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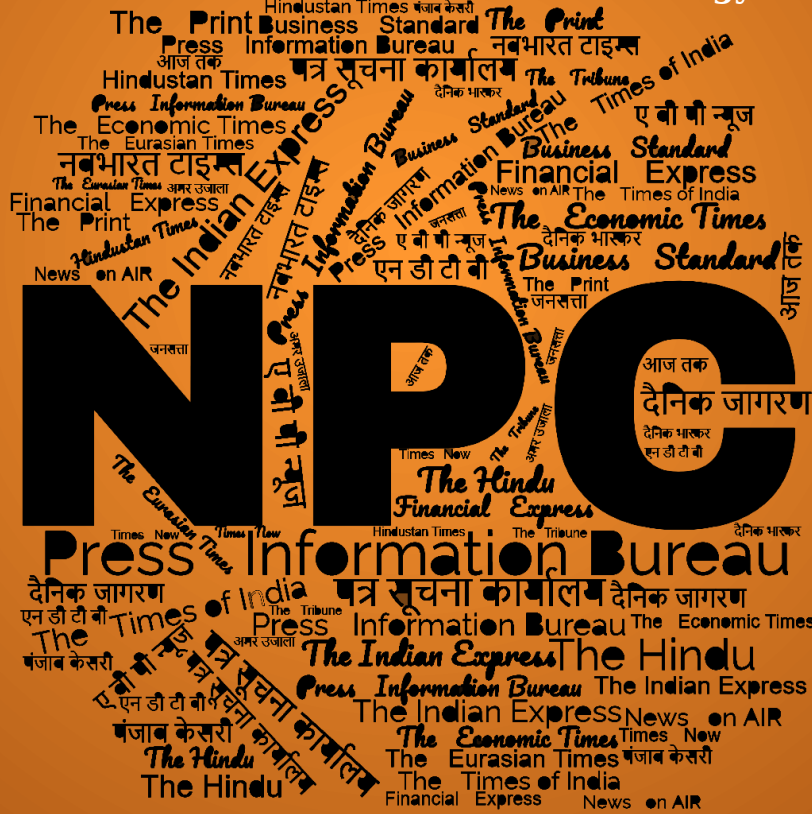
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India's Dhruvastra Missile to Provide Precision Strikes Against Enemy Armor

In a significant development, India's Defence Acquisition Council (DAC) has given the green light to several capital acquisition proposals, including the indigenous Dhruvastra short-range air-to-surface missile. This precision-guided weapon is designed for deployment on the indigenously built DHRUV MK-IV helicopters and is poised to elevate India's combat capabilities against enemy tanks and armoured vehicles significantly.

The Dhruvastra missile system represents a significant addition to India's military arsenal. Developed under the Integrated Guided Missile Development Program (IGMDP) by the Defence Research and Development Organisation (DRDO), Dhruvastra, previously known as Helina, is a helicopter-launched anti-tank guided missile (ATGM) system that can be deployed from both land and air platforms.

Cutting-edge features and versatility

Dhruvastra is a third-generation, fire-and-forget ATGM system, offering versatility in engaging and neutralizing enemy tanks and armoured vehicles. It operates in both direct hit mode and top attack mode, with a range spanning from 500 meters to an impressive 7 kilometres. Dhruvastra can be launched from altitudes of up to 4 kilometres and effectively targets objects moving at speeds of up to 70 kilometres per hour.

At the core of Dhruvastra's precision is its imaging infrared-seeker (IIS), which tracks and guides the missile to its target based on the target's heat signature. This seeker can lock onto a target before or after a missile launch, ensuring optimal accuracy even in challenging conditions such as low light or adverse weather. Dhruvastra's special warhead is designed to penetrate various types of armour, including reactive armour, commonly found on tanks.

Beyond Dhruvastra: The future of Indian missile technology

The induction of the Dhruvastra Missile into the Indian Army and Air Force not only enhances India's defence capabilities but also bolsters its stance in territorial disputes with neighbouring nations. With both China and Pakistan possessing substantial armoured forces, Dhruvastra equips India with a formidable countermeasure.

India's indigenous missile technology continues to evolve. The DRDO has developed a man-portable version of the Nag missile known as the Man-Portable Anti-Tank Guided Missile (MPATGM), extending its use to infantry soldiers. Additionally, the DRDO is working on the SANT missile, a longer-range version of the Nag missile, with a range of 15-20 kilometres, suitable for launch from helicopters and drones. The successful development and deployment of Dhruvastra

mark a significant stride in India's journey toward self-reliance in missile technology and defence equipment, further strengthening its national security and defence capabilities.

