

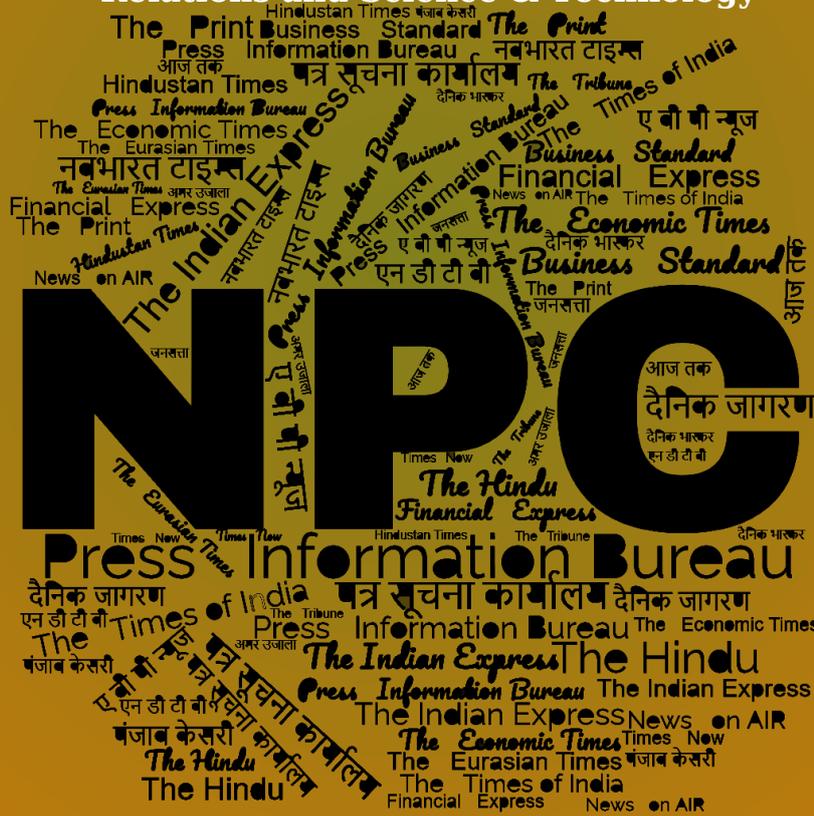
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# समाचार पत्रों से चयित अंश Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

A Daily service to keep DRDO Fraternity abreast with DRDO Technologies, Defence Technologies, Defence Policies, International Relations and Science & Technology



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Sat, 03 Feb 2024

### पश्चिम बंगाल में पहली बार मिसाइल टेस्ट करेगा DRDO: दीघा में बनी टेस्टिंग रेंज; इसी दौरान बालासोर से भी मिसाइल लॉन्च करके रिसर्च करेगी टीम

भारतीय रक्षा अनुसंधान और विकास संगठन (DRDO) पश्चिम बंगाल में दीघा के तट से मिसाइल टेस्टिंग करने वाला है। यह पहला मौका होगा, जब बंगाल के समुद्र तट से कोई मिसाइल टेस्ट होगा।

आमतौर पर DRDO मिसाइल टेस्टिंग के लिए पड़ोसी ओडिशा के व्हीलर या बालासोर टेस्टिंग रेंज को ही प्राथमिकता देता है। मिसाइल की टेस्टिंग फरवरी के आखिरी या मार्च के पहले हफ्ते में की जाएगी।

#### दो टेस्टिंग रेंज से दो मिसाइलें एक साथ लॉन्च होंगी

दीघा से होने वाली मिसाइल टेस्टिंग के दौरान ओडिशा के बालासोर से भी इसी समय मिसाइल लॉन्च की जाएगी। दरअसल, DRDO यह रिसर्च करना चाहता है कि दो मिसाइलें एक-दूसरे को बीच रास्ते में कैसे इंटरसेप्ट करेंगी, या अलग हो जाएंगी। इससे यह पता चल सकता है कि भारत के मिसाइल डिफेंस प्रोग्राम में कितना डेवलपमेंट हो सकता है।

#### ममता सरकार ने टेस्टिंग रेंज बनाने जमीन दी

हल्दिया कलेक्टर तनबीर अफजल के मुताबिक DRDO की तरफ से हो रही मिसाइल टेस्टिंग के लिए राज्य सरकार पहले ही जमीन दे चुकी है। वहां मिसाइल लॉन्चिंग पैड बनाए जा रहे हैं। इसके साथ लॉन्चिंग पैड तक सड़कें बनाने में भी राज्य सरकार द्वारा सहयोग किया जा रहा है।

पिछले दिनों केंद्रीय रक्षा एजेंसियों में से एक इंडियन कोस्ट गार्ड के IG इकबाल सिंह चौहान हल्दिया गए थे। उन्होंने बताया था कि तटरक्षक बल ओडिशा-बंगाल में दो-दो रडार स्टेशन बना रहा है। बंगाल में फ्रेजरगंज और जुनपुट में राडार स्टेशन होगा। ये अगस्त तक बनकर तैयार हो जाएंगे।

#### दो दशक पहले परमाणु संयंत्र को लेकर हुआ था विरोध

करीब दो दशक पहले 2006 में पूर्वी मेदिनीपुर के हरिपुर में परमाणु ऊर्जा संयंत्र बनाने की बात हुई थी। लेकिन तब, स्थानीय लोगों की वजह से ऐसा नहीं हो सका। उसी हरिपुर के पास जुनपुट में मिसाइल लॉन्चिंग पैड बन रहा है। जुनपुट कांथी से 7 किमी दूर है। वहां के ड्राई फिश फार्म के पास यह मिसाइल लॉन्च सेंटर बनाया जा रहा है।

#### DRDO ने ओडिशा में 3 महीने तक मिसाइल टेस्टिंग रोक दी है

ओडिशा के डॉ. अब्दुल कलाम आजाद आइलैंड (पहले व्हीलर द्वीप) पर होने वाली मिसाइल टेस्टिंग को दिसंबर 2023 से लेकर मार्च 2024 तक 3 महीने के लिए रोका गया है। इसके पीछे वजह हैं ओलिव रिडले कछुए। नवंबर से

मई तक इन कछुओं का नेस्टिंग टाइम होता है। मिसाइल टेस्टिंग के दौरान तेज चमक और आवाज होने से कछुओं का ध्यान भटक सकता है। इन्हें परेशानी न हो, इसलिए यह फैसला लिया गया।

<https://www.bhaskar.com/national/news/drdo-digha-coast-missile-launch-update-west-bengal-132537501.html>

# हिन्दुस्तान

Mon, 05 Feb 2024

## भारतीय सेना के जवानों को लगे पंख, अब जेटपैक सूट पहनकर उड़ान भरने की तैयार

भारत की रक्षा चुनौतियों एवं भविष्य के युद्धों में आधुनिक तकनीकों का इस्तेमाल सुनिश्चित करने के लिए रक्षा अनुसंधान एवं विकास संगठन (DRDO)

जवानों के लिए जेटपैक सूट तैयार करने जा रहा है। इन्हें पहनकर जवान उड़कर भी आपरेशन को अंजाम दे सकेंगे। अभी तक ब्रिटेन की एक कंपनी को ह इस प्रकार के जेटपैक सूट बनाने में महारत हासिल है और तमाम देश उसी से इनकी खरीद कर रहे हैं।

रक्षा मंत्रालय से जुड़े एक दस्तावेज के अनुसार डीआरडीओ ने जेटपैक सूट बनाने की संभावनाओं को लेकर एक अध्ययन शुरू किया है। इसके तहत सबसे पहले इसका एक प्रोटोटाइप बनाया जा रहा है। लेकिन यह प्रोटोटाइप बाजार में मौजूद जेटपैक इंजनों से भिन्न होगा। अभी तक जो जेट इंजन इस्तेमाल हो रहे हैं, वे माइक्रो गैस टरबाइन इंजन होते हैं। लेकिन डीआरडीओ गैस टरबाइन इंजन के बजाय बैटरी चालित इलेक्ट्रो डक्टेड फैन्स (ईडीएफ) तैयार करेगा। इसे वियरेबल ह्यूमन फ्लाइट प्लेटफार्म का नाम दिया गया है।

रक्षा सूत्रों ने बताया कि अगले कुछ महीनों में डीआरडीओ द्वारा जेटपैक सूट तैयार कर लिए जानेकी संभावना है, जिसके बाद उसका परीक्षण सेनाओं द्वारा किया जाएगा तथा सफल रहने पर सेना में शामिल कर लिया जाएगा।

