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# समाचार पत्रों से चयित अंश Newspapers Clippings

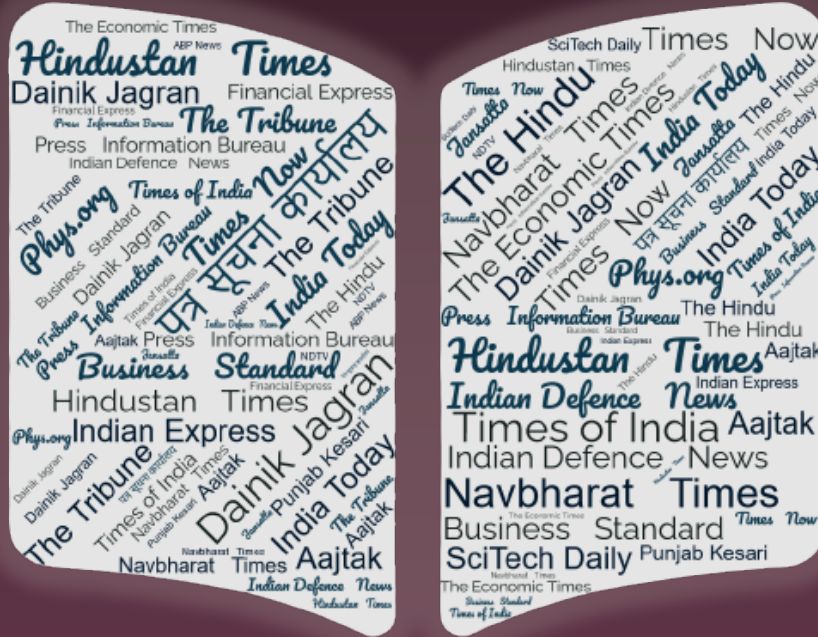
A Daily service to keep DRDO Fraternity abreast with DRDO  
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# DRDO News

## DRDO on Twitter



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**Press Information Bureau**  
**Government of India**

Ministry of Defence

*Thu, 13 Oct 2022 6:20 PM*

**Raksha Mantri Shri Rajnath Singh Describes  
Defence Attachés as the Bridge between  
India & Friendly Foreign Countries Mutual Defence  
Cooperation.  
Urges them to Promote Indian Defence Production Capabilities  
under Aatmnirbhar Bharat**

Raksha Mantri Shri Rajnath Singh stated that defence attachés (DA) are the bridge between India and Friendly Foreign Countries for mutual defence cooperation, urging them to promote Indian defence production capabilities under Aatmnirbhar Bharat and understand the technological innovations taking place in Indian Defence Production Sector, both Public and Private so as to showcase and promote these in their countries of accreditation. He was delivering inaugural address at the two-day 4th DAs Conference being held in New Delhi on 13th October, 2022.

Appreciating the performance of the DA, Raksha Mantri said that defence attachés make a significant contribution in securing national interests in line with foreign policy; strengthening international cooperation and enhancing the capabilities & preparedness of the Armed Forces. He urged them to carry forward the Government's vision of achieving self-reliance, describing it as the only way to make India strong and respected at the global stage, amid the constantly-evolving global security scenario. He, however, maintained that 'Aatmanirbharta' does not mean isolation from the rest of the world, but ensuring national security and strategic autonomy through a modern military.

Asserting that India cannot and should not rely on imports, Shri Rajnath Singh reaffirmed the Government's commitment to achieve self-reliance in defence manufacturing to remain prepared to deal with future security challenges. He termed defence attachés as the forerunners of 'Aatmanirbharta' in defence. The Raksha Mantri listed out the steps taken by Ministry of Defence to attain self-reliance, including encouraging private sector participation; issuance of positive indigenisation lists; setting up of defence corridors in Uttar Pradesh & Tamil Nadu; rolling out of new production & export policies; promoting innovation and increasing FDI limit. He said, the defence attachés can bring investment in India by raising awareness about these

decisions in different countries. Describing them as a bridge, he stressed that defence attachés can liaison with their respective countries and help in fulfilling the needs of both sides.

