on France. In other words, in propulsion, weapons, and sensors, DRDO's track record in indigenization is rather dismal.

In India's Defence Procurement Policy, the Make-option (build from indigenous design) has been given primacy over Buy and Make (build on the basis of imported technology). The Buy (off-the-shelf purchase) is the least preferred. A number of options have been given in the make category to encourage collaboration with OEMs and foreign design houses. However, the Buy (Import) option remains the most practiced option. Dr Kalam was prescient enough to conclude a Joint Venture with a Russian firm to manufacture the Brahmos cruise missile. It has been a huge success and there have been requests for import. Similarly, he opted for a Joint Design and Development of MR SAM (Medium Range Surface Missile to Air Missile). This model has brought substantial dividends for India in terms of indigenous capability. India does not have to invent wheels to come up with niche technology. It's the age of collaboration where countries provide the best possible investment climate to OEMs and reputed design houses to set up JVs in developing economies. China is a good example which offers 100% FDI to OEMs to set up production bases in their country. Lockheed Martin outsources most of its manufacturing to units in China. It has become a big global manufacturing and critical cog in the global supply chain. India, on the other hand, is quite timid in its defence policy architecture (FDI) and tepid in networking with OEMs and design houses. Kalam sniffed these challenges and seized the opportunity to successfully cement JVs like the Brahmos or Joint D and D like MR SAM. Therefore, political leadership and its vision is crucial, in how to shepherd India's moribund military industry complex, embrace best global practices and usher synergy amongst its contending agencies.

<https://www.dailypioneer.com/2022/state-editions/two-cheers-for-india--s-indigenously-built-aircraft-carrier.html>

Business Standard

Tue, 06 Sep 2022

BEL, UK-Based Smith Detection to Build High-Tech Scanners Within 3 Years

With India's growing requirement for large-scale scanning of containers, vehicles, critical infrastructure, stadiums and defence facilities, defence public sector undertaking Bharat Electronics Limited (BEL) is readying to manufacture high-energy X-ray screening facilities in India.

Towards this objective, BEL has announced the inking a memorandum of understanding (MoU) with Smiths Detection India for manufacturing technologically advanced scanners--mobile as well as stationary. BEL officials say they cannot divulge specific scanner requirements and numbers, but the MoU estimates that BEL could begin producing scanners within three years.

UK-headquartered Smiths Detection has been operating in India for over 20 years. In October 2021, Smiths Detection opened its new Global Technology Development Centre in Bengaluru. This will be a global hub for developing and delivering new digital technologies for customers across the aviation, defence, urban security, and ports and borders industries.

Over the last 6-8 years, Smiths Detection has operated four stationary scanning systems. It has also operated eight mobile scanners in six port locations – Jawaharlal Nehru Port Trust (three scanners), Paradip, Kolkata, Visakhapatnam, Kamaraj Port Trust and New Mangalore Port Trust.

Now, however, with increased movement of people and goods around critical infrastructure, land borders and urban sensitive points, there is a growing requirement for screening technologies in India. To facilitate ease of doing business and to enhance safety, the Indian government is prioritising port and land border security.

Moreover, the requirement for advanced X-ray scanning technology is being driven by defence facilities, which need to screen large volumes of vehicles entering sensitive areas.

And with New Delhi promoting vehicular cross-border trade at sensitive border locations such as Poonch in Jammu, Uri in Kashmir and Nathu La in Sikkim, there is a requirement for large, mobile scanners to increase the throughput of these facilities.

In addition, there is a requirement for being able to scan containers on a moving train, as has been implemented at JNPT.

“Though defence is its mainstay, BEL has been continuously exploring opportunities in allied non-defence areas like homeland security and network and cyber security. Through this tie-up with Smiths Detection, BEL will look at catering to the emerging market for high-energy scanning systems, yet another step in the direction of “Atmanirbharta” (self-reliant India),” said Bhanu Prakash Srivastava of BEL.

This MoU marks Smiths Detection’s first manufacturing operation in India. BEL will handle front end requirements in the market and support the localisation of projects. Smiths Detection will provide its screening technology. The MoU is for five years and can be extended further by mutual consent.