इस प्रकार जेटपैक इंजन वालेसूट अभी ब्रिटेन की एक कंपनी बनाती है। ब्रिटेन के साथ अमेरिका, रूस, न्यूजीलैंड समेत कई देशों की सेनाओं में इनका इस्तेमाल होता है। कई देशों में इस कंपनी के सहयोग में भी इनका निर्माण हो रहा है। सूत्रों की मानें तो कंपनी द्वारा खुले बाजार में बिक्री के लिए ऐसे सूट उपलब्ध हैं। भारत में भी बेंगलूर की एक कंपनी इस पर कार्य कर रही है तथा पूर्व में सेना ने भी ऐसे सूट की जरूरत से सरकार को अवगत कराया है। लेकिन अब तक इनकी खरीद को लेकर कोई फैसला नहीं हो पाया है।

### उड़ान अवधि को ज्यादा करने के प्रयास

इस प्रकार के सूट को पहनकर जवान 10-20 मिनट तक की उड़ान भर सकते हैं। साथ में वह कुछ वजन भी अपने साथ ले जा सकते हैं। डीआरडीओ बैटरी चालित जो प्लेटफार्म बना रहा है, उसमें उड़ने की अवधि को ज्यादा समय तक करने के प्रयास किए जा रहे हैं। ताकि इसके जरिये दो घंटे या अधिक समय तक उड़ान भरी जा सके। लेकिन यह प्रक्रिया बेहद जटिल है तथा इसके परीक्षण होने में सालों लग जाएंगे।

डीआरडीओ यदि आने वाले वर्षों में इन्हें तैयार करने में सफल रहता है तो फिर स्वदेशी जेटपैक इंजनों से भारतीय सेनाओं के जवान लैस होंगे और भारत चुनिंदा देशों में शामिल हो जाएगा जिनकी सेनाओं के जवान इस प्रकार के वियरेबल प्लेटफार्म से लैस हैं।

सर्जिकल स्ट्राइक जैसे अभियानों के लिए उपयुक्त

यह यूनिफार्म सर्जिकल स्ट्राइक जैसे अभियानों, दुर्गम स्थानों पर हमला करने, जंगलों में नक्सलियों के खिलाफ अभियानों के लिए कारगर होगी। एक बार यह सूट बन गया तो फिर अर्धसैनिक बलों को भी उसका लाभ मिलना तय है, जो नक्सलियों के खिलाफ अभियान चलाते हैं। इसी प्रकार इस प्लेटफार्म से लैंस जवानों को निगरानी के कार्यपर भी लगाया जा सकता है।

<https://www.livehindustan.com/national/story-soldiers-will-fly-wearing-jetpack-suit-drdo-working-on-it-indian-army-updates-sena-9286483.html>

## Defence News

## Defence Strategic: National/International



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

**Ministry of Defence**

*Sat, 03 Feb 2024*

### **INS Sandhayak, First Survey Vessel Large Ship, Commissioned into Indian Navy in the Presence of Raksha Mantri in Visakhapatnam**

**The ship will further strengthen India's role as a superpower in the Indo-Pacific region: Shri Rajnath Singh**

**“INS Sandhayak will protect our own maritime interests as well as of friendly countries”**

**“Maritime piracy & smuggling will not be tolerated; It is a pledge of ‘New India’”**

**“India stands for freedom of navigation, trade & commerce and a rules-based world order”**

INS Sandhayak (Yard 3025), the first Survey Vessel Large (SVL) ship, was commissioned into the Indian Navy in the presence of Raksha Mantri Shri Rajnath Singh at an impressive ceremony held at the Naval Dockyard, Visakhapatnam on February 03, 2024. The primary role of the ship is to carry out full scale hydrographic surveys of ports, harbours, navigational channels/routes, coastal areas and deep seas, towards enabling safe marine navigation. In its secondary role, the ship will be capable of undertaking a range of naval operations.

The Raksha Mantri, in his address, termed the commissioning as historic, exuding confidence that INS Sandhayak will further strengthen India's role as a superpower in the Indo-Pacific region and help the Indian Navy in maintaining peace & security. He explained the security aspect of a country by drawing parallels with the development of a human being. “From being dependent on the family in the formative years, a child gradually becomes independent before he/she starts to spread knowledge in the society. Similarly, a country, in the initial stage of its development, depends on other countries for security, before it starts developing the capability to protect itself. Then comes

the third stage when it becomes so powerful that it not only safeguards its own interests, but also becomes capable of protecting its friendly nations,” he said.

The Raksha Mantri expressed hope that INS Sandhayak will go a long way in obtaining information about the oceans and achieve the twin objective of protecting the country as well as others. “The ocean is vast and bottomless. The more we are able to explore its elements, the more our knowledge will expand, and we will become stronger. The more we gather information about the ocean, its ecology, its flora and fauna, the closer we will get to achieving our objectives. The more we know about the ocean, the more meaningfully we will be able to fulfil our strategic interests,” he said.

Shri Rajnath Singh pointed out that post-Independence, despite facing challenges on many fronts, India continued to move forward for its security and protected itself from threats. Today, the country is marching ahead on the path of development, with the more-than-ever strong Navy providing security in the Indian Ocean and Indo-Pacific region as the first responder, he said.

The Raksha Mantri termed the Indian Ocean as a hotspot for global trade. “Many choke points like Gulf of Aden etc. are present in the Indian Ocean, through which a large amount of international trade takes place. Many threats remain at these choke points, the biggest being from pirates,” he said, referring to the hijack attempts on Merchant Vessels in the Arabian Sea and the Indian Navy’s courage and promptness to rescue the ships from the pirates.

Shri Rajnath Singh assured that those involved in maritime piracy and smuggling will not be tolerated under any circumstances, describing it as the pledge of ‘New India’. During the commissioning of INS Imphal recently, the Raksha Mantri had said that India will find those involved in nefarious activities from the depth of the oceans and take strict action against them.

At the commissioning ceremony of INS Sandhayak, the Raksha Mantri lauded the Indian Navy for providing security not only to the Indian ships, but also those from friendly countries. He referred to the recent drone attack on a British ship in the Gulf of Aden which resulted in the oil tankers catching fire. He commended the Indian Navy for its prompt response in extinguishing the fire, stating that the effort was recognised and appreciated by the world.

Shri Rajnath Singh praised the Indian Navy for averting five piracy attempts and assisting ships attacked by drones and missiles in the last few days, in addition to rescuing 80 fishermen/marines. “The Indian Navy in the Indian Ocean region is facilitating safe trade, while ensuring peace and prosperity. Many defence experts are calling this the rise of a superpower. This is our culture - to protect everyone,” he said.

The Raksha Mantri emphasised that with increasing power, India is determined to eradicate anarchy not only from the region, but from the entire world. He iterated India’s stand of maintaining freedom of navigation, trade and commerce among different countries. “The purpose of our growing power is to ensure a rules-based world order. Our aim is to stop illegal and unregulated fishing in the Indian Ocean and Indo-Pacific region. The Navy is stopping narcotics and human trafficking in this region. It is not only committed to stopping piracy, but also making this entire region peaceful and prosperous. INS Sandhayak will play a crucial role in achieving our objective. The intention with which the Government is strengthening the Navy will realise our destiny of becoming the promoters of world peace,” he said.

Speaking on the occasion, Chief of the Naval Staff Admiral R Hari Kumar stated that the SVL project highlights the growing importance attached by the government and the Navy to the quintessential prerequisite to operating at sea - survey of the unfathomable depths of the oceans. He added that in order to leverage the flexibility to undertake a diverse range of roles and tasks, the Navy has been launching state-of-the-art platforms indigenously. “Be it the mighty aircraft carrier Vikrant, the deadly destroyers of Visakhapatnam Class, the versatile Nilgiri class Frigates, the

stealthy Kalvari class submarines, the nimble Shallow Water ASW Craft or the specialised Diving Support Vessels - we are carefully crafting a balanced 'Aatmanirbhar' force in service of an ascendant Bharat," he said. Admiral R Hari Kumar asserted that 64 out of 66 ships and submarines under order are being built in Indian shipyards. This means that the Navy will invest thousands of crores in this sector, enhancing capacity of the shipyards, and capabilities of the workers as well as those employed in ancillary industries, he emphasised.

On the Raksha Mantri's assurance that strict action will be taken against those who disturb peace in the Indian Ocean, the Chief of the Naval Staff said: "Not only India but the entire world has seen the effect of Shri Rajnath Singh's instructions in the last four-five weeks. The Indian Navy will not stop until the Indian Ocean becomes completely open, safe and free. We are ready!".

The commissioning ceremony marked the formal induction of the first of the four ships of the SVL Project under construction at Garden Reach Shipbuilders & Engineers (GRSE), Kolkata. The project has been steered by the Warship Design Bureau of the Indian Navy.

The keel was laid on March 12, 2019 and the ship was launched on December 05, 2021. It has undergone a comprehensive schedule of trials in harbour and at sea, leading up to commissioning. The ship has a displacement of 3,400 tons and an overall length of 110 meters with a beam of 16m.