“India is manufacturing world class and cost-effective weapons, equipment & platforms, which are being internationally recognised. Our defense products are not only world class and reliable in quality but also relatively economical.,” said Shri Rajnath Singh. Two days’ conference will have different briefing sessions wherein chief of services, Foreign Secretary, and other dignitaries from Ministry of Defence will address the DAs on various diplomatic, strategic and functional issues pertaining to defence cooperation. After this conclave the DAs will also accompany the delegations from the Freindly Foreign Countries attending the DefExpo-22 which is starting from 17th October at Gandhinagar Gujarat.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1867507>



**Press Information Bureau**  
**Government of India**

**Ministry of Defence**

*Thu, 13 Oct 2022 3:10 PM*

## **First-Ever Marquee Event of MoD to Promote Investment in the Defence Sector ‘Invest for Defence’ to be Inaugurated by Raksha Mantri Shri Rajnath Singh during DefExpo 2022**

‘Invest for Defence’, the first ever marquee event of Ministry of Defence, targeted to promote investment in the defence sector in the country both by the Indian industry as well Foreign Original Equipment Manufacturers, will be inaugurated by Raksha Mantri Shri Rajnath Singh on October 20, 2022 during the 12th edition of DefExpo. The event will highlight the requirements of the Armed Forces and policy reforms undertaken by the Government for ease of doing business in the defence sector. It provides the industry with the opportunities and the advantages of investing in the sector and thus contributing to maximising the indigenous production. The event is expected to witness participation from the big industry names, both Indian as well as foreign OEMs, such as L&T, Adani Defence, Bharat Forge, Saab, Airbus, Lockheed Martin etc., besides participation from Domestic and Foreign Institutional Investors and Venture Capitalists.

The event will feature a panel discussion between the industry stalwarts and the MoD and Armed Forces leadership. The discussion will be followed by a Q&A session, wherein participants can ask questions from the eminent panelists. The target audience for the event is industry representatives including those from MSMEs and Start-ups, policy makers and enthusiasts in defence sector. Another highlight of the event will be a B2B interaction among the OEMs, including both DPSUs and foreign OEMs, on the ‘Opportunities from large platforms’. Concurrently, with this B2B interaction an iDEX pitching event for the budding start-ups in Defence is also planned. The 12th DefExpo will be held in Gandhinagar, Gujarat between October 18-22, 2022.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1867422>

Thu, 13 Oct 2022

## DefExpo 2022 to Focus on ‘Invest for Defence’

The government has announced “Invest for Defence”, the first-ever marquee event of the Ministry of Defence, to be the focus area in DefExpo 2022 that will take place in Gandhinagar, Gujarat between October 18-22. Invest for Defence has been planned to promote investment in the sector in the country. Officials said the event will address Indian industry as well as foreign original equipment manufacturers (OEM). The event focused on “Invest for Defence” will be inaugurated by Defence Minister Rajnath Singh on 20 October 2022 during the 12<sup>th</sup> edition of DefExpo. The event will highlight the requirements of the Armed Forces and policy reforms undertaken by the Government for ease of doing business in the defence sector. It provides the industry with the opportunities and advantages of investing in the sector and thus contributing to maximising indigenous production.

The government has planned to present several key policy initiatives to attract investment in defence which includes two proposed defence corridors. The event will see participation from industry names, both Indian as well as foreign OEMs, such as L&T, Adani Defence, Bharat Forge, Saab, Airbus, Lockheed Martin and others, besides participation from domestic and foreign institutional investors and venture capitalists. According to a statement from the Ministry of Defence, the event will feature a panel discussion between industry stalwarts and leaders from the MoD and armed forces.

According to government officials, the discussion will be interactive wherein participants can ask questions to eminent panelists. The target audience for the event will be industry representatives including those from MSMEs and startups, policymakers and enthusiasts in the defence sector. Another highlight of the event will be a business-to-business (B2B) interaction among OEMs, including defence public sector units and foreign OEMs, on the “Opportunities from large platforms”. Concurrently, with this B2B interaction an iDEX pitching event for startups in the defence sector is planned.

[https://www.financialexpress.com/defence/defexpo2022-to-focus-on-invest-for-defence-  
nbsp/2709340/lite/](https://www.financialexpress.com/defence/defexpo2022-to-focus-on-invest-for-defence-<br/>nbsp/2709340/lite/)



Thu, 13 Oct 2022

## What should be the Next Steps as India Moves to be a Defence Exporter

As India prepares to sell its military equipment, including Tejas and Brahmos, to Malaysia and the Philippines, it seeks to establish itself as a defence exporter which holds great significance as no country can be called a superpower without it being a defence exporter. To be known as a

superpower, the country must make a significant mark for itself in the international defence market and must export lethal weapons to countries, and not be an importer of defence equipment. This fact is substantiated by the study of The Stockholm International Peace Institute which suggests that every year there is a sharp rise in defence expenditure. The major beneficiaries of such a rise are the United States, Russia, France, Germany, and China. These industrialized countries are having domestic arms manufacturing supply chain to meet global demand. India along with Pakistan, Saudi Arabia, and the United Arab Emirates are the biggest arms importers of military products.