Last September, the government had announced that a Mobile X-Ray Container Scanning System (MXCS) had been installed at Paradeep Port, at a cost of Rs 30 crore. It said the scanner could scan up to 25 containers per hour, enabling industry to move out their containers quickly and securely.

https://www.business-standard.com/article/companies/bharat-electronics-to-build-high-tech-scanners-within-three-years-122090601193_1.html

The Tribune

Tue, 06 Sep 2022

US, India Look to Boost Naval Ties

US Assistant Secretary of Defence for Indo-Pacific Security Affairs Ely Ratner and Assistant Secretary of State for South and Central Asian Affairs Donald Lu will co-chair the 6th United States-India 2+2 Intersessional Dialogue on Thursday and the Maritime Security Dialogue on Friday during their visit to India.

Information-sharing, logistics, technology and high-end navy cooperation will be discussed during the meetings, US Department of Defence Spokesperson Lieutenant Colonel Martin Meiners said in a statement. They will discuss how to take forward an ambitious set of initiatives across the defence partnership, especially in the maritime domain.

“Ratner’s trip reaffirms the Department of Defense’s deep commitment to working with like-minded partners to advance our shared vision for a free and open Indo-Pacific,” the statement of the United States read. These meetings are a build-up to the 2+2 Ministerial meet scheduled for next year. Even as these meetings are taking place in India, Defence Minister Rajnath Singh and External Affairs Minister S Jaishankar will be part of the 2+2 Ministerial dialogue in Japan. This year, India and Japan had operationalised a key agreement for reciprocal provision of supplies and services between their defence forces.

Warship ‘Taragiri’ to be launched on Sept 11

Mazagon Dock Shipbuilders Limited will launch a warship, Taragiri, a stealth frigate, on September 11. To be fitted with BrahMos missile, it can achieve a speed of over 28 knots.

<https://www.tribuneindia.com/news/nation/us-india-look-to-boost-naval-ties-429275>



Tue, 06 Sep 2022

Putin Attends Joint Military Drills with China, Others

Russian President Vladimir Putin on Tuesday attended sweeping war games in his country's far east involving troops from China and other nations, in a show of military muscle amid the tensions with the West over Moscow's action in Ukraine.

The weeklong exercise that began Thursday is intended to showcase growing defense ties between Russia and China and also demonstrate that Moscow has enough troops and equipment for the massive drills even while its forces are engaged in fighting in Ukraine.

The Russian Defense Ministry said that the Vostok 2022 (East 2022) exercise that runs until Wednesday at seven firing ranges in Russia’s Far East and the Sea of Japan involves more than

50,000 troops and over 5,000 weapons units, including 140 aircraft and 60 warships. It engages troops from several ex-Soviet nations, China, India, Laos, Mongolia, Nicaragua and Syria.

Beijing sent more than 2,000 troops along with more than 300 military vehicles, 21 combat aircraft and three warships to take part in the drills, according to Chinese news reports. As part of the maneuvers, the Russian and Chinese navies in the Sea of Japan practiced joint action to protect sea communications and support for ground forces in coastal areas.

Neil Melvin, the head of international security studies at the Royal United Services Institute in London, observed that the drills are intended "to indicate to the West, to its partners in Asia that this is an emerging security and military relationship that needs to be taken account of."

The drills continue a series of joint war games by Russia and China in recent years, including naval drills and patrols by long-range bombers over the Sea of Japan and the East China Sea. Last year, Russian troops for the first time deployed to Chinese territory for joint maneuvers.

The exercise marked the first time that China has sent forces from three branches of its military to take part in a single Russian drill, a sign of increasing close ties between Moscow and Beijing, which have grown stronger since Putin sent his troops into Ukraine on February 24. China has pointedly refused to criticize Russia's actions, blaming the U.S. and NATO for provoking Moscow, and has blasted the punishing Western sanctions against Russia.

The Kremlin, in turn, has strongly backed Beijing amid the latest tensions with the U.S. that followed a recent visit to Taiwan by U.S. House Speaker Nancy Pelosi.