INS Sandhayak is equipped with state-of-the-art hydrographic equipment including Deep & Shallow Water Multi-Beam Echo-Sounders, Autonomous Underwater Vehicle, Remotely Operated Vehicle, Side scan sonars, Data Acquisition and Processing System, satellite-based positioning systems and terrestrial survey equipment. The ship is propelled by two Diesel Engines and is capable of achieving speeds in excess of 18 knots. It has an indigenous content of over 80% by cost and is a tribute to the collaborative efforts between the Indian Navy and Industry, including MSMEs. Its induction underscores the growing maritime interests and capabilities of the nation.

'Sandhayak' means the one who carries out a special search. The crest depicts the sixteen points of a mariner's compass, enclosing a 'divider' and an 'anchor' riding the sea, symbolising the charting of oceans, which is the basic role of the survey ship. The commissioning is an affirmation of India's expertise in warship designing and construction.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2002179>



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

**Ministry of Defence**

***Fri, 02 Feb 2024***

## **Defence Ecosystem**

The Government has drawn various action plans to strengthen the country's defence ecosystem. Indian industry, both public and private, is encouraged to participate in design, development and manufacture of Defence Systems under 'Make Procedure' prescribed at chapter-III of Defence Acquisition Procedure 2020 (DAP-2020) wherein provisions to provide financial assistance for prototype development are also incorporated.

A Green Channel Policy for procurement of Defence stores and spares has been launched for awarding Green Channel status to firms having predefined financial and quality credentials. Grant of Green Channel Certificate provides waiver of pre-dispatch inspection and acceptance of stores under supplier's guarantee/warranty against the contracts concluded by various Procurement

Agencies under Ministry of Defence. Two Defence Industrial Corridors (DICs) - Uttar Pradesh Defence Industrial Corridor (UPDIC) and Tamil Nadu Defence Industrial Corridor (TNDIC) - have been set up aimed at attracting investment for defence industries, developing the domestic supply chain and strengthening defence manufacturing ecosystem in the country.

Defence Testing Infrastructure Scheme has been launched to boost domestic defence and aerospace manufacturing with primary aim to set up Greenfield Defence Testing Infrastructure as a common test facility for government assistance to promote indigenous defence production with special focus on participation of MSMEs and start-ups by bridging gaps in defence testing infrastructure in the country. Innovations for Defence Excellence (iDEX) has been launched to bring start-ups & MSMEs to innovate, develop technologies and solve problems related to defence and aerospace aimed at creation of an ecosystem to foster innovation and technology development in Defence and Aerospace, R&D institutes and Academia and provide them grants/funding and other support to carry out R&D which has potential for future adoption for Indian defence and aerospace needs. DSPUs are having tie-ups with various Centres of excellence/Academic Institutes viz IITs, IISc, IIMs etc. for various developmental projects.

The DRDO has laid down a procedure by which its developed technologies are transferred to industries by entering into Licensing Agreement for Transfer of Technology (LAToT). DRDO has evolved a new ToT policy and procedures with zero ToT fee for its industry partners (Development cum Production Partners (DcPP)/Development Partner (DP) and zero royalty for supply to Indian Armed Forces and Government Departments. Test facilities have now been opened for industries in DRDO labs. DRDO has launched Technology Development Fund (TDF) which provides financial support to the Indian industries for the design development of innovative defence products. In June 2023, DRDO released 75 priority technology areas/products/systems to encourage Defence R&D in Industry that DRDO will not do. Youth are connected as start-ups under iDEX scheme in innovation, technology development and problem solving related to defence and aerospace. Young Engineers are involved through tie-ups of Defence PSUs with the Centres of Excellence/ Academic Institutes for various projects that include R&D and manufacturing. DRDO has established 15 DRDO Industry Academia-Centres of Excellence (DIA-CoEs) at various IITs, IISc, Central and State Universities, of which six have been operationalised in 2023. The DPSUs and private sectors are hiring trained youths having specialisations for various projects in the defence sector.

This information was given by Raksha Rajya Mantri Shri Ajay Bhatt in a written reply to Shri S Jagathrakshakan in the Lok Sabha today.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2001843>



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

**Ministry of Defence**

*Sat, 03 Feb 2024*

## **Delivery of 25T Bollard Pull Tug, Mahabali First 25T Bollard Pull Tug on 02 Feb 24 at NSRY (Kochi)**

25T Bollard Pull (BP) Tug, Mahabali has been delivered to Indian Navy on 02 Feb 24 in presence of Rear Admiral Subir Mukherjee, NM, ASY(Kochi). This Tug is a proud flag bearer of “Make in India” initiative of Govt of India.

Contract for construction and delivery of three 25T BP Tugs was concluded with M/s Shoft Shipyard Pvt Ltd (M/s SSPL), an MSME, in consonance with “Aatmanirbhar Bharat” initiative of the Government of India. These Tugs are being built under the classification rules of Indian Register of Shipping (IRS). The availability of Tugs will provide impetus to Operational commitments of IN by facilitating assistance to Naval ships and submarines during berthing and un-berthing, turning and maneuvering in confined waters. The Tugs will also provide afloat firefighting assistance to ships alongside, at anchorage and will also have capability to conduct limited Search and Rescue Operations.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2002253>



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

**Ministry of Defence**

*Fri, 02 Feb 2024*

## **Hijacking of Vessels by Pirates**

Seven incidents of hijacking of vessels on high seas by pirates have been reported during the last three years. One hijacking incident of Merchant Vessel – Lila Norfolk. 21 crew were present including 15 Indian nationals onboard on January 04-05, 2024. Further, two hijacking incidents occurred involving Fishing Vessel – IMAN (January 28, 2024) & Fishing Vessel - AI Naeemi (January 29, 2024) which did not have any Indian crew onboard.

Indian Navy has been proactively engaging with the regional and extra-regional navies/ maritime forces, to promote maritime security. Since 2008, Indian Navy has deployed units in Gulf of Aden and East Coast of Africa towards antipiracy patrols. A total of 3,440 ships and over 25,000 seafarers have been safely escorted. For restoring maritime security in the region, enhanced presence of ships, aerial surveillance by maritime patrol aircraft / remotely piloted aircraft in the Central Arabian Sea and Off East of Coast of Somalia is being undertaken by Indian Navy. Information is also exchanged with national and international maritime security agencies for early response in a coordinated manner, effective liaison & coordination with DG (Shipping) for inputs on Indian crew onboard Merchant vessels plying in Arabian Sea and Gulf of Aden / adjoining region. In addition, interrogation of fishing vessels/ dhows operating in the region is also being undertaken by Indian Navy for maintaining maritime security in the region.

Indian Navy has enhanced presence of ships, aerial surveillance by maritime patrol aircraft/remotely piloted aircraft in the central Arabian Sea and Off East of Coast of Somalia towards restoring maritime security in the region. Nil piracy incidents have been reported in Palk Strait.

This information was given by Raksha Rajya Mantri Shri Ajay Bhatt in a written reply to Shri A Ganeshamurthi in the Lok Sabha today.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2001844>



**Press Information Bureau  
Government of India**

**Ministry of Defence**

*Fri, 02 Feb 2024*

## **Maritime Security**

Indian Navy units are regularly deployed on Mission Based Deployments in our areas of interest in Indian Ocean Region (IOR) to enhance maritime security. Further, Indian Navy units undertake surveillance to enhance Maritime Domain Awareness and address contingencies that may arise. Since 2008, Indian Navy has deployed units in Gulf of Aden and East coast of Africa towards antipiracy patrols. A total of 3,440 ships and over 25,000 seafarers have been safely escorted.

Indian Navy has been proactively engaging with regional and extra-regional navies/maritime forces, to promote maritime security in the IOR. Bilateral/multilateral maritime exercises, Joint Exclusive Economic Zone (EEZ) surveillance, Coordinated Patrols (CORPATs) with Friendly Foreign Countries are being undertaken by Indian Navy to enhance maritime security and countering non-traditional threats in an inclusive and cooperative manner. Further, towards strengthening regional maritime security, Government of India has established Information Fusion Centre-Indian Ocean Region (IFC-IOR) which has linkages with 25 partner nations and over 40 international multinational organisations for real-time information exchange towards enhancing maritime security. Moreover, due to the ongoing maritime security situation in the region, Indian Navy units are being deployed off Djibouti/ Gulf of Aden, in the North/ Central Arabian Sea/ off East Coast of Somalia for protection of Merchant Vessels/rendering assistance, if required. In addition, information exchange/intelligence sharing is also being undertaken with Friendly Foreign Countries to identify the source/reason/players involved in the attacks/incidents.