After having emerged as a key exporter of the automobile, pharmacy, and information technology industry, India is working to graduate into a manufacturing hub for weapons, arms, ammunitions, warships, and planes for international as well as domestic needs. In this light, some questions arise: what exactly is the broad and multi-sector initiative called “Make in India”, the characteristics that distinguish India as a possible future leading exporter, the steps that need to be taken to achieve such status, and what can be the possible way to ensure that India acts as a responsible defence exporter? In simple terms, the Make in India program aims at self-reliance in armament production i.e. with an aim to convert from a leading arms importer to a major producer which means achieving import substitution and boosting defence exports, and achieving self-reliance and putting forth an image of an India beholder to no other i.e. being free from the coercion of supplier states and not be locked out of military technologies.

At the same time, there exist concerns about whether there will be issues over quality in arming its military and whether such a strategy is based on India’s security needs. However, India is rich in human capital and has large domestic demand, as well as an industrialized economy, that promises to overcome these challenges. Nonetheless, there remain certain steps that need to be taken that are to ensure foreign firm participation, reform the industrial ecosystem, and increase arms sales. What needs to be understood is the fact that the aim behind all these steps is to ensure that the indigenous firms prosper and by ensuring foreign firm participation they can take advantage of technology transfer and access to larger markets. Such an approach is reflected in the steps taken by the government in changing the cap on Foreign Direct Investment (FDI) from 26 to 49 percent.

Similarly, there is a need to incentivize domestic firms by easing the bureaucratic process of issuing licenses for defence production along with active civil-military integration. Lastly, to boost arms sales, there is a need to liberalize export policies, streamline export permission decision making and provide export finances. In the larger context, India needs to adopt multiple domestic and municipal legislation to control such activities. Though it is correct that, the export of arms can take states’ economies to greater heights, along with this, it must be responsible while exporting arms. These arms and guns must not be used for any violation of human rights or humanitarian law. This is especially significant given the changing geopolitical dynamics with the rise of China, Russia’s strategic convergence with China, US’s indeterminate Indo-Pacific policy stance and to maintain a multipolar Asia paradigm rather than a zero-sum alliance system.

<https://www.news18.com/news/opinion/what-should-be-the-next-steps-as-india-moves-to-be-a-defence-exporter-6159283.html>

# The Tribune

*Fri, 14 Oct 2022*

## **India should not Rely on Defence Imports: Rajnath**

India cannot and should not rely on imports of military hardware and the government is committed to achieving self-reliance in defence production to remain prepared to deal with any future security challenges, Defence Minister Rajnath Singh said on Thursday. He also noted that “atmanirbharta” did not mean isolation from the rest of the world, but to ensure national security and strategic autonomy through a modern military. He was addressing a conference of defence attaches (DAs) posted in Indian missions across the globe. The conference was also attended by Chief of Defence Staff Gen Anil Chauhan and the three service chiefs.

In his address, Rajnath described the defence attaches as the bridge between India and friendly foreign countries for mutual defence cooperation. He also urged them to showcase the capabilities of the Indian defence industry in their countries of postings. Rajnath said the DAs were making a significant contribution in securing national interests in line with the country’s foreign policy. He called upon the DAs to carry forward the government’s vision of achieving self-reliance in defence manufacturing, describing it as the only way to make India strong and respected amid constantly-evolving global scenario.

<https://www.tribuneindia.com/news/nation/india-should-not-rely-on-defence-imports-rajnath-441040>

# THE ECONOMIC TIMES

*Thu, 13 Oct 2022*

## **Indian Army to Conduct Military Exercise on Western Front**

Offensive formations of the Indian Army are preparing to take part in a military exercise on the Western front this month, according to a defence release here on Thursday. It is expected to be one of the biggest exercises in recent times and will be witnessed by the General Officer Commanding-in-Chief, Western Command, and other key officials from Army headquarters, it said. "The exercise is planned to validate newly converted mechanised formations, also known as Reorganised Plains Infantry Division, test efficacy of latest induction and upgrades in weapons and equipment, and also test the enhanced force ratios accrued post rebalancing of forces on entire Western Front," according to the release.

Validation of tactical concepts of these formations, especially on canal-based operations, and fighting manoeuvre through built-up areas apart from many other latest operational concepts designed to launch a swift punitive blow to the adversary as part of the proactive strategy will be the key features of the exercise, it said. "The exercise will put into practice the synergy between all arms and services including attack helicopters in a semi desert terrain, it said.