Mr. Putin and Chinese President Xi Jinping have developed strong personal ties to bolster a "strategic partnership" between the former Communist rivals as they both are locked in rivalry with the U.S. Even though Moscow and Beijing in the past ruled out a military alliance, Putin has said that such a prospect can't be excluded.

Analyst Melvin said that, while Beijing wants to showcase its growing defense ties with Russia, China is not in a situation where it can support Russia economically without damaging its own core interests because of its focus on the North American and European markets. Mindful of sweeping Western sanctions against Russia, "Chinese business has had to look very carefully at its economic relationship with Russia, and in many cases, the Chinese businesses have concluded that it'd be too risky to carry on doing business," he said.

Mr. Melvin said Moscow's campaign in Ukraine and the Western sanctions has made Russia increasingly reliant on China.

"China is clearly going to be setting the agenda more and more," Mr. Melvin said. "It may be actually demanding more of Russia."

<https://www.thehindu.com/news/international/putin-attends-joint-military-drills-with-china-others/article65857664.ece>

Business Standard

Tue, 06 Sep 2022

Russia to Buy Rockets, Artillery Shells from North Korea, Says US

The Russian Ministry of Defense is in the process of purchasing millions of rockets and artillery shells from North Korea for its ongoing fight in Ukraine, according to a newly downgraded U.S. intelligence finding.

Brig Gen Pat Ryder, the Pentagon press secretary, said Tuesday that the information that we have is that Russia has specifically asked for ammunition. He said the US has seen indications Russia approached North Korea, but said he had no other details, including whether money has changed hands or any shipments are in progress.

It does demonstrate and is indicative of the situation that Russia finds itself in, in terms of its logistics and sustainment capabilities as it relates to Ukraine, said Ryder, in the administration's first public comments on the intelligence assessment. We assess that things are not going well on that front for Russia.

A U.S. official, who spoke on the condition of anonymity to discuss the intelligence determination, said Monday that the fact Russia is turning to the isolated state of North Korea demonstrates that the Russian military continues to suffer from severe supply shortages in Ukraine, due in part to export controls and sanctions.

U.S. intelligence officials believe the Russians could look to purchase additional North Korean military equipment in the future. The intelligence finding was first reported by The New York Times.

Neither Ryder nor the U.S. official were able to say how much weaponry Russia intends to purchase from North Korea.

Asked why the information was declassified, Ryder it's relevant to illustrate the condition of Russia's ongoing military campaign in Ukraine. And, he said, it shows they're trying to reach out to international actors like Iran and North Korea that don't have the best record when it comes to international stability.

The Biden administration said last week that Russia has faced technical problems with Iranian-made drones acquired from Tehran in August for use in its war with Ukraine. Russia picked up Mohajer-6 and Shahed-series unmanned aerial vehicles over several days last month as part what the Biden administration says is likely part of a Russian plan to acquire hundreds of Iranian UAVs for use in Ukraine.

North Korea has sought to tighten relations with Russia as much of Europe and the West has pulled away, blaming the United States for the Ukraine crisis and decrying the West's hegemonic policy as justifying military action by Russia in Ukraine to protect itself.

The North Koreans have hinted interest in sending construction workers to help rebuild Russian-occupied territories in the country's east.

North Korea's ambassador to Moscow recently met with envoys from two Russia-backed separatist territories in the Donbas region of Ukraine and expressed optimism about cooperation in the field of labor migration, citing his country's easing pandemic border controls. In July, North Korea became the only nation aside from Russia and Syria to recognize the independence of the territories, Donetsk and Luhansk, further aligning with Russia over the conflict in Ukraine.

The North's arms export to Russia would be a violation of U.N. resolutions that ban the country from exporting to or importing weapons from other countries. Its possible dispatch of laborers to the Russian-held territories in Ukraine would also breach a U.N. resolution that required all member states to repatriate all North Korean workers from their soil by 2019.

There have been suspicions that China and Russia haven't fully enforced U.N. sanctions on North Korea, complicating a U.S.-led attempt to deprive North Korea of its nuclear weapons.