This information was given by Raksha Rajya Mantri Shri Ajay Bhatt in a written reply to Shri Kunwar Pushpendra Singh Chandel in the Lok Sabha today.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2001842>



**Press Information Bureau  
Government of India**

**Ministry of Defence**

*Fri, 02 Feb 2024*

## **Swift Response by Mission Deployed Indian Naval Platforms Foil another Piracy Attempt along East Coast of Somalia**

Information regarding piracy attempt on Fishing Vessel FV Omari was monitored on 31 Jan 24. Indian Naval RPA, undertaking surveillance in the area, successfully located FV Omari and INS Sharda, deployed for anti-piracy mission in the region was diverted to intercept the boat.

FV Omari, an Iranian Flagged Vessel, had been boarded by seven pirates who had taken the crew as hostages.

INS Sharda intercepted the vessel in early hours of 02 Feb 24 and used her integral helo and boats to coerce the pirates for safe release of crew along with the vessel.

The ship has ensured successful release of the crew (11 Iranian and 08 Pakistani nationals) members along with the boat. The ship also undertook confirmatory boarding on FV Omari to sanitise and check on the well-being of the crew who had been held captive by the Somali pirates.

Relentless efforts by Indian Naval platforms, mission deployed for anti-piracy and maritime security operations, continue to save precious life at sea, symbolising Indian Navy's resolve towards safety of all vessels and seafarers at sea.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2002101>



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

**Ministry of Defence**

*Fri, 02 Feb 2024*

## **Exercise Vayushakti-2024**

The Indian Air Force will be conducting Exercise Vayu Shakti-24 on 17 February 2024 at the Pokhran Air to Ground Range, near Jaisalmer. The last edition of exercise Vayu Shakti was held on 16 February 2019. As always, Ex Vayu Shakti will be a riveting demonstration of the offensive and defensive capabilities of the IAF, spanning across day and night. The exercise will also showcase joint operations with the Indian Army.

This year, the exercise will see participation by 121 aircraft, including the indigenous Tejas, Prachand and Dhruv. Other participating aircraft would include the Rafale, Mirage-2000, Sukhoi-30 MKI, Jaguar, Hawk, C-130J, Chinook, Apache and Mi-17. Indigenous Surface to Air Weapon systems Akash and Samar will demonstrate their capability to track and shoot down an intruding aircraft. Exercise Vayu Shakti will be a demonstration of the IAF's capability to deliver weapons with long range, precision capability as well as conventional weapon accurately, on time and with devastating effect, while operating from multiple air bases. Special operations by the IAF transport and helicopter fleets, involving the Garuds and Indian Army elements will also be on display.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2001820>

**THE  HINDU**

*Fri, 02 Feb 2024*

## **IAF to Conduct Exercise Vayu Shakti-2024 in a 'Near-realistic Scenario'**

The Indian Air Force (IAF) will display its full spectrum of combat and fire capabilities during Exercise Vayu Shakti-2024 in a "near-realistic scenario" at the Pokhran firing range in Rajasthan on February 17, Vice Chief of Air Force Air Marshal A.P. Singh said. Rafale fighter jets and Prachand and Apache attack helicopters will be among those platforms that will take part in the exercise for the first time, he said.

“We plan to conduct Exercise Vayu Shakti to showcase the full spectrum of operations that Indian aerospace power can take on. In two hours, we would be dropping around 40-50 tonnes of ordnance in a one to two-kilometre radius,” Air Marshal Singh said, speaking to the media.

The exercise will be for 2 hours and 15 minutes during the day, at dusk and night, he said. The last edition of exercise Vayu Shakti was held on February 16, 2019. The exercise will also showcase joint operations with the Indian Army, officials said.

This year, the exercise will see participation by 121 aircraft, including the indigenous Tejas, Prachand and Dhruv. Other participating aircraft would include the Rafale, Mirage-2000, Sukhoi-30 MKI, Jaguar fighters, Hawk advanced jet trainers, C-130J transport aircraft, Chinook, Apache and Mi-17 helicopters. Indigenous Surface to Air Weapon systems Akash and Samar will demonstrate their capability to track and shoot down an intruding aircraft, the IAF said.

“Exercise Vayu Shakti will be a demonstration of the IAF’s capability to deliver weapons with long range, precision capability as well as conventional weapon accurately, on time and with devastating effect, while operating from multiple air bases,” the IAF said. Special operations by the IAF transport and helicopter fleets, involving the Garuds and Indian Army elements will also be on display, it added.

<https://www.thehindu.com/news/national/iaf-to-conduct-exercise-vayu-shakti-2024-in-a-near-realistic-scenario/article67804658.ece>

## THE ECONOMIC TIMES

*Fri, 02 Feb 2024*

### **Women Personnel being Appointed Onboard Warships: Govt in Lok Sabha**

Women personnel are being appointed onboard warships and also as special naval air operation officers in the Indian Navy, the government said in Lok Sabha on Friday. Minister of State for Defence Ajay Bhatt said permanent commission is being granted to women officers in 12 arms and services of the Army in addition to the medical and dental corps as well as military nursing service.

He was replying to a question on the strength of women in the armed forces.

Bhatt said the experimental scheme to induct women officers in all combat roles initiated by the Indian Air Force in 2015 was regularised in 2022 into a permanent one.

"Women officers are being appointed onboard warships in afloat billets and also as Special Naval Air Operation (NAO) officers in the Indian Navy," he said without elaborating.

On various measures to boost India's defence manufacturing, he said a 'green channel policy' for procurement of military stores and spares has been launched for awarding 'green channel' status to firms having predefined financial and quality credentials.

Bhatt was highlighting various action plans that the government has rolled out to strengthen the country's defence ecosystem.

"A green channel policy for procurement of defence stores and spares has been launched for awarding green channel status to firms having predefined financial and quality credentials," he said.

Bhatt was replying to a question.

"Grant of green channel certificate provides waiver of pre-dispatch inspection and acceptance of stores under supplier's guarantee/warranty against the contracts concluded by various procurement agencies under the Ministry of Defence," he said.

The minister said two defence industrial corridors -- one in Uttar Pradesh and another in Tamil Nadu -- have been set up to attract investment for defence industries and develop domestic supply chains.

He said a defence testing infrastructure scheme has been launched to boost domestic defence and aerospace manufacturing with primary aim to set up greenfield defence testing infrastructure as a common test facility. The minister also noted that the defence public sector undertakings are having tie-ups with various centres of excellence and academic institutes like IITs and IIMs for various developmental projects.

Bhatt said the Defence Research and Development Organisation (DRDO) has laid down a procedure by which its developed technologies are transferred to industries by entering into Licensing Agreement for Transfer of Technology.

The DRDO has evolved a new transfer of technology (ToT) policy and procedures with zero ToT fee for its industry partners, he said.

<https://economictimes.indiatimes.com/news/defence/women-personnel-being-appointed-as-onboard-warships-govt-in-lok-sabha/articleshow/107364827.cms?from=mdr>



*Sat, 03 Feb 2024*

## **CDS Anil Chauhan Unveils Book on AI, National Security at Defence Lit Fest in Pune**

Chief of Defence Staff General Anil Chauhan unveiled a book, 'Artificial Intelligence and National Security' at the Defence Literature Festival, "Kalam and Kavach," in Pune on Saturday.

Chief Guest Gen Anil Chauhan, the CDS, inaugurated the event, marking a significant milestone in blending India's rich cultural heritage with contemporary national security strategies.

Army Southern Command along with Pentagon Press hosted the Defence Literature Festival, Kalam and Kavach at the RSAMI Institute in Pune.

Addressing the gathering at the Lit Fest, CDS Chauhan said, "In recent times if we would recall, the art track and college of Defence Management had come out with two or three booklets on ancient Indian stratagems and the Indian Army had also launched project UDBHAV with USI to research on indigenous military systems to integrate age-old wisdom with modern military."

"Like all novel and new ideas, this also ran into a bit of a controversy with some of us military academicians stating that there was no place for ancient stratagems in an age of nuclear war artificial intelligence-dominated corporations," the official said.

Military weapon systems supporting tactics and military organisations have undergone such a profound change that they are no longer relevant, he said adding that he had different views and would like to present them.

CDS Chauhan also wanted to address this larger question of whether ancient stratagems such as Sun Tzu's 'Art of War' or Kautilya's 'Arthshastra' are relevant today and if they are, how are they

applicable. To begin with, the official started with the knowledge of ancient Indian wisdom that is still relevant.

Lt Gen Anil Chauhan highlighted how India navigates the evolving landscape of national security as it draws inspiration from its ancient scriptures.

The event highlighted how ancient wisdom from texts like the Mahabharata and Bhagavad Gita is relevant to today's strategic needs.

Gen Anil Chauhan also emphasised the timeless relevance of Dharma from Indian scriptures, underscoring its principles of duty, righteousness, and moral balance.

The Defence Lit Fest Kalam and Kavach was hosted by Army Southern Command along with Pentagon Press.

Speaking at the event, Lt Gen AK Singh, Army Commander Southern Command, stressed adapting these ancient strategies to counter modern threats and challenges.