<https://economictimes.indiatimes.com/news/defence/indian-army-to-conduct-military-exercise-on-western-front/articleshow/94828942.cms?from=mdr>



*Thu, 13 Oct 2022*

## **Eastern Naval Command Conducts Offshore Security Exercise – Prasthan**

A two-day offshore security exercise, 'Prasthan' with the aim to integrate the efforts of all maritime stakeholders involved in offshore defence was conducted in the Krishna Godavari Basin Offshore Development Area. This exercise was under the aegis of Eastern Naval Command. The exercise resulted in refining the standard operating procedures (SOPs) and response actions to several contingencies in the Offshore Defence Area, off Kakinada. This exercise is conducted every six months and is an important element of ensuring offshore security as per the Defence Ministry statement. Led by the Navy, the exercise saw participation from the various oil operators, like ONGC, RIL, Vedanta and other stakeholders in the domain of maritime security including AP Marine Police, AP fisheries department and the Coast Guard.

The exercise was conducted onboard Drill rigs Platinum Explorer and DDKG- of ONGC and RIL located about 40 nm south of Kakinada. Contingencies such as terrorist intrusion, bomb explosion, casualty evacuation, search and rescue, man overboard, major fire, oil spill and mass evacuation were exercised. According to the Defence Ministry, the exercise provided all stakeholders with a realistic opportunity to assess their response and preparedness as well as combat contingencies. It was also targetted as bringing about operation in a coordinated and synergised manner. As per the Ministry, the exercise met all its intended objectives.

<https://www.financialexpress.com/defence/eastern-naval-command-conducts-offshore-security-exercise-prasthan/2709554/lite/>

## **Business Standard**

### **Global Defence Firms to Attend Investment Meet in Lucknow**

Top military and defence hardware makers from the US, Europe, and Russia will attend the Uttar Pradesh capital summit 2023 on February 10-12 in Lucknow. The Yogi Adityanath government will showcase its defence manufacturing backyard of UP Defence Corridor at the investment event. In probable first-time-ever prospect, the world's leading military hardware makers will compete in a commercial landscape in the aftermath of the Russia-Ukraine conflict.

According to UP government officials, defence manufacturers that will take part in the event include US missile firm Northrop Grumman, UK's missile launch systems and ammunition maker BAE Systems, German rifle company Umarex, Swedish firm SAAB (which makes Carl Gustaf M4 rifles), Russia's Almaz-Antey (among the top military hardware exporters), France's Dassault Aviation (manufacturer of Rafale jets), and Israel Weapon Industries.

[https://www.business-standard.com/article/current-affairs/global-defence-firms-to-attend-uttar-pradesh-capital-summit-2023-in-lucknow-122101301416\\_1.html](https://www.business-standard.com/article/current-affairs/global-defence-firms-to-attend-uttar-pradesh-capital-summit-2023-in-lucknow-122101301416_1.html)

Thu, 13 Oct 2022

## Indian Army Restarts Air-Defence Guns Procurement

*By Kapil Kajal*

The Indian Ministry of Defence (MoD) has outlined a plan to procure air-defence (AD) guns for the Indian Army. A request for proposal (RFP) issued by the MoD on 8 October said that the plan features the acquisition of 220 towed AD guns and about 142,000 rounds of ammunition. According to the RFP, the proposed AD gun will replace the 'in-service' army guns and will be deployed in all types of terrains. The RFP added that the AD gun should not weigh more than seven tonne in a firing position. The system has a barrel elevation requirement of between  $-5^{\circ}$  and  $+80^{\circ}$ , and it must be fitted with an automatic ammunition-handling system or autoloader. The gun should be operated by a maximum crew of four and be towed by 'in-service' gun tractors with all-terrain mobility including mountainous areas. It should also be able to operate in extreme temperatures.

The gun should be able to engage air targets during day and night using the army's fire-control radar as well as electro-optical fire-control system (EOFCS) independently, the RFP added. The gun should be able to fire smart and programmable ammunition, along with standard rounds, to engage the entire spectrum of manned and unmanned aerial threats at a range of 4,000 m and a height of more than 2,500 m, with a cyclic rate of fire of 220 rounds/minute. The RFP also outlines a requirement for the gun to be built in India through the 'Buy and Make (Indian)' procurement category. Foreign bidders were asked in the RFP to detail in their bids about how they would achieve this 'Make in India' requirement.