The provocative move by North Korea comes as the Biden administration has become increasingly concerned about stepped-up activity by North Korea in pursuit of nuclear weapons.

North Korea has test-fired more than 30 ballistic missiles this year, including its first flights of intercontinental ballistic missiles since 2017, as leader Kim Jong Un pushes to advance his nuclear arsenal despite U.S.-led pressure and sanctions.

The U.S. has frequently downgraded and made public intelligence findings over the course of the grinding war in Ukraine to highlight plans for Russian misinformation operations or to throw attention on Moscow's difficulties in prosecuting the war. Ukraine's smaller military has put up a stiff resistance against the militarily superior Russian forces.

Russian President Vladimir Putin and Kim have recently exchanged letters in which they both called for comprehensive and strategic and tactical cooperation between the countries. Moscow, for its part, has issued statements condemning the revival of large-scale military exercises between the United States and South Korea this year, which North Korea views as an invasion rehearsal.

Russia, along with China, has called for the easing of U.N. sanctions imposed on North Korea over its nuclear and missile tests. Both countries are members of the U.N. Security Council, which has approved a total of 11 rounds of sanctions on the North since 2006. In May, Russia and China vetoed a U.S.-led bid to impose new economic sanctions on North Korea over its high-profile missile tests this year.

Some experts say that Kim could likely bolster his resolve to retain his nuclear weapons because he may think the Russian attack happened because Ukraine had signed away its nuclear arsenal.

Relations between Moscow and Pyongyang go back to the 1948 foundation of North Korea, as Soviet officials installed young, ambitious nationalist Kim Il Sung, the late grandfather of Kim Jong Un, as the country's first ruler. Since then, Soviet aid shipment had been crucial in keeping North Korea's economy afloat for decades before the disintegration of the Soviet Union in the early 1990s.

Moscow had since established formal diplomatic relations with Seoul as part of its hopes to draw South Korean investment and allowed its Soviet-era military alliance with North Korea to expire. But after his election in 2000, Putin actively sought to restore his country's ties with North Korea

in what was seen as an effort to regain its traditional domains of influence and secure more allies to better deal with the United States.

https://www.business-standard.com/article/international/russia-to-buy-rockets-artillery-shells-from-north-korea-says-us-122090601316_1.html

Science & Technology News



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India's 1st Nasal Dose Given Emergency Nod

The drugs regulator approved India's first nasal coronavirus vaccine on Tuesday, paving the way for access to a new method of inoculation that scientists believe could significantly boost protection from Covid-19 for the population, helping stop not just disease but also new infections to a great extent.

The dose, Bharat Biotech-produced iNCOVACC, was approved by the Central Drugs Standards Control Organization (CDSCO), and the government will now have to formally decide to include it in the national Covid-19 immunisation program.

“Big Boost to India's Fight Against COVID-19! Bharat Biotech's ChAd36-SARS-CoV-S COVID-19 (Chimpanzee Adenovirus Vectored) recombinant nasal vaccine approved by @CDSCO_INDIA_INF for primary immunization against COVID-19 in 18+ age group for restricted use in emergency situation,” Union health minister Mansukh Mandaviya tweeted.

“This step will further strengthen our collective fight against the pandemic,” he said in another tweet, in which he said the credit went to India's capacities in science and research and “Prime Minister Narendra Modi's leadership”.

Scientists have long seen nasal vaccines as a crucial breakthrough the world needs to end the pandemic. These vaccines target the mucous membrane in the nasal pathway, the site where the Sars-CoV-2 first infects the body. These vaccines elicit a protective coat of what is known as IgA antibodies over the membrane, which then prevent an infection from taking hold in the first place.

Conventional vaccines, mostly delivered as a shot in muscles, work differently: they trigger antibodies that circulate in the bloodstream; these antibodies are best suited to preventing the disease from taking hold, but are usually unable to avert an infection or transmission.

“Nasal vaccines might be able to prevent even asymptomatic Covid because they generate local IgA antibodies (first line of defence), cutting chain of transmission and possibly bringing an end to this pandemic,” said senior immunologist Dr Narinder Kumar Mehra.