<https://www.republicworld.com/india-news/general-news/indias-dhruvastra-missile-to-provide-precision-strikes-against-enemy-armor-articleshow.html>

Defence News

Defence Strategic: National/International



Press Information Bureau
Government of India

Ministry of Defence

Tue, 19 Sep 2023

Indian Army Organises Inaugural General Sf Rodrigues Memorial Lecture on the Topic “Changing Character of War and Firepower”

The Indian Army organised inaugural “General SF Rodrigues Memorial Lecture” in Manekshaw Centre today, in memory of Late General Sunith Francis Rodrigues, the former Chief of the Army Staff (COAS) and Governor of Punjab on the occasion of his 90th birthday. The lecture was attended by General Manoj Pande, the Chief of the Army Staff who delivered the keynote address and other senior serving & veteran officers of the Indian Army.

The forum started with Memoirs of the former COAS followed by a lecture on “Changing Character of War and Firepower” delivered by Lieutenant General Raj Shukla (Retired), former General Officer Commanding in Chief, Army Training Command (ARTRAC).

General SF Rodrigues was born in 1933 in Mumbai and did his schooling from St Xavier’s School. He joined the first course in Joint Services Wing in 1949 and was commissioned into the Regiment of Artillery (9 Field Regiment) on 28th December 1952. The General Officer served in various Field and Self-Propelled Artillery units, and subsequently became an Artillery Aviation Pilot in 1960, wherein he actively participated in 1962 and 1965 wars. He has tenanted the appointments of Vice Chief of the Army Staff, General Officer Commanding in Chief of Central and Western Commands before taking over as the COAS. He served as the COAS from 1st July 1990 till 30th June 1993.

Speaking on the occasion, the Army Chief reminded the audience of the major initiatives undertaken by Gen Rodrigues as the Army Chief. He highlighted that the induction of Women Officers in streams other than Medical Corps, commenced for the first time in 1992 when General Rodrigues was the COAS. “Today, the number of Women Officers in olive greens is more than 1700, with 740 granted Permanent Commission and 114 approved for command assignments. In

other ranks, we have 100 plus in the regular cadre in the Corps of Military Police and 100 new entrants have joined as Agniveers”, the COAS mentioned.

General Manoj Pande also recalled how General Rodrigues gave impetus to the footprints of Indian Army in various assignments under the United Nations. It was a result of his efforts that the subscription of Indian Army personnel in United Nations missions increased from a mere eight personnel in 1991 to 1000 in 1992 and 6300 in 1993. “Today, Indian ‘Blue Helmets’ are almost 6000 strong, deployed across 11 missions”, he mentioned.

General Rodrigues was an exemplary military leader and a strategic thinker who practiced military ethics, ethos and values to the core. He also played a crucial role in fast-pacing the modernisation plan of the Indian Army. Today’s event was an apt tribute to commemorate the contributions made by General Rodrigues to the Indian Army and the Nation

<https://pib.gov.in/PressReleasePage.aspx?PRID=1958847>



Press Information Bureau
Government of India

Ministry of Defence

Tue, 19 Sep 2023

Raksha Rajya Mantri Shri Ajay Bhatt Visits Andaman & Nicobar Command

Raksha Rajya Mantri Shri Ajay Bhatt visited the headquarters of Andaman & Nicobar Command (ANC) during a two-day visit to the islands, that culminated on September 18, 2023. The Raksha Rajya Mantri’s visit to the headquarters included a comprehensive briefing and Op discussions with Commander-in-Chief, ANC Air Marshal Saju Balakrishnan. During the visit, Shri Ajay Bhatt held a number of interactions, which highlighted the strategic importance of the picturesque archipelago.

The Raksha Rajya Mantri began his visit by paying homage to Netaji Subhas Chandra Bose at Sankalp Smarak at INS Utkrosh. It was followed by a courtesy meeting with Lt Governor Admiral DK Joshi (Retd) at Raj Niwas.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1958693>



Press Information Bureau
Government of India

Ministry of Defence

Tue, 19 Sep 2023

Defence Secretary & Malaysian Deputy Secretary General (Policy) Co-chair 12th Defence Cooperation Committee Meeting in New Delhi

The 12th meeting of Malaysia-India Defence Cooperation Committee (MIDCOM) was held in New Delhi on September 19, 2023. The meeting was co-chaired by Defence Secretary Shri

Giridhar Aramane and Deputy Secretary General (Policy), Malaysia Mr Mohd Yani bin Daud. During the meeting, both sides reviewed the outcomes of the two sub-committee meetings namely Sub Committee on Military Cooperation held on July 27, 2023 and Joint Sub Committee on Defence Science Technology and Industry Cooperation held on September 18, 2023.