<https://www.janes.com/defence-news/news-detail/indian-army-restarts-air-defence-guns-procurement>



**Press Information Bureau**  
**Government of India**

Ministry of Defence

Thu, 13 Oct 2022 7:22 PM

## Indian Navy and IIM Nagpur Joint Collaborative Efforts in Niche Management Domains

Indian Navy and IIM Nagpur signed an MoU on 13 Oct 2022 to explore Opportunities to train, up-skill and re-skill Armed Forces Personnel, Indian Navy personnel in particular, in emerging areas of Business Management, Financial Management, Block Chain, Project Management, Strategic Management, Digital Marketing, Supply chain, Logistic management and research. This will facilitate career enhancement/ progression of Serving Personnel and

up skill retiring officers to meet industry requirement. A Naval Headquarters team will shortly visit IIM Nagpur to custom design executive education programmes to meet specific requirements of the Navy. This MoU will also facilitate reciprocal visits by Indian Navy and IIM Nagpur personnel to respective organisations.

Speaking on the occasion Dr Bhimaraya Ambanna Metri, Director IIM Nagpur, said that IIM Nagpur will jointly collaborate with the Indian Navy to design a bouquet of on-campus/ off-campus program / workshop in areas of mutual interest involving the faculty & participants of full-time IIM program & Research Scholars to find innovative solutions to assist Indian Navy in realising its dream of being Aatma Nirbhar. Vice Admiral Dinesh K Tripathi, the Chief of Personnel Indian Navy speaking on the occasion said that the Indian Navy and Armed Forces are looking forward to see the end results that the Joint Collaborative efforts will bring out in the near future and vistas of opportunities that this MoU will open for Armed Forces personnel in general and Indian Navy personnel in particular. He added that with conclusion of this MoU, the personnel of the Indian Navy will maintain their connect with the zenith end of Academia to keep Indian Navy well aware of the latest happenings in the civil world.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1867535>

# The Tribune

*Fri, 14 Oct 2022*

## **INS Vikrant Starts Integration Exercise with Navy Fleet**

India's indigenous aircraft carrier INS Vikrant has started integrating with the Indian Navy fleet. Over the next few days, it will undertake a series of drills that will mould the operational tasking to make it the leader of the 'carrier task force'. These include drills and evolutions in a multi-threat exercise environment. Vice Admiral Ajendra Bahadur Singh, the Western Navy Commander, embarked the warship on Wednesday to witness the progress of the integration at sea, the Western Command of the Navy headquartered in Mumbai said in a tweet. The 45,000 tonne warship is carrying on its deck the MiG-29K fighter jets. The core of integration shall include flight trials to ensure that jets can land and take off smoothly under all weather condition from the 260-metre-long deck of the warship.

INS Vikrant's flight deck is STOBAR (Short Take-off but Arrested Recovery) configuration with a ski-jump. A fighter jet will approach deck at 240 km per hour. A set of three ribbed- steel 'arrestor wires' – each is one-inch-thick – will pop up across the 60-metre-wide deck. The undercarriage of the jet has a tail hook that gets 'arrested' in wires and brings the aircraft to stop within 90 metre of touch down. For taking-off, there is a 14-degree inclined ramp shaped like ski-jump to give it a lift. Once integrated with the Navy, the warship will expand the Navy's combat arc. The INS Vikrant is powered by four LM 2500 gas turbines from the US company General Electric and each generates 30,000 horse power.

The warship will widen the bubble of 'surveillance' and provide more attack options at sea while having the agility to match the latest warships. Besides own radars, the INS Vikrant will get feed from satellite Rukmini, surveillance planes like the Boeing P8-I and drones like the Predator.

INS Vikrant is expected to be operationally deployed in about six months from now. The warship has been built with state-of-the-art automation features and is the largest ship ever built in the maritime history of India.

<https://www.tribuneindia.com/news/nation/ins-vikrant-starts-integration-exercise-with-navy-fleet-440901>



*Fri, 14 Oct 2022*

## **North Korea Fires Missile and Shells, Further Inflaming Tensions**

North Korea early on Friday fired an additional ballistic missile and 170 rounds of artillery shells toward the sea and flew warplanes near the tense border with South Korea, further raising animosities triggered by the North's recent barrage of weapons tests. The North Korean moves suggest it is reviving an old playbook of stoking fears of war with provocative weapons tests before it seeks to win greater concessions from its rivals. South Korea's Joint Chiefs of Staff said in a statement the short-range missile lifted off from the North's capital region at 1:49 am Friday (1649 GMT Thursday; 12:49 p.m. EDT Thursday) and flew toward its eastern waters. It was North Korea's 15th missile launch since it resumed its testing activities on September 25.