The festival also celebrated the launch of four significant books, covering diverse themes from global geopolitics to the role of AI in national security. These included "Russia, Gaza, Taiwan... A World at War" by Ajay Singh, and "A I and National Security" by Col Amit Sinha and Vijay Khare, among others.

Reflecting on the 25th anniversary of the Kargil War, Rajan Arya, CEO of Pentagon Press, highlighted the company's commitment to raising awareness about national security complexities.

A key session, 'Atmanirbhar Bharat - Powering India's Defence Sector,' featured prominent industry leaders like Shri Baba Kalyani, emphasizing the collaborative effort needed for realizing true self-reliance in defence.

The festival brought together experts discussing a range of topics from global conflicts to the role of heritage in security. It stands as a beacon for future events that aim to merge history, culture, defence, and security into a single narrative.

<https://www.aninews.in/news/national/general-news/cds-anil-chauhan-unveils-book-on-ai-national-security-at-defence-lit-fest-in-pune20240203123108/>

## THE TIMES OF INDIA

*Mon, 05 Feb 2024*

### **Army's 'New' Knowledge Corps to now Focus on Cyber, Infotech**

The Army Educational Corps (AEC) will now be rechristened the Army Knowledge & Enablers Corps with the mandate to specially focus on cyber, infotech, perception management and linguistics, including specialisation in Mandarin, Burmese and other languages, as part of the overall "transformation" drive under way in the 12-lakh strong force.

The restructuring of the AEC, which has been approved by the defence ministry, will provide the Army with "dedicated specialists" in these niche domains to exploit their potential in meeting "emerging operational needs", senior officers told TOI on Sunday.

The thrust on linguistics comes at a time when the Army has already been taking some steps to address "capability voids" in Mandarin proficiency and sector specialisations on Chinese issues and

Tibetology, amid the ongoing four-year military confrontation with China in eastern Ladakh, as earlier reported by TOI.

With China now the primary front, which has seen the Army "rebalance" additional forces and firepower to the northern borders from the western front with Pakistan, there is certainly an urgent need to boost expertise in Chinese language, culture, behaviour and thought at the tactical, operational and strategic levels.

"Restructuring and reorientation of AEC, which was raised in 1921, will propel the ongoing efforts. A framework has been instituted to ensure availability of the requisite pool of trained linguists. In addition to the in-service linguist school, engagements are being carried out with reputed universities across the nation to conduct advanced linguistic training," an officer said.

Only 21% of AEC personnel will now be engaged in the conventional human resource development efforts, with the rest being deployed in the newly-identified domains.

"Since the AEC is mandated to recruit only graduates and above, this restructuring provides an opportunity to directly recruit professionals with these skills. Fresh guidelines have been formulated for recruiting and commissioning professionals with these skills," another officer said.

"Fresh commissioning of postgraduates as officers to handle such niche domains, and recruitment of graduates and postgraduates in the specified subjects as direct entry Havildars, is going to commence shortly," he added.

With China's extensive cyber-warfare and cyber-espionage capabilities also posing a major threat, the Army is already training existing manpower in this arena, with a three-pronged approach of "re-orientation, re-skilling and on-the-job training".

Re-skilling is being carried out both within the Army as well as in conjunction with the National Institute of Electronics & Information Technology. "Re-skilled manpower in cyber and information operations are being posted to various Army establishments and units," the officer said.

The AEC restructuring is only one of the wide array of initiatives being undertaken by the Army as part of the transformation drive to bolster overall combat capabilities to effectively deal with future security challenges.

The five identified pillars of transformation are force restructuring and optimisation; modernisation and technology infusion; improving systems and processes to improve combat and functional efficiencies; ensuring jointness and integration; and better human resources management.

<https://timesofindia.indiatimes.com/india/armys-new-knowledge-corps-to-now-focus-on-cyber-infotech/articleshow/107410131.cms>

## नईदुनिया

Mon, 05 Feb 2024

### सेना के लिए तैयार हो रहे प्रैक्टिस बम, 400 बमों की खेप तैयार, परीक्षण के बाद DRDO देगा हरी झंडी

आयुध क्षेत्र में बेहतरीन बमों के उत्पादन में अग्रणी नगर की आर्डनेंस फैक्ट्री खमरिया ओएफके 125 एमएम बम का नया वर्जन बनाने की ओर कदम बढ़ा चुकी है। इसे प्रैक्टिस बम नाम दिया गया है। यह देश की सीमाओं की चौकसी में सतत सजग सेना के युद्धाभ्यास के लिए होगा।

पायलट लॉट को परीक्षण के लिए ओडिशा के समुद्र तटीय शहर बालासोर भेजा जा रहा है, परीक्षण के निष्कर्षों का आकलन करते हुए विशेषज्ञ टीम के दिशा-निर्देशों के अनुरूप इसके बाद प्रैक्टिस बम का उत्पादन शुरू हो जाएगा।

### मारक क्षमता कम, ताकि खर्च और नुकसान से बचा जा सके

गोला-बारूद का बड़े स्तर पर उत्पादन करने वाली ओएफके की टीम सेना के लिए प्रैक्टिस बम बनाकर एक नई इबारत लिखने जा रही है। इसके उत्पादन से सेना की तैयारियों को काफी मदद मिल जाएगी साथ ही साथ उसकी मांग को भी तय समय पर पूरा किया जा सकेगा।

अभी प्रैक्टिस बम की पहली खेप में 400 बमों को तैयार किया गया है। परीक्षण के लिए बनाए गए इन बमों को पायलट लाट नाम दिया गया है और ओडिशा के टेस्टिंग रेंज बालासोर भेजा जा रहा है। ओएफके पायलट लाट के परीक्षण के बाद उसके निष्कर्षों का अध्ययन करते हुए प्रैक्टिस बम का उत्पादन आरंभ हो जाएगा। प्रैक्टिस बम सेना की मांग को ध्यान में रखकर 125 एमएम का नया वर्जन है।

चूंकि यह पूरी तरह सेना के अभ्यास में टी-90 टैंक की मदद से उपयोग होगा, अतः इसकी मारक क्षमता को कम रखी गई है। इससे विध्वंस भी कम होगा, साथ ही उत्पादन लागत में भी कम खर्च आएगा। मारक क्षमता कैमिकल की मात्रा पर निर्भर करती है।

### डीआरडीओ की टीम करती है निगरानी

ओएफके में बनाए जाने वाले बमों की खेप बालासोर टेस्टिंग रेंज में परीक्षण के लिए भेजे जाते हैं। जहां ओएफके के साथ डीआरडीओ की टीम भी बमों के परीक्षण का बारीकी से अध्ययन कर उसकी रिपोर्ट तैयार करते हैं। परीक्षण के निष्कर्षों के आधार पर ही यह तय होता है कि पायलट लाट में शामिल बम परीक्षण में सफल रहे अथवा फेल हो गए। इस बार भी पहले पायलट ही तैयार किया गया है।

परीक्षण में खरे उतरने के बाद डीआरडीओ की हरी झंडी के बाद ओएफके में प्रैक्टिस बम के पहले चरण पर कार्य आरंभ हो जाएगा। पहले चरण में करीब 8000 प्रैक्टिस बम का उत्पादन होगा।

### नए वर्जन पर एक नजर

पहली खेप में 400 बमों को तैयार किया गया

ओडिशा के टेस्टिंग रेंज बालासोर में होगा परीक्षण

टी-90 टैंक के होगा उपयोगी

परीक्षण के बाद 8000 प्रैक्टिस बम का उत्पादन होगा

<https://www.naidunia.com/madhya-pradesh/jabalpur-jabalpur-news-practice-bombs-are-being-prepared-for-the-army-consignment-of-400-bombs-ready-drdo-will-give-green-signal-after-testing-8274726>



Sun, 04 Feb 2024

## Defence Forces, DRDO, over 1,200 Defence Firms to Participate at Maharashtra MSME Defence Expo in Pune

Indian Defence forces along with the Defence Research and Development Organisation (DRDO) are set to take part in the inaugural edition of the Maharashtra Defence Expo which is being held from February 17-19 in Pune with an aim of promoting the medium and small enterprises.

The expo with a large participation from the medium and small enterprises is also aimed at promoting the coastal state as a hub for defence manufacturing, state government officials said here.

The expo is being held at the Pune International Exhibition and Convention Centre with defence firm Nibe Limited as its knowledge partner, they said.

The state of Maharashtra has a large number of defence PSUs, DRDO laboratories (headquartered in Pune), and Ordnance Factories, along with a robust network of over 12,500 MSMEs contributing to the defence ecosystem in the country.

The event aims to provide a platform for prominent industry leaders, innovative start-ups, and dynamic MSMEs to showcase their capabilities, fostering collaboration and unlocking immense potential within the defence sector.

The event will also see the participation of approximately 10,000 students from various universities and engineering colleges in Maharashtra.