Both sides assessed the existing defence cooperation between the two countries and held wide-ranging discussions on issues of mutual interest including regional issues. They explored effective and practical initiatives to further expand bilateral defence engagements and agreed to establish a Strategic Affairs working Group (SAWG) to formulate a consultative mechanism intermediate between the MIDCOM and the two Sub-committees to handle all aspects of the defence cooperation between the two countries. The two chairs also articulated steps in the direction of emerging areas of cooperation like cyber security and issues pertaining to global commons. They identified means to enhance existing areas of collaboration, especially in the field of defence industry, maritime security and multilateral cooperation. During the MIDCOM, the Defence Secretary shared an 8-point proposal with the Malaysian side to expand cooperation between India and Malaysia on a wide range of areas such as Government to government-level engagement, Tri-Service cooperation, Training, UN Peacekeeping, Bilateral Services Engagement, Defence Industrial Cooperation, Research & Development and Regional/ Sub-Regional Engagements.

The Defence Secretary highlighted the potential of the domestic defence industry with capacity and capability to cooperate with the Malaysian Armed Forces in its shipbuilding and maintenance plans. Malaysia expressed confidence in the capability of the Indian defence industry and discussed possibilities for co-design, co-production and co-development in the field of defence industry. Both countries reaffirmed their commitment to implement fully the Enhanced Strategic Partnership based on mutual trust and understanding, common interests and shared values of democracy & rule of law.

As part of the visit, the Malaysian delegation also interacted with DRDO officials and identified areas of mutual interest. The delegation is scheduled to visit Mumbai on September 20, 2023 for interactions at Mazagaon Dockyard Limited and Headquarters, Western Naval Command.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1958830>



Wed, 20 Sep 2023

Strengthening Bilateral Defence Ties: Key Takeaways from the 12th MIDCOM Meeting

India and Malaysia met in New Delhi and discussed a wide array of subjects, ranging from assessing the current state of defence cooperation between the two countries. At the 12th Malaysia-India Defence Cooperation Committee (MIDCOM) in New Delhi the two sides also talked about addressing issues of mutual interest, including regional concerns.

Both parties actively brainstormed effective and practical initiatives to further bolster their bilateral defence engagements. A noteworthy development was the agreement to establish a Strategic Affairs working Group (SAWG). This group would serve as a consultative mechanism, bridging the MIDCOM and the two Sub-committees, to comprehensively handle all aspects of defence cooperation between the two nations. The MIDCOM meeting convened in New Delhi on September 19, 2023, marks a significant milestone in the bilateral defence relationship between the

two nations. This crucial meeting was co-chaired by India's Defence Secretary, Giridhar Aramane, and Malaysia's Deputy Secretary General (Policy), Mohd Yani bin Daud.

During the meeting, both sides meticulously reviewed the outcomes of two pivotal sub-committee meetings, namely the Sub Committee on Military Cooperation held on July 27, 2023, and the Joint Sub Committee on Defence Science Technology and Industry Cooperation held on September 18, 2023. These meetings had laid the groundwork for more extensive discussions and collaborations.

Furthermore, the co-chairs of the meeting delved into emerging areas of cooperation, such as cyber security, and addressed issues relating to the global commons. They explored avenues to enhance existing areas of collaboration, with a particular emphasis on defence industry cooperation, maritime security, and multilateral initiatives.

One of the highlights of the MIDCOM meeting was the presentation of an 8-point proposal by the Indian Defence Secretary. This proposal outlined various avenues for expanding cooperation between India and Malaysia, encompassing government-to-government engagement, tri-service cooperation, training, UN Peacekeeping, bilateral services engagement, defence industrial cooperation, research and development, and regional/sub-regional engagements.

Notably, discussions also revolved around India's burgeoning domestic defence industry and its capacity to collaborate with the Malaysian Armed Forces, particularly in shipbuilding and maintenance. Malaysia expressed confidence in India's defence industry capabilities and engaged in talks regarding the possibilities of co-design, co-production, and co-development in the realm of defence industry initiatives. Both countries reaffirmed their unwavering commitment to fully implementing the Enhanced Strategic Partnership, which is grounded in mutual trust, common interests, and shared values of democracy and the rule of law.

As part of their visit, the Malaysian delegation interacted with officials from the Defence Research and Development Organization (DRDO). Additionally, they are scheduled to visit Mumbai today (Sept 20, 2023), for further interactions, including engagements at Mazagaon Dockyard Limited and Headquarters, Western Naval Command. This visit signifies the depth and scope of the burgeoning defence ties between Malaysia and India.