North Korea said Monday its recent missile tests were simulations of nuclear strikes on South Korean and US targets in response to their "dangerous" military exercises involving a US aircraft carrier. After the latest missile test, North Korea fired 130 rounds of shells off its west coast and 40 rounds off its east coast. The shells fell inside maritime buffer zones the two Koreas established under a 2018 inter-Korean agreement on reducing tensions, thus violating the accord, South Korea's military said. North Korea separately flew warplanes, presumably 10 aircraft, near the rivals' border late Thursday and early Friday, prompting South Korea to scramble fighter jets. There were no reports of clashes between the two countries.

South Korean President Yoon Suk Yeol said North Korea's provocations are becoming "indiscriminate" but that his country has massive retaliation capabilities that can deter actual North Korean assaults to some extent. "The decision to attack can't be made without a willingness to risk a brutal outcome," Yoon told reporters. "The massive punishment and retaliation strategy, which is the final step of our three-axis strategy, would be a considerable psychological and social deterrence (for the North)." Maj. Gen. Kang Ho Pil of the South Korean Joint Chiefs of Staff later said in a televised statement that South Korea issued "a stern warning to (North Korea) to immediately halt" its weapons tests. He said South Korea has the ability to deliver an "overwhelming response" to any North Korean provocations.

South Korea's Foreign Ministry said Friday it imposed sanctions on 15 North Korean individuals and 16 organisations suspected of involvement in illicit activities to finance North Korea's nuclear weapons and missile programs. They were Seoul's first unilateral sanctions on North Korea in five years, but observers say they are a symbolic step because the two Koreas have little

financial dealings between them. Most of the North's recent weapons tests were ballistic missile launches that are banned by UN Security Council resolutions. But the North hasn't been slapped with fresh sanctions thanks to a divide at the UN over US disputes with Russia over its invasion of Ukraine and with China over their strategic competition.

The missile launched Friday traveled 650-700 kilometers (403-434 miles) at a maximum altitude of 50 kilometers (30 miles) before landing in waters between the Korean Peninsula and Japan, according to South Korea and Japanese assessments. "Whatever the intentions are, North Korea's repeated ballistic missile launches are absolutely impermissible and we cannot overlook its substantial advancement of missile technology," Japanese Defense Minister Yasukazu Hamada said. He said the missile flew on an "irregular" trajectory – a possible reference to describe the North's highly maneuverable KN-23 weapon modeled on Russia's Iskander missile. The US Indo-Pacific Command said in a statement the North Korean launch didn't pose an immediate threat to U.S. personnel or territory, or to its allies, adding that the US commitments to the defense of South Korea and Japan remain "ironclad." Other North Korean tests in recent weeks included a new intermediate-range missile that flew over Japan and demonstrated a potential range to reach the US Pacific territory of Guam; a ballistic missile fired from an inland reservoir, a first for the country; and long-range cruise missiles.

After Wednesday's cruise missile launches, North Korean leader Kim Jong Un said the tests successfully demonstrated his military's expanding nuclear strike capabilities. He said his nuclear forces were fully prepared for "actual war to bring enemies under their control at a blow" and vowed to expand the operational realm of his nuclear armed forces, according to North Korea's state media. Some observers had predicted North Korea would likely temporarily pause its testing activities this week in consideration of its ally China, which is set to begin a major political conference Sunday to give President Xi Jinping a third five-year term as party leader. North Korea's ongoing testing spree is reminiscent of its 2017 torrid run of missile and nuclear tests that prompted Kim and then US-President Donald Trump to exchange threats of total destruction. Kim later abruptly entered high-stakes nuclear diplomacy with Trump in 2018 but their negotiations fell apart a year later due to wrangling over how much sanctions relief Kim should be provided in return for a partial surrender of his nuclear capability.

Kim has repeatedly said he has no intentions of resuming the nuclear diplomacy. But some experts say he would eventually want to win international recognition of his country as a nuclear state and hold arms control talks with the United State to wrest extensive sanctions relief and other concessions in return for partial denuclearization steps. The urgency of North Korea's nuclear program has grown since it passed a new law last month authorizing the preemptive use of nuclear weapons over a broad range of scenarios, including non-war situations when it may perceive its leadership as under threat. Most of the recent North Korean tests were mostly of short-range nuclear-capable missiles targeting South Korea. Some analysts say North Korea's possible upcoming nuclear test, the first of in five years, would be related to efforts to manufacture battlefield tactical warheads to be placed on such short-range missiles.