On Monday, the first such vaccine to be approved anywhere in the world was China's CanSino Biologics's Convidecia Air.

The Bharat Biotech inoculation is delivered as nasal drops, given in two doses four weeks apart. It can be stored in regular refrigerator temperature of 2-8°C, making it easy to store and distribute across the country. The vaccine has been evaluated in phase I, II and III clinical trials involving at least 3,000 participants with successful results, the company said, but was yet to release any of this data or study details.

The lack or late release of human trials data also marked Bharat Biotech's Covaxin, the vaccine developed and produced by the company, that was the first along with Serum Institute of India's Covishield to be used in India starting March last year.

"iNCOVACC was evaluated to determine its impact on safety. The reactogenic events and adverse events that were documented during the trial were highly comparable to published data from other Covid-19 vaccines. Product development data will be submitted to peer reviewed journals and will be made available in the public domain," Bharat Biotech said in a statement.

The vaccine, people aware of the matter said, is currently approved for primary immunisation but may also be allowed for use as a booster with a significant proportion of target population having already been vaccinated. The company has conducted trials to see how it worked as a heterologous booster shot. Data on those results have not been made public.

In the past, Bharat Biotech officials said they have a capacity to churn out a billion doses a year of this vaccine, although there were no new estimates shared on Tuesday and no details were available about potential pricing.

The vaccine has been developed by the Washington University School of Medicine in St. Louis, US, and licensed for manufacturing and distribution by Bharat Biotech and another American company, Precision Biologics.

Bharat Biotech has the rights to distribute the vaccine in all markets except the United States, Japan and European nations, for which Precision has the rights.

"We are proud to announce the approval of iNCOVACC, a global game changer in intra nasal vaccines technology and delivery systems. Despite the lack of demand for Covid-19 vaccines, we continued product development to ensure that we are well prepared with platform technologies for future infectious diseases," said Krishna Ella, founder and managing director, Bharat Biotech.

"We thank the ministry of health, the CDSCO, dept of Biotechnology, Govt of India, and Washington University St. Louis for their support and guidance. iNCOVACC has been designed for efficient distribution and easy administration," Ella added.

In January, 2021, the company applied to CDSCO for permission to start clinical trials. The phase 3 trial was conducted at 14 sites across the country with 3,100 healthy adult volunteers. The company also assessed it as a booster dose studies for safety and immunogenicity in 875 people who were given two doses after having received a primary course of Covaxin and Covishield, the two most widely used shots in India.

<https://www.hindustantimes.com/india-news/indias-1st-nasal-dose-given-emergency-nod-101662487616930.html>

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Gaganyaan, India's Manned Space Mission, to Start Soon

The first test-vehicle mission of Gaganyaan, India's manned space mission, will start in a couple of months, said R Umamaheswaran, Director of ISRO's Human Space Flight Centre. This to check whether the crew can escape if required, whether landing can be done safely by parachute and the crew retrieved, etc., he said. He was speaking at the Bengaluru Space Expo at BIEC in Bengaluru on Tuesday.

The spacecraft would have a separate crew escape system that had been tested back in 2018. "But there are many things that can go wrong during ascent, so we have to test for different scenarios now. Since this is a manned mission, reliability is important, so we will have a series of test-vehicle missions," he said. "Though Prime Minister Modi had announced Gaganyaan in 2018, the foundation for it had started back in 2003-04," said Umamaheswaran. He said they have overcome the technical challenges with the launch vehicle already, but many components of the spacecraft are still being readied. For example, the design and development of the crew module is yet to be finalised. "We are planning for launch towards the end of 2023." He said the project was delayed due to Covid; its original deadline was August 2022.

"This is not an ISRO project alone. Around 75 per cent of the development is done with the support of industries. Armed forces, research labs and academia are also involved. We also have strong collaborations with Europe, Russia, NASA, etc," he said. Indian and foreign organisations that are supporting the mission spoke at the session

<https://www.deccanherald.com/city/top-bengaluru-stories/gaganyaan-indias-manned-space-mission-to-start-soon-1142903.html>