<https://www.financialexpress.com/business/defence-strengthening-bilateral-defence-ties-key-takeaways-from-the-12thnbspmidcom-meeting-3248899/>



Tue, 19 Sep 2023

जब चाहे, जहां से चाहे, कर सकेंगे बात... आर्मी ने सैनिकों के लिए खरीदा सैटेलाइट कम्युनिकेशन टर्मिनल

नौसेना और वायु सेना ऑपरेशन के लिए खुद के सैटेलाइट कम्युनिकेशन टर्मिनल का इस्तेमाल करती हैं, लेकिन आर्मी अभी भी सुदूर सीमावर्ती क्षेत्रों में उपग्रह संचार नेटवर्क का उपयोग कर रही है. अब जल्द ही उसका अपना उपग्रह होने वाला है. भारतीय सेना ने सैनिकों के लिए सुरक्षित सैटेलाइट कम्युनिकेशन टर्मिनल खरीदा है. चीन के साथ वास्तविक नियंत्रण रेखा (LAC) पर दूरदराज के इलाकों में तैनात सैनिकों के लिए सुरक्षित संचार बढ़ाने की दिशा में रक्षा मंत्रालय ने एक मजबूत और महत्वपूर्ण कदम उठाया है. सेना ने 160 से अधिक मोबाइल सुरक्षित सैटेलाइट कम्युनिकेशन टर्मिनल (MSST) के लिए भारत इलेक्ट्रॉनिक्स (BEL) के साथ एक कॉन्ट्रैक्ट पर हस्ताक्षर

किए हैं. ये अत्याधुनिक हाथ से पकड़े जाने वाले और हल्के सूटकेस-आधारित सैटकॉम सेट लंबी दूरी की गश्त पर तैनात सैनिकों और सर्जिकल ऑपरेशन में लगे स्पेशल फोर्स को सुरक्षित उपग्रह-आधारित संचार प्रदान करेंगे.

भारत इलेक्ट्रॉनिक्स के सहयोग से रक्षा अनुसंधान और विकास संगठन (DRDO) द्वारा विकसित एमएसएसटी को सेना के लिए डिजाइन किया गया है. ये दूर-दराज और कठिन इलाकों में तैनात सैनिकों के सामने आने वाली संचार चुनौतियों का समाधान करने में कारगर हैं. इसके अतिरिक्त, ये तेजी से छोटी टीम के संचालन में लगे पैरा-स्पेशल फोर्सेज के लिए सुरक्षित और निर्बाध संचार क्षमताएं प्रदान करते हैं.

एलएसी और एलओसी पर हो रही थी कठिनाई

ये इसलिए भी जरूरी था क्योंकि सेना द्वारा उपयोग किए जाने वाले सैटकॉम सेट पुराने और अप्रभावी हो गए हैं. LAC और LOC के बेहद कठिन और नेटवर्क से कोसो दूर इलाकों में आर्मी को आपसी बातचीत में बहुत परेशानी का सामना करना पड़ता है. सैनिकों को अक्सर अपने ठिकानों और सैन्य मुख्यालयों के साथ संचार स्थापित करने में कठिनाइयों का सामना करना पड़ता है. इन सैटेलाइट कम्युनिकेशन टर्मिनल को सुरक्षित कनेक्टिविटी सुनिश्चित करने के लिए डिजाइन किया गया है.

लेटेस्ट टेक्नोलॉजी से लैस मोबाइल खरीदे

इस स्पेशल नेटवर्क के लिए खास तरह के मोबाइल फोन को भी डिजाइन किया गया है जो स्वदेशी हैं. भारतीय आर्मी ने बेहद लेटेस्ट टेक्नोलॉजी से लैस मोबाइल खरीदे हैं जो जंग के मैदान में दुश्मन पाकिस्तान और चालबाज चीन की किसी भी हरकत का मुंह तोड़ जवाब देंगे. इसके अंतर्गत इंडियन आर्मी ने ऐसे मोबाइल फोन को तमाम ऑपरेशन में यूज करेगी जिन्हे चलाने के लिए किसी भी तरह के नॉर्मल नेटवर्क की जरूरत नहीं होगी बल्कि उन्हें सैटेलाइट के जरिए या यू कहें की बेहद एडवांस टेक्नोलॉजी के जरिए इस्तेमाल में लाया जाएगा. इससे ऑपरेशन के दौरान जवान आपस में कनेक्ट रहेंगे और नॉर्मल बातचीत और वीडियो कॉल कर सकेंगे.