These developments sparked security jitters in South Korea, with some politicians and scholars renewing their calls for the US to redeploy its tactical nuclear weapons in South Korea as deterrence against intensifying North Korean nuclear threats. North Korea's military early Friday accused South Korea of carrying out artillery fire for about 10 hours near the border, forcing it to take unspecified "strong military countermeasures" in response. South Korea's military later confirmed it conducted artillery training at a site 10 kilometers (6.2 miles) away from the

Koreas' military demarcation line and said the training did not violate the conditions of the 2018 agreement.

<https://www.financialexpress.com/world-news/north-korea-fires-missile-and-shells-further-inflaming-tensions/2709935/>



*Thu, 13 Oct 2022*

## **NATO Steps Up Support for Ukraine, Strengthens Deterrence and Defence**

NATO will further step up support for Ukraine, while strengthening the Alliance's defence and deterrence and working to increase the protection of critical infrastructure, Secretary General Stoltenberg said on Thursday (13 October 2022). Speaking after a two-day meeting of Defence Ministers, Mr Stoltenberg praised the U.N. General Assembly's condemnation of Russia's attempted illegal annexation of four regions in Ukraine. "This is a clear and strong message that Russia is isolated and that the world stands with Ukraine," he said, reiterating that NATO is not party to the conflict, but that Allies will continue to support Ukraine for as long as it takes. To further enhance Ukrainian defences, the Secretary General announced that NATO will soon provide Ukraine with hundreds of drone jammers for use against Russian and Iranian drones. Addressing Russia's recent nuclear threats, the Secretary General made clear that President Putin's nuclear rhetoric is dangerous and irresponsible and that any use of nuclear weapons by Russia would have "severe consequences".

NATO will hold its annual, routine nuclear preparedness exercise next week, Mr Stoltenberg said, adding that planning for the drill commenced many months ago. Ministers also took decisions to increase Allied stockpiles of munitions and to speed up the delivery of capabilities after months of Allied arms shipments to Ukraine. This involves "providing industry with the long-term demand they need to boost production", Mr Stoltenberg said. Allies also agreed to further enhance the resilience of critical undersea and energy infrastructure. Following the sabotage on the Nord Stream pipelines, NATO doubled its presence in the Baltic and North Seas to 30 ships, supported by maritime patrol aircraft and undersea capabilities.

[https://www.nato.int/cps/en/natohq/news\\_208101.htm](https://www.nato.int/cps/en/natohq/news_208101.htm)

## ISRO's Next-Gen Launch Vehicle may Assume PSLV's Role

The Indian Space Research Organisation (ISRO) is developing a Next-Gen Launch Vehicle (NGLV), which will one day replace operational systems like the Polar Satellite Launch Vehicle (PSLV), ISRO Chairman S. Somanath has said. The PSLV, often dubbed the 'trusted workhorse' of ISRO, "will have to retire" one day, Mr. Somanath said during the three-day Engineers Conclave 2022 which opened at the Liquid Propulsion Systems Centre (LPSC), Valiyamala in Thiruvananthapuram on Thursday. In NGLV, ISRO is understood to be looking at a cost-efficient, three-stage to orbit, reusable heavy-lift vehicle with a payload capability of ten tonnes to Geostationary Transfer Orbit (GTO).

NGLV will feature semi-cryogenic propulsion (refined kerosene as fuel with liquid oxygen (LOX) as oxidiser) for the booster stages which is cheaper and efficient, Mr. Somanath said. "We believe at least 10 tonne capability to GTO is needed. Correspondingly, the Low Earth Orbit (LEO) capability will be twice that. However, payload capability will be lower when the rocket is reusable," he said.

### Simple, robust design

NGLV will feature a simple, robust design which allows bulk manufacturing, modularity in systems, sub-systems and stages and minimal turnaround time. Potential uses will be in the areas of launching communication satellites, deep space missions, future human spaceflight and cargo missions. On PSLV's future, Mr. Somanath said it will be operated as long as there is a commercial demand for it. "The technologies, the manufacturing and cost associated with the systems, all go through changes. Same is the case with the Geosynchronous Satellite Launch Vehicle (GSLV). But the GSLV Mk-III (LVM3) is just a few years old. If you look at launch vehicles, technology induction at the appropriate time is essential," he said.

Mr. Somanath said it is also important to develop a "business model" for NGLV so that it serves its aims. This will include launching commercial satellites and national missions as well as ensuring industry participation from the start. "With the backing of ISRO's knowledge, it is possible for industries to support and create this rocket as a national asset," he said.