This presents an unparalleled opportunity for students to interact with the top brass of the Tri-Services and industry professionals deeply engaged in the defence sector, an official said.

<https://www.aninews.in/news/national/general-news/defence-forces-drdo-over-1200-defence-firms-to-participate-at-maharashtra-msme-defence-expo-in-pune20240204185654/>



*Sat, 03 Feb 2024*

## **46 Nations have Confirmed their Participation in MILAN-2024 to be Conducted in Vizag, Says Navy Chief Admiral Hari Kumar**

Chief of the Naval Staff (CNS) Admiral R. Hari Kumar has said that 46 countries have confirmed their participation in MILAN-2024 to be conducted in Visakhapatnam from February 19 to 27, and four more will be confirming their participation soon.

Admiral Hari Kumar was speaking to the reporters onboard INS Sandhayak, the Navy's survey vessel, which was commissioned by Defence Minister Rajnath Singh here on February 3 (Saturday).

“The Navy has invited 60 countries. Hopefully, it will have a meaningful discussion on naval activities that will benefit the countries and the city as well,” he said.

Admiral Hari Kumar said that MILAN would also include visits to local sites by the participants.

Referring to the recruitment of women in the Navy, Admiral Hari Kumar said, “Now, all roles and ranks are open to women in the Navy. Women can join any role in the Navy. We look at the individual's ability and commitment, not gender,” he added.

INS Sandhayak would double as a hospital at sea in case of any casualty in the ships, he said, and added that three more Sandhayak-class ships would be inducted by next year.

“The Navy is very particular about the nation's security and its network. The Anti-Piracy Act brought in during December 2022 gives more power to the Navy to counter any anti-national activities,” he said.

“We have indigenously developed anti-drone equipment. We have also deployed ships for anti-drone operations,” Admiral Hari Kumar added.

Talking about the status of Indian Navy in the Maldives, he said, “We have good military relations with the Maldives.”

<https://www.thehindu.com/news/national/46-nations-have-confirmed-their-participation-in-milan-2024-to-be-conducted-in-vizag-says-navy-chief-admiral-hari-kumar/article67807641.ece>



*Sun, 04 Feb 2024*

## **India Sends Submarine to Sri Lanka ahead of Chinese Spy Ship's Visit to the Maldives**

The Indian Navy sent the submarine INS Karanj to one of Sri Lanka's main ports, conveying a message to Beijing and Malé, even as the Chinese People's Liberation Army Navy's spy ship Xiang Yang Hong 3 continued sailing towards the Maldives.

As the INS Karanj, a diesel-electric submarine of the Indian Navy, arrived at the Colombo Port on Saturday, the Sri Lankan Navy accorded it a ceremonial welcome. New Delhi's envoy to Colombo, Santosh Jha, visited the submarine and interacted with the commanding officer, Commander Arunabh, and his crew. Around 100 nominated personnel of the Sri Lankan Navy were briefed about the submarine onboard. The commanding officer called on Rear Admiral Saman Perera, the Commander of the Western Naval Area of the Sri Lankan Navy, later.

The submarine will depart from the Colombo Port on Monday, according to a press release issued by the High Commission of India in Sri Lanka's capital.

The Indian Navy sent the submarine to Colombo, coinciding with the Independence Day of Sri Lanka. This move was apparently aimed at highlighting India's role as the primary security provider in the Indian Ocean region and sending a message to China's People's Liberation Army Navy (PLA Navy), which has recently increased its activities in the maritime neighborhood of India.

The INS Karanj docked at the Colombo Port ahead of the arrival of the Chinese PLA Navy's 'research vessel', Xiang Yang Hong 3, in Malé.

President Mohamed Muizzu's government in Malé on January 23 accepted Beijing's diplomatic request to allow the 'research vessel' to dock at the main port of the Maldives, disregarding India's security concerns.

The Xiang Yang Hong 3 sailed from Sanya Port in southern China on January 16. It is expected to arrive at Malé on February 8.

The Chinese PLA Navy uses its 'research vessels' not only for hydrographic surveys and charting underwater paths for its submarines but also for monitoring missiles or satellites test-fired from the locations in the vicinity, as well as for keeping watch on military installations in nearby countries. New Delhi had conveyed its concerns to the Sri Lankan government when two research vessels of the Chinese PLA Navy – Yuan Wang 5 and Shi Yan 6 – had been allowed to dock at Hambantota and Colombo ports of the island nation in August 2022 and October 2023 respectively.

President Ranil Wickremesinghe's government has recently decided not to allow China's research vessels to dock at the ports of Sri Lanka or operate in the exclusive economic zone of the country for a year.

In response, Beijing has chosen to leverage its friendly relations with Muizzu's regime in Malé, opting to use the ports of the Maldives for docking the research vessels of the Chinese PLA Navy.

New Delhi's relations with Malé entered tumultuous waters after Muizzu assumed the presidency of the Maldives and began steering the island nation closer to China. This marked a reversal of his predecessor Ibrahim Mohamed Solih's 'India First' policy, which considered India as the preferred development partner of the Maldives. Furthermore, Muizzu compelled New Delhi to commit to withdrawing all its military personnel deployed in the Maldives. These personnel were primarily engaged in operating and maintaining the aircraft and helicopters provided by India for humanitarian services and emergency medical evacuations from the distant islands of the country.

India is also worried over the possibility of China building an ocean observatory at Makunudhoo in the Maldives.

The strains in the relationship between New Delhi and Malé were further exacerbated by a video showing armed men from the Indian Coast Guard aboard three fishing vessels of the Maldives. Muizzu's government sought an explanation from New Delhi regarding the incident.

The INS Karanj, the third submarine of the Kalveri class, was commissioned into the Indian Navy on March 10, 2021. This marks the first foreign port call for the INS Karanj since its commissioning. Previously, another Kalveri class submarine, INS Vagir, visited Colombo on the occasion of the International Day of Yoga in June 2023.

The visit by the INS Karanj to the Colombo Port is designated as an Operational Turn Around (OTR), during which the submarine will replenish fuel and provisions.

<https://www.deccanherald.com/india/india-sends-submarine-to-sri-lanka-ahead-of-chinese-spy-ships-visit-to-the-maldives-2879456>

# THE ECONOMIC TIMES

*Fri, 02 Feb 2024*

## **Next-Gen Defence: India's Military Strategy Transformed with Approval of \$3.99 Billion MQ-9B Sea Guardian Sale**

The US State Department has greenlit the sale of 31 MQ-9B Sea Guardian drones to India, marking a pivotal moment in bolstering the country's defense capabilities. Packed with cutting-edge technology, these remotely-piloted aircraft systems are poised to be a game-changer for India's military strategy.

Renowned as the world's most advanced military drone, the MQ-9B is set to redefine India's strategic prowess with its unparalleled features.

### **Key Features and Capabilities**

The MQ-9B Sea Guardian, often dubbed the "Most Dangerous Military Drone on the Planet," brings cutting-edge technology to the forefront. With a remarkable flight time of 40 hours at altitudes exceeding 40,000 feet, armed with Hellfire air-to-ground missiles and smart bombs, this

fighter-sized drone specializes in over-the-horizon ISR (intelligence, surveillance, and reconnaissance) missions.

### **Strategic Significance**

The proposed sale aligns seamlessly with India's commitment to modernizing its military. These armed UAVs will significantly enhance India's ability to conduct unmanned surveillance and reconnaissance patrols, particularly in the Indian Ocean Region (IOR) and along its land borders with China and Pakistan.

### **Congressional Approval and Routine Consultation**

Despite initial reports of resistance from some lawmakers, the Defense Security Cooperation Agency (DSCA) promptly provided the required certification to Congress. Routine consultation with Congress members was emphasized, highlighting the overarching geo-political goals supporting the US-Indian strategic relationship.

### **Strategic Objectives and Economic Considerations**

The US envisions India as a crucial counterweight to China and a key player in addressing tensions in the Gulf. Economic considerations, particularly involving General Atomics, the California-based principal contractor, play a pivotal role. The economic benefits for California's congressional delegation underscore the significance of the deal.

### **Timeline for Finalizing the Deal**

Following the notification to Congress, the Biden administration is set to issue the Letter of Acceptance (LoA) to India within a month. Final cost negotiations will then ensue, culminating in the official contract signing, pending approval from the Indian Cabinet Committee on Security.

At the forefront of negotiations is Dr. Vivek Lall, Chief Executive of General Atomics, whose influential efforts have strengthened defense trade and cooperation between India and the United States. His commitment played a pivotal role in securing the agreement for the release of these advanced UAVs to India.

### **Armed Forces' Long-Awaited Acquisition**

The Indian armed forces have long advocated for the acquisition of these armed HALE drones. The proposed deal includes 15 Sea Guardian drones for the Navy and 16 Sky Guardians for the Army and Air Force. General Atomics will assemble these drones in India over the next six to seven years, reinforcing the country's defense capabilities.