सेना अब दूर करेगी कम्युनिकेशन की बाधाएं

सेना की तैयारी है कि 2025 तक आर्मी का अपना सैटेलाइट होगा और अपना खुद का एडवांस मोबाइल होगा जो पूरी तरह से सुरक्षित होगा. जिसे दुश्मन हैक नहीं कर सकेगा. आर्मी ने पिछले महीने अपनी तरह का पहला बड़ा अभ्यास किया. यह अभ्यास 25-29 जुलाई तक किया गया था. इसका उद्देश्य उपग्रह संचार प्रणाली को बेहतर बनाना और यहां काम करने वाले कर्मियों को ट्रेनिंग देना था.

इस अभ्यास के जरिए सेना ने पश्चिम में लक्षद्वीप से लेकर पूर्व में अंडमान तक और उत्तर में लद्दाख और कश्मीर के ऊंचे इलाकों से लेकर दक्षिणी छोर तक फैली अपनी अंतरिक्ष डोमेन क्षमताओं को बढ़ावा दिया. अंतरिक्ष और जमीनी क्षेत्रों के लिए जिम्मेदार एजेंसियों के साथ-साथ इसरो ने भी इस अभ्यास में हिस्सा लिया था.

<https://www.tv9hindi.com/india/indian-army-purchases-secure-satellite-communication-terminals-for-soldiers-2117330.html>



Wed, 20 Sep 2023

US in Active Talks with India to Look at Producing Military Systems, Says Pentagon Official

The United States is in active talks with the Indian government to look at producing military systems in areas related to ISR and ground-based conventional warfare, a senior Pentagon official said.

Efforts are also on to establish a reciprocal defence procurement agreement with India, Siddharth Iyer, Director for South Asia Policy, Office of the Secretary of Defence said here on Tuesday at an event organised by the prestigious Hudson Institute.

"We are in active talks with the Indian government to look at producing military systems in areas related to ISR (Intelligence, Surveillance and Reconnaissance), and then of course ground-based conventional warfare. And we'll have more to say on that as they become ripe," he said.

Indian-American Iyer said the talks between India and the US to finalise the security of supply arrangement, which would streamline the ability of defence firms to procure their requirements, is making good progress.

"We are also moving at an aggressive clip to establish a reciprocal defence procurement agreement, which would allow and create the conditions for US and Indian defence industries to increase and streamline market access," he said.

This relationship is one of the top priorities for the Pentagon, Iyer said.

"Our belief is that getting the US-India relationship right is not just necessary, it's essential to achieving our strategy in the Indo-Pacific. There's a broad and deep commitment to making that happen," he said.

"I think one of the ways in which we think about the road map is really a manifestation of (Defence) Secretary (Lloyd) Austin's commitment to accelerating India's military modernisation, and for him, putting the department on the hook to find targeted opportunities to propose to advance India's indigenous defence production capabilities," he said.

The India-US defence road map, Iyer said, among other things, identifies the priority military areas where their industries should focus their collaborative efforts.

It identifies some concrete mechanisms by which they can work together to integrate the supply chains. And then ultimately, it also establishes the oversight mechanism to ensure that bureaucratic logjams and regulatory barriers don't impede progress.

"On some of the concrete initiatives, I think the GE engine deal has received some of the most attention in the press," Iyer said.

"I think it is a testament to the significance of the deal. Certainly, it's an arrangement between private companies but the governments had to work extremely closely with each other, with industry and we had to take a really holistic view about how we think about technology security and what it means to advance our strategic interest and balance tech security and US national security requirements to make this come about," he said.

The deal provides India access to jet engine technology that is some of the most sensitive military technology available to the US and what many consider to be a crown jewel, he said.

"In the months ahead, I expect we are going to make progress on a number of different fronts," Iyer said.

<https://www.deccanherald.com/india/us-india-military-systems-2693211>

Empowering India's Navy: The Journey of Innovation and Self-Reliance

By Huma Siddiqui

The second edition of the Indian Navy's Naval Innovation and Indigenisation (NIIO) Seminar, 'Swavlamban 2023,' is set to take place on October 4-5, 2023.

This event follows the inaugural seminar in July 2022, where the Prime Minister Narendra Modi launched the 'SPRINT' initiative, presenting 75 challenges to startups and MSMEs. These 'SPRINT Challenges' aim to promote the use of indigenous technology within the Indian Navy, aligning with the goal of developing at least 75 technologies or products as part of the 'Azadi ka Amrit Mahotsav' celebration.

The 'SPRINT' initiative is a collaborative effort involving the Defence Innovation Organisation (DIO), and it stands for 'Supporting Pole-Vaulting in R&D through Innovations for Defence Excellence (iDEX), NIIO, and Technology Development Acceleration Cell (TDAC).' The response to this initiative has been remarkable, with 1106 proposals received.