<https://www.thehindu.com/sci-tech/science/isros-next-gen-launch-vehicle-may-assume-pslvs-role/article66005152.ece>



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**CSIR-Indian Institute of Petroleum Announces its New  
Atmospheric-Pressure Hydrogen-Free Low-Carbon  
Desulphurization Process for Crude Oil and Refinery Streams**

**CSIR-IIP invites interested industries to partner on a non-exclusive basis for collaborative research, development, scale-up and commercial deployment of the technology**

Crude oil and many petroleum refining streams contain Sulphur-Containing Heterocyclic Aromatic Compounds (SCHAC), which are responsible for the corrosion of assets, poor fuel quality, health issues, and environmental problems. Refinery streams like petrol, diesel, jet fuel, kerosene and fuel oil therefore need to be treated for sulphur reduction before its final end-use. Conventionally, such treatment involves expensive, high-pressure hydrogen, high-temperature operations and significant capital investment, and also substantial associated net greenhouse emissions (carbon footprint) for effecting the necessary desulphurization. To address this, a novel single-step hydrogen-free desulphurization process has been developed by CSIR-Indian Institute of Petroleum (CSIR-IIP). Crude oil from various sources, and sulphur-containing streams from several refineries in India, have been tested; up to 90 percent of the sulphur content, depending on the specific nature of the stream being treated, can be removed by the process. The transformed sulphur compounds produced from the SCHAC components by the CSIR-IIP process are easily separable from the de-sulfurized crudes or other refinery streams via simple filtration process, and offer promise in bulk applications like road construction and coatings.

The facile, inexpensive process offers a potentially transformative low-carbon desulfurization solution for bulk processing of petroleum streams at ambient pressures and mild temperatures. It has the potential to change the existing desulfurization configuration of crude oil and refinery streams in a cost-effective manner without the use of expensive hydrogen, especially for marine and industrial heating applications. Key patents have been filed internationally and additional filings, including Trademark protection, are in progress. CSIR-IIP invites interested industries to partner on a non-exclusive basis for collaborative research, development, scale-up and commercial deployment of the technology. Established in 1960, CSIR-Indian Institute of Petroleum is one of the 37 constituent laboratories of the Council of Scientific and Industrial Research, an autonomous Society headed by the Honourable Prime Minister of India. CSIR-IIP develops and offers technologies, products and services aimed at reducing India's dependence on fossil fuel imports, in mitigating the environmental impact of the global oil and gas sector, and in efficiency enhancement, capacity building and thought leadership for low-carbon energy transition across a wide range of energy producer and energy user industries.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1867477>





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## **Experts Discuss Significance of Geospatial Information for Supporting Sustainable Development**

Experts discussed how enabling people with geospatial information is crucial for supporting sustainable development and the wellbeing of society, as well as for dealing with environmental and climate challenges through digital transformation and technological development at the Second United Nations World Geospatial Information Congress (UNWGIC). David Henderson, Chief Geospatial Officer, Ordnance Survey of the United Kingdom, elaborated on how geospatial technologies are being used in modelling the impact of surface temperature and heat at a plenary session of UNWGIC

We are using these technologies to help quantify, qualify, and express the implication of changes in our environment, identifying them through 3 kinds of impacts--- populations as well as infrastructure at risk and visualizing green space," he added. Ingrid Vanden Berghe, Administrator General, National Geographic Institute, the Belgian national mapping agency, highlighted the significance of looking at sustainable development from the perspective of space which she said "brings a very interesting insight." Taking about GPS as a navigation tool, Syed Akbaruddin Dean, Kautilya School of Public Policy, said, "GPS has helped in reducing fuel use 15-21%. We all use it without realizing what our individual pursuits are doing for the world. "This is just one geospatial application which all of us use, oblivious to the bigger picture that we are contributing to. There is no single other technology in the world that helps in improving fuel efficiency as much," the former Ambassador pointed out.

"For a developing country like Ethiopia, it is very important to equip human resources with the necessary skill-set because at the end of the day, at the bottom of the innovation and tech, there are people operating," said Betelhem Dessie, CEO, Anyone Can Code (ACC), Ethiopia's first Artificial Intelligence and robotics lab. She further pointed out that it is very important to start early, start with kids and the universities, and create a synergy between government and non-government institutions as also private institutions also. The five-day conference is being hosted by the Department of Science & Technology (DST) and convened by the United Nations Committee of Experts on Global Geospatial Information Management. With the theme of 'Geo-Enabling the Global Village: No one should be left behind,' the Second UNWGIC 2022 reflects on the importance of integrated geospatial information infrastructure and knowledge services to support the implementation and monitoring of sustainable development goals.

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