The MQ-9B Sea Guardian drones represent a significant leap in India's defense capabilities, providing an advanced technological edge for surveillance and precision strikes. As the deal progresses, it not only solidifies the defense ties between the US and India but also positions the MQ-9B as a critical asset in safeguarding India's security interests.

<https://economictimes.indiatimes.com/news/defence/next-gen-defence-indias-military-strategy-transformed-with-approval-of-3-99-billion-mq-9b-sea-guardian-sale/articleshow/107362728.cms>

## India's MQ-9B Drone Deal Raises Security Concerns amidst Information Disclosure

While the MQ-9B deal appears to be on the verge of finalization, India has voiced dissatisfaction with the detailed information disclosed by the US Defense Department in its statement, specifying the number of Hellfire missiles and guided bombs accompanying the 31 MQ-9 Sky Guardian drones.

### Why the concern?

Sources indicate that sharing such information could make India's adversaries, particularly neighbouring enemy Pakistan, aware of the extent of India's drone capabilities. It is believed that Pakistan has received a batch of 6-7 Bayraktar Akinci drones from Turkey, but no official announcement has been made by either party. Pakistan is reportedly readying these drones for deployment near Lahore. The specific missiles and weapons installed in the Bayraktar drone, as well as the quantity received in this package, remain undisclosed.

Remarkably, Pakistan has not publicly acknowledged any deal with Turkey for the Bayraktar drones, but this information became evident through the uniform patches on the Bayraktar TB2 drones during an exercise.

In contrast, the US announced on Thursday its intention to provide India with the highly lethal MQ-9B Predator drone. The US Defense Department notified Congress about the MQ-9B remotely piloted aircraft (RPA) for India. This indicates that the conspiracy to murder Khalistani terrorist Gurpatwant Singh Pannu has not hindered defense cooperation between the two countries.

Detailing the deal, the Defense Security Cooperation Agency of the US Department of Defense issued a statement, confirming the US\$3.99 billion (about Rs 33 thousand crore) deal for 31 MQ-9B Sky Guardian aircraft, along with 170 Hellfire missiles, 310 laser small diameter bombs, Global Positioning and Inertial Navigation System, and other equipment. The Defense Department has informed Congress about this deal.

During Prime Minister Narendra Modi's visit to the US last year, discussions took place between the two nations regarding the purchase of the MQ-9B Predator, which is an armed version of the Reaper. The US State Department has communicated this information to General Atomics Aeronautical Systems, the company manufacturing MQ-9B drones.

According to the US State Department, the MQ-9B deal will bolster the strategic relationship between India and America, contributing to peace, stability, and economic prosperity in the Indo-Pacific region and South Asia. Additionally, these drones will play a vital role in sea surveillance and addressing potential threats.

India requires 31 MQ-9B drones to monitor the Indian Ocean and the airspace adjacent to China-Pakistan. Of these, 15 drones (Sea-Guardian) are allocated for the Indian Navy, and 8 each for the Air Force and Army. The provision of Hellfire missiles and laser-guided bombs with MQ-9B drones indicates their combat capabilities.

<https://www.financialexpress.com/business/defence-indias-mq-9b-drone-deal-raises-security-concerns-amidst-information-disclosure-3383944/>

## Address Gaps in Defence Allocation

By C Uday Bhaskar

THE defence allocation in the interim Budget for the 2024-25 financial year is Rs 6.21 lakh crore (around \$75 billion). This has been described by the Ministry of Defence (MoD) as a record allocation. The MoD's press release says that this amount is 4.72 per cent more than what had been budgeted in the 2023-24 financial year, even as Rs 1.72 lakh crore (which amounts to 27.67 per cent of the defence budget) has been allocated for capital expenditure — a critical component for modernisation of the military inventory.

Putting these figures in context, India plans to acquire 31 MQ-9B armed drones from America's General Atomics Aeronautical Systems at an estimated cost of \$4 billion. This amounts to a whopping Rs 33,000 crore and the payment will be spread out over an agreed time period of a few years.

For any nation, investing in its defence preparedness in an adequate and sustainable manner is a complex and costly process. There are many indicators to assess the defence allocation. The guiding tenet is that each nation and its elected government (in democracies) or the elite in power (in authoritarian regimes) decide how much they are willing to spend on their military capabilities. The total amount as a percentage of the GDP is a useful benchmark.

In 2022, this ratio for major nations varied from 0.6 per cent in the case of Indonesia to 7.4 per cent of the GDP for Saudi Arabia, according to the Stockholm International Peace Research Institute (SIPRI). India was estimated to have spent 2.4 per cent of the GDP for military purposes. This amounted to \$81.4 billion. On the SIPRI list, India was fourth after the US (\$877 billion), China (\$292 billion) and Russia (\$86.4 billion).

The allocation for the border-guarding Central police forces are not included in the defence budget (they are under the purview of the Home Ministry). Hence, the actual allocation to the Indian defence establishment, comprising the three armed forces, the Coast Guard, the Defence Research and Development Organisation and the defence PSUs and factories, is different from the SIPRI figure.

Against this backdrop, a more granular reading of the current defence allocation draws attention to structural trends of the last decade that present a not-so-rosy picture of India's defence spend.

The current Budget estimate (BE) for 2024-25 is an increase of under 5 per cent over the BE of 2023-24, but it may not even compensate for inflation. To that extent, this could be seen as an interim, standstill allocation till the next government assumes office later this year.

However, what is more problematic is the pattern of defence allocation in relation to the GDP. As per a PRS Legislative Research report, in FY 2023-24, this figure was 1.97 per cent; in the current year, it is estimated to be 1.9 per cent. It merits recall that in 2018, the Standing Committee on Defence had recommended that the MoD should be allocated a fixed budget of about 3 per cent of the GDP to ensure adequate preparedness of the armed forces, but this recommendation has not been accepted by the government.

The first trendline of the last decade is that defence spending, which was about 2.2 per cent of the GDP in 2013-14, has gradually come down (barring a spike in one year to cater to the OROP and bunched payments, delayed due to the Covid-19 pandemic) to below 2 per cent. Considering the

political priorities, it is unlikely that this figure will increase in any meaningful and significant manner.

How does this affect the modernisation of the military inventory, which in turn determines the combat proficiency of the Indian fauj? The capital component of the BE is a good indicator and here again the trendline is not encouraging.

The current capital expenditure has been pegged at Rs 1.72 lakh crore. This figure has to be contextualised in two ways. The first is the slow decline in capital allocation. The PRS report (February 2023) notes that while this was 32 per cent of the defence budget in 2013-14, it was estimated to have come down to 29 per cent in 2023-24.

Furthermore, given that India is among the top importers of military inventory, the rupee's value against the dollar is an indicator of how much India is actually able to buy in the global market. It was Rs 60.95 per dollar in 2014 and slid to Rs 83.1 (as on January 10, 2024). This would automatically depress the forex value of the rupee when paying for past and current acquisitions.

To their credit, parliamentarians have drawn attention to the high level of obsolescence in the Indian military inventory. In 2018, the Standing Committee on Defence cautioned that while a modern military ought to have an equal share (33.3 per cent each) of its equipment in the three categories (vintage, current and state-of-the-art), the Army had 68 per cent of its equipment in the vintage category, 24 per cent in the current one and a mere 8 per cent in the state-of-the-art category. It also noted that the Army had a substantial deficiency of weapons, stores and ammunition. And as the PRS report points out, the committee "found that adequate attention has been lacking with respect to both policy and budget for modernising the ageing armoury", which represents a hiatus in long-term strategising.

The next government will have to address these critical gaps in higher defence policy and resource allocation if India is to deal with the many challenges it is likely to face in the near future. Make-believe can prove to be dangerous in national security matters, as the events of October 1962 demonstrated.

<https://www.tribuneindia.com/news/comment/address-gaps-in-defence-allocation-587398>



*Sat, 03 Feb 2024*

## **India to 'Replace' Military Personnel in the Maldives**

India will "replace" its military personnel in the Maldives in two phases by May 10, the Government of Maldives has stated after the second meeting of the high-level core group between the two sides that was held here on Friday.

The decision came in the backdrop of Malé's demand to end the presence of Indian military personnel in the archipelago nation, which was further complicated because of social media controversy over remarks by three ministers of the Mohamed Muizzu government that were found to be disrespectful of Prime Minister Narendra Modi.

"Both sides agreed that the Government of India will replace the military personnel in one of the three aviation platform(s) by 10 March 2024, and will complete replacing military personnel in the other two platforms by 10 May, 2024," a statement issued by the Maldivian side announced. The statement, however, did not clarify if the military personnel of India will be replaced by civilian operators or by another batch of armed forces personnel.