Following a rigorous evaluation process, 113 winners in the DISC 7 SPRINT category (with grants up to 1.5 crores) and 5 winners in the DISC 7 SPRINT-PRIME category (with grants up to 10 crores) were announced. These winners are currently working on developing prototypes, with over 100 developmental agreements established between iDEX, industry, and the Indian Navy.

Various cutting-edge technologies are advancing under this initiative, including blue-green lasers for underwater use, autonomous weaponized swarms, underwater swarm drones, multiple firefighting aids, the integration of Artificial Intelligence (AI) for diverse applications, and the creation of an ultra-endurance small drone for maritime missions.

The culmination of these efforts will be showcased during the 'Swavlamban-2023' event in New Delhi on October 4-5, 2023, where 75 prototypes, including live demonstrations of promising technologies, will be presented.

Background:

In July 2022, Prime Minister Modi unveiled the 'SPRINT Challenges' during the NIIO seminar 'Swavlamban' in New Delhi. These challenges are designed to bolster the use of indigenous technology within the Indian Navy as part of the 'Azadi ka Amrit Mahotsav' initiative. The collaborative project involves NIIO, the Defence Innovation Organisation (DIO), and is named 'SPRINT.'

During his address, Prime Minister Modi emphasized the importance of self-reliance in India's defence forces, underlining the significance of organizing the 'Swavlamban' seminar for a self-reliant Navy. He praised the goal of creating 75 indigenous technologies and expressed confidence in achieving this milestone. He stressed the need for continuous innovation, connecting premier institutions like IITs with defence research, and opening defence R&D to the private sector, academia, MSMEs, and startups.

The Prime Minister acknowledged the transformation in the defence sector, with a shift from being the world's biggest defence importer to a growing exporter. He highlighted the changing nature of

threats, extending beyond traditional domains to include space, cyberspace, and economic and social realms, making self-reliance critical.

Overall, these initiatives and efforts underscore India's commitment to self-reliance in defence and its aspiration to become a global hub for manufacturing.

<https://www.financialexpress.com/business/defence-empowering-indias-navy-the-journey-of-innovation-and-self-reliance-3247975/>



Tue, 19 Sep 2023

M1 Abrams Tanks to Enter Ukraine 'Soon': U.S. Defence Chief

Ukraine will soon receive M1 Abrams tanks from the United States as Kyiv's forces steadily advance in their counter-offensive against Moscow's troops, U.S. Defence Secretary Lloyd Austin said on September 19.

Representatives of dozens of countries that support Kyiv are meeting in Germany to discuss new aid for Ukraine ahead of an address to the U.N. General Assembly by the country's president, Volodymyr Zelenskyy.

Washington had promised the 31 tanks to Kyiv at the start of the year, part of more than \$43 billion in security assistance pledged by the United States since Russia invaded Ukraine in February 2022.

"I'm... pleased to announce that the M1 Abrams tanks that the United States had previously committed to will be entering Ukraine soon," Mr. Austin said at the opening of the Ukraine Defence Contact Group.

A senior U.S. military official said the first tanks will be sent in the coming days and the process completed within weeks.

The tanks will be paired with 120mm armour-piercing depleted uranium rounds.

Such munitions are controversial due to their association with health problems, such as cancer and birth defects, in areas where they were used in past conflicts, although they have not been definitively proven to have caused them.

The decision to provide Abrams tanks to Ukraine represented a U-turn as American defence officials had repeatedly said they were ill-suited for Kyiv's forces due to their complexity.

Mr. Zelenskyy arrived in the United States on Monday, visiting wounded Ukrainian troops at a hospital ahead of his U.N. address, which he will make as the country's forces push ahead with a slow-moving, high-stakes counter-offensive to wrest back territory from Russian forces.

'Steady forward progress'

Ukraine's limited progress against entrenched Russian positions has spurred debate among Kyiv's Western allies over its military strategy.

But on Monday, Ukraine's defence ministry said it had recaptured a total of seven square kilometres (nearly three square miles) last week near the eastern town of Bakhmut and also along the southern front.

Mr. Austin said Tuesday that the counter-offensive "continues to make steady forward progress.

"And brave Ukrainian troops are breaking through the heavily fortified lines of Russia's army of aggression."

The U.S. defence chief also welcomed new Ukrainian defence minister Rustem Umerov, who was appointed earlier this month in a significant change for Kyiv, following corruption scandals at the ministry.

A senior U.S. defence official said ahead of the meeting that the gathering provided an opportunity "to hear from minister Umerov himself what his vision is, what his priority is".

"Democracies like Ukraine have... turnover in leadership all the time," the official said, adding: "We do expect continuity [from Kyiv]."

U.S. officials have spearheaded the push for international support for Ukraine, quickly forging a coalition to back Kyiv after Russia invaded and coordinating aid from dozens of countries through near-monthly Contact Group meetings.

As Kyiv reported that its air defence systems had downed 27 Shahed drones launched overnight in Russia's latest aerial barrage, Mr. Austin in Ramstein urged allies to "continue to dig deep" on such systems for Ukraine as they are "saving lives".

Ahead of the latest meeting, Germany announced it will give another 400 million euros (\$428 million) of weapons and aid to Ukraine.

This will include ammunition, armoured vehicles and mine-clearing equipment, Defence Minister Boris Pistorius told top German tabloid Bild.

"Ammunition is what Ukraine needs most in its defensive struggle against the brutal war of aggression," he said.

Ukraine's supporters have also provided training to Kyiv's troops, while the United States and other countries have imposed tough sanctions on Russia.

The targets of the sanctions include financial institutions, technology imports and energy exports.

<https://www.thehindu.com/news/international/m1-abrams-tanks-to-enter-ukraine-soon-us-defence-chief/article67323241.ece>

ThePrint

Wed, 20 Sep 2023

Russia's Corvette Carries out Firing Drills at Baltic Sea – Russia's Defence Ministry

Russia's Stoikiy corvette of the Baltic Fleet carried out firing drills at mock targets in the Baltic Sea, the Russian defence ministry said on Wednesday.

The crew of the small warship conducted a series of scheduled exercises, firing at surface and air targets in a "difficult jamming environment" with the use of electronic countermeasures of a possible enemy, the ministry said.

"The sea range of the Baltic Fleet, where the exercise took place, was declared temporarily dangerous for civil shipping and aviation flights," the ministry said in a statement on the Telegram messaging platform.

It was not clear when the drills took place.

The Baltic Sea Fleet of the Russian Navy is headquartered in Kaliningrad, a Russian exclave between Poland and Lithuania, both NATO member states, on the Baltic Sea.

<https://theprint.in/world/russias-corvette-carries-out-firing-drills-at-baltic-sea-russias-defence-ministry/1769389/>

Science & Technology News

 **The Indian EXPRESS**

Wed, 20 Sep 2023

ISRO's Aditya-L1 Leaves Earth Orbit, Begins a 110-Day Journey to L1 Point

“Off to Sun-Earth L1 point!” said the Indian Space Research Organisation (ISRO) on Tuesday as an early morning manoeuvre by the Aditya-L1 spacecraft put it in a trajectory towards the point 1.5 million kilometres away from where it will continuously study the Sun.

The spacecraft will remain in the Trans-Lagrangean Point 1 trajectory for 110 days before being inserted into an orbit around the point where the gravitational pull of the Sun and Earth on the spacecraft will be completely balanced. “This is the fifth consecutive time ISRO has successfully transferred an object on a trajectory toward another celestial body or location in space,” the space agency said.

After travelling for nearly four months to the L1 point, covering a distance that has not been covered by any other Indian spacecraft, the Solar observatory will park itself in a halo orbit around the L1 point and study the Sun.

In fact, this is the first mission by India where the spacecraft will get into an orbit around a point and not a celestial body like Earth, Moon, or Mars. Mission director Nigar Shaji earlier told Indian Express: “This halo orbit insertion at L1 is something that ISRO has not done so far.”

The L1 point that lies at only 1% of the distance between Earth and the Sun has been selected as it allows for an unobstructed view of the Sun as no celestial body can come in between to cause an eclipse. The point also allows us to study the Sun without interference of the dust found in the Earth's atmosphere or the atmosphere and magnetic fields itself that do not allow some of the harmful radiations like UV radiation from the Sun to enter the Earth.

There are seven scientific instruments on board the observatory class spacecraft.

One of the instruments called the Supra Thermal and Energetic Particle Spectrometer (STEPS) has started collecting scientific data already, measuring high temperature, energetic particles in the solar wind. STEPS comprises six sensors, each observing in different directions. The instrument was switched on nine days ago after reaching a distance of more than 50,000 kilometres from the Earth. This distance of more than eight times the Earth's radius meant that the spacecraft was out of the Earth's radiation belt.

The observations started after the necessary instrument health checks were completed. “The data collected during Earth's orbits helps scientists to analyse the behaviour of particles surrounding the Earth, especially in the presence of the magnetic field of Earth,” the space agency said.

The ISRO launched Aditya L-1, its first space-based mission to study the Sun, from the Satish Dhawan Space Centre in Sriharikota on September 2.