A statement from the Ministry of External Affairs (MEA) said that the two sides had “agreed on a set of mutually workable solutions to enable continued operation of Indian aviation platforms that provide humanitarian and medevac services to the people of Maldives.” The Maldivian side reiterated that the two countries will continue cooperation in the fields of defence and security.

The development came a day after the revised Indian budget estimates for 2023-'24 gave Maldives a bigger financial allocation than it was previously granted in the current financial year. The revised budget estimate for Maldives stands at ₹770.90 crore over the previous grant of ₹400 crore.

This allocation has created a buzz over India fast-peddling development projects in the backdrop of bilateral tension. This focus was visible in the Indian statement that emphasised on “expediting the implementation of ongoing development cooperation projects.”

However, even as the issue of Indian military personnel drag on, a new controversy began on Maldivian social media this week over a video showing purportedly Indian Coast Guard (ICG) personnel boarding Maldivian fishing vessels within the Exclusive Economic Zone (EEZ) of Maldives.

<https://www.thehindu.com/news/national/india-to-replace-military-personnel-in-the-maldives/article67805754.ece>

## THE TIMES OF INDIA

Sun, 04 Feb 2024

### **North Korea Tests 'Super-large' Warhead Cruise Missiles in Fourth Round: Forming Alliance with Russia against US?**

North Korea has initiated its fourth round of missile launches in 2024, specifically testing cruise missiles equipped with 'super-large' warheads. This activity occurred one day after South Korea's military reported detecting the launch of multiple cruise missiles into waters off its western coast. Photographs from North Korea vividly showcase a low-flying cruise missile striking a target along a coastal shoreline during the test. The number of missiles tested and detailed performance specifics remain undisclosed at this point. North Korea's official Korean Central News Agency asserts that cruise missiles with "super-large" warheads were involved. The agency also reports that these tests were conducted as routine military development activities within the country and had no impact on the security of neighboring nations. Cruise missiles are becoming an integral part of North Korea's expanding arsenal, strategically designed to overwhelm regional missile defenses. They supplement an already extensive array of ballistic missiles possessed by the country, including those with long-range capabilities directed towards the continental United States. One notable area where North Korea stands to benefit is in anti-aircraft missile technology, potentially leveraging its deepening military cooperation with Russia. The alignment between North Korea and Russia is emphasized as a response to their distinct and escalating conflicts with the United States, highlighting a strategic avenue where North Korea may enhance its military capabilities with Russian support.

<https://timesofindia.indiatimes.com/videos/toi-original/north-korea-tests-super-large-warhead-cruise-missiles-in-fourth-round-forming-alliance-with-russia-against-us/videoshow/107391140.cms>

### **Woman Robot Astronaut 'Vyommitra' to be Launched this Year before ISRO's Gaganyaan Mission**

Woman Robot Astronaut 'Vyommitra' will fly into space ahead of ISRO's ambitious 'Gaganyaan' mission, which will be India's first human-manned space flight carrying Indian astronauts into space. Disclosing this in New Delhi during an interaction with the media, Union Minister of State (Independent Charge) Science and Technology and Space, Jitendra Singh, said, "The uncrewed "Vyommitra" mission is scheduled for the third quarter of this year while a manned mission "Gaganyaan" is scheduled to be launched next year, that is 2025."

"Vyommitra is a name derived from two Sanskrit words, namely, 'Vyoma' (meaning space) and 'Mitra' (meaning friend). This female robot astronaut is equipped with the capability to monitor module parameters, issue alerts, and execute life support operations. It can perform tasks such as operating six panels and responding to queries," he explained.

Jitendra Singh further elaborated that the 'Vyommitra' astronaut is designed in such a manner as to simulate human functions in the space environment and interact with the life support system.

It is pertinent to mention that, in the run-up to the launch of India's first-ever manned space flight named 'Gaganyaan', the first Test Vehicle Flight TV D1 was accomplished on October 21 last year. This was meant to qualify the crew escape system and parachute system. The human rating of the launch vehicle is complete. All the propulsion stages are qualified. All the preparations are in place, Singh said.

While the uncrewed unmanned robot flight 'Vyommitra' will take place this year, 'Gaganyaan' will be launched next year, he said.

The Gaganyaan project envisages a demonstration of human space capabilities by launching a crew of astronauts into an orbit of 400 kilometres and then bringing these astronauts safely back to earth by landing them in India's sea waters.

<https://www.hindustantimes.com/technology/woman-robot-astronaut-vyommitra-to-be-launched-before-isro-gaganyaan-mission-101707097315778.html>

## **THE TIMES OF INDIA**

### **Could a Giant Umbrella in Outer Space Help Solve the Climate Crisis?**

It's come to this. With Earth at its hottest point in history, and humans doing far from enough to stop its overheating, a small but growing number of astronomers and physicists are proposing a

potential fix that could have leaped from the pages of science fiction: the equivalent of a giant beach umbrella, floating in outer space.

The idea is to create a huge sunshade and send it to a far away point between Earth and sun to block a small but crucial amount of solar radiation, enough to counter warming. Scientists have calculated that if just shy of 2% of the sun's radiation is blocked, that would be enough to cool the planet by 1.5C and keep Earth within manageable climate boundaries.

The idea has been at the outer fringes of conversations for years. But as the climate crisis worsens, interest in sun shields has been gaining momentum, with more researchers offering up variations. A recent study led by University of Utah explored scattering dust deep into space, while a team at Massachusetts Institute of Technology is looking into creating a shield made of "space bubbles." Last summer, Istvan Szapudi, an astronomer at the Institute for Astronomy at University of Hawaii, published a paper that suggested tethering a big solar shield to a repurposed asteroid.

Now scientists led by Yoram Rozen, a physics professor and the director of the Asher Space Research Institute at Technion-Israel Institute of Technology, say they are ready to build a prototype to show the idea will work. To block the necessary amount of solar radiation, the shade would have to be about 1 million square miles, roughly the size of Argentina, Rozen said. A shade that big would weigh at least 2.5 million tonnes - too heavy to launch into space, he said. So, the project would have to involve a series of smaller shades. They would not completely block the sun's light but rather cast slightly diffused shade onto Earth, he said. Rozen said his team was ready to design a prototype shade of 100 square feet and is seeking between \$10-\$20 million.

Proponents say a sunshade would not eliminate the need to stop burning coal, oil and gas. Even if emissions from fossil fuels were to immediately drop to zero, there's already excessive heat-trapping carbon dioxide in the atmosphere.

The idea also has its critics, who say it would be astronomically expensive and could not be implemented in time, given the speed of global warming. In addition, a solar storm or collision with stray space rocks could hurt the shield, resulting in sudden, rapid warming with disastrous consequences.

<https://timesofindia.indiatimes.com/home/science/could-a-giant-umbrella-in-outer-space-help-solve-the-climate-crisis/articleshow/107374355.cms>

# THE ECONOMIC TIMES

Mon, 05 Feb 2024

## Ex-ISRO Engineer Helps Author World's First 'Hydrogen Ship Rules'

Guntur, Andhra Pradesh born-raised and BITS Pilani-educated Padmini Mellacheruvu, a former engineer associated with cryogenic rocket systems at India's space agency, helped write the world's first so-called 'class rules' for hydrogen powered ships after she quit the Indian Space Research Organisation (ISRO) and joined London-based Lloyd's Register, the oldest and one of the top global ship classification societies.

The 'class rules' for hydrogen fuelled ships will support the global shipping industry - which accounts for some 3% of the global carbon emissions - in its endeavour to meet the decarbonisation targets set by the International Maritime Organisation (the UN agency tasked with regulating

global shipping) to bring shipping closer to the Paris Agreement's 1.5°C temperature-warming limit.

Globally, fleet owners are trying out alternate fuels such as methanol and hydrogen to build and run ships, an effort that will gain speed as the world increasingly pivot towards green energy.

Ship classification societies such as Lloyd's Register certifies ships for sea worthiness by providing classification and compliance services to the marine and offshore industries, helping ship owners design, construct, operate, and decommission their assets safely as per environmental expectations. This is done by framing rules that are referred to as 'class rules'.

Writing 'class rules' for hydrogen powered ships was an uncharted water for ship classification societies. By hiring Padmini, Lloyd's Register, founded in 1760, shows how the marine industry is tapping the space industry to pursue its decarbonisation initiatives as it transforms with the twin focus on digitalisation and adoption of green fuels.

"The role of a Lloyd's Register colleague whether that's a ship surveyor or whether that is somebody working in our digital survey centre, is changing and will change and what that means is that we're not looking at those traditional pools anymore in terms of academic or experience background," Mark Darley, chief operating officer, Lloyd's Register said in an interview during a visit to Mumbai last week.

<https://economictimes.indiatimes.com/news/science/ex-isro-engineer-helps-author-worlds-first-hydrogen-ship-rules/articleshow/107407581.cms>