<https://indianexpress.com/article/technology/science/isros-aditya-l1-earth-orbit-journey-l1-point-8946613/>



Tue, 19 Sep 2023

Science and Tech Awards to Get Padma-Style Makeover into Rashtriya Vigyan Puraskar

Nearly a year after the Union Government decided to cut the number of prizes annually awarded by its science-affiliated Ministries, it has instituted the Rashtriya Vigyan Puraskar (RVP) — 56 prizes to felicitate scientists, technologists and innovators. Akin to the prestigious Padma awards, these awards will not include any cash component; instead, they will likely bestow only a certificate and medallion on the awardee, sources confirmed to The Hindu.

According to the proposal seen by The Hindu, which is yet to be made public, the RVP will comprise three Vigyan Ratna awards, as well as 25 Vigyan Shri, 25 Vigyan Yuva-Shanti Swarup Bhatnagar, and three Vigyan Team awards.

Multi-disciplinary

These prizes will be awarded annually for physics, chemistry, biological sciences, mathematics and computer science, earth science, medicine, engineering science, agricultural science, environmental science, technology and innovation, atomic energy, space science and technology, and a 13th category, simply called 'Others'.

“It may be ensured that each domain may be represented. Adequate representation of women may also be ensured,” said the proposal forwarded by the Department of Science and Technology (DST) to the Ministry of Home Affairs (MHA).

Cash prizes unlikely

The 56 proposed awards are a stark reduction from the almost 300 science prizes that used to be given by Union Ministries. In their previous avatar, the prizes also had a significant cash component. The Shanti Swarup Bhatnagar (SSB) awards, given by the Council of Scientific and Industrial Research (CSIR) since 1958, now includes ₹5 lakh per winner, as well as a salary perk. In fact, the government announced the names of 12 winners of the SSB awards just last week, after a year's delay. The National Technology Awards, given to teams by the Technology Development Board (a DST entity), also include cash prizes worth ₹25 lakh.

Open to PIOs

The new awards will also be open to persons of Indian origin (PIOs), though a maximum of one such may be awarded the Vigyan Ratna, while three PIOs each can be selected for the Vigyan Shri and the VY-SSB. However, PIOs will not be eligible for the Vigyan Team awards.

The Vigyan Ratna awards shall be for “lifetime contributions along with excellence made in any field of science”, the Vigyan Shri for “distinguished contribution to any field”, and the SSB for “exceptional contribution by young scientists”. The team awards shall be for three or more

researchers who have made an “exceptional contribution as a team”. There are no age limits for any prizes except the SSB, for which recipients must be 45 years or younger.

Starting in 2024

The awards will be announced annually on May 11, which is National Technology Day, and will be awarded on National Space Day, August 23. These are the days on which India successfully conducted its second nuclear test in 1998, and then catapulted the Chandrayaan-3’s Vikram lander on the moon this year.

The RVP awards, which will commence from 2024, will be conferred by the President of India or the Vice President, according to the proposal. A committee will be constituted every year, comprising the Secretaries of six science Ministries, up to four presidents of science and engineering academies, and six distinguished scientists and technologists from various fields. The CSIR will coordinate the administration of the awards process for two years, after which it will be taken over by the proposed National Research Foundation.

Truncation from 300 awards

The RVP awards are a major truncation of the nearly 300 awards that were given by scientific Ministries, though most of these were internal awards. The DST, for instance, used to award 207 prizes, of which four were national awards, 97 were private endowment awards, 54 were lecture or scholarship awards, and 56 were internal awards. The Department of Atomic Energy (DAE) used to give 25 performance awards, conferred by public sector units, and 13 “non-core” domain awards.

Last year, an MHA-constituted committee decided to do away with all the atomic energy awards, and replace them with “an award of very high stature.” As per the latest recommendation, all internal awards of departments will be discontinued, save one award of the DAE in the name of Homi Jehangir Bhabha with a maximum of 30 recipients. Internal awards given by the Department of Space, the Indian Council of Medical Research, and the Ministry of Earth Sciences have also been rescinded.

The Union Government has instituted the Rashtriya Vigyan Puraskar (RVP) — 56 prizes to felicitate scientists, technologists and innovators.

Akin to the prestigious Padma awards, these awards will not include any cash component; instead, they will likely bestow only a certificate and medallion on the awardee.

The RVP will comprise three Vigyan Ratna awards, as well as 25 Vigyan Shri, 25 Vigyan Yuva-Shanti Swarup Bhatnagar, and three Vigyan Team awards.

<https://www.thehindu.com/sci-tech/science/science-and-tech-awards-to-get-padma-style-makeover-into-rashtriya-vigyan-puraskar/article67322829.ece>

