



# STRATEGIC FOCUS

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## Azadi Ka Amrit Mahotsav



## EDITING AND COMPILATION

Mr Shantanu K. Bansal

## EDITORIAL TEAM

Dr Biplab Rath  
Mr Ankit Kumar  
Ms Aditi Dubey  
Mr Ashwan Paikray  
Mr Pazdin M. Dalal

## DESIGNING AND ILLUSTRATION

Mr Kuldeep Patel

## COMMUNICATIONS AND WEB SUPPORT

Mr Anung W. Elemen  
Mr Adway Gupta  
Mr Herron Waskel  
Mr Arpan Saha

## ADVISORY BOARD

Mr Navneet Bhushan, DRDO  
Mr Rakesh Raushan, HAL  
Dr Amit Mukherjee, NIAS

## CONTACT

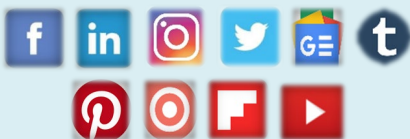
[Contact@iadnews.in](mailto:Contact@iadnews.in)

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## **Empowering Strategic Minds Since 2012**

The IADN is a leading independent defence and strategic news and information providing website. It is a 'not-for-profit' 'self-sustaining' 'non-partisan' 'knowledge-building' website providing exclusive, non-partisan and in-depth news and analysis on leading defence, strategic, security and related issues about India.

The IADN was founded in March 2012 by **Mr Shantanu K. Bansal**. The IADN can be called a unique venture which has played an instrumental role in taking defence and strategic issues to a wider audience. Before IADN, the issues related to defence and security were limited to the interest of some scholars and government, the IADN took upon the initiative to enlighten public about prevailing security situation of the country hence assisting the much-needed 'strategic culture' in the country from the grassroots level. Having been inspired by IADN many such news and analysis platforms mushroomed across the open domain.

With extreme efforts, the IADN has been able to transform itself into an open-information and knowledge-sharing platform. Time and again through its unique way of reporting, it has touched upon the minds across the world hence providing a way for better policy orientation in the sector it serves. Today IADN is backed by a strong, ever-growing community of more than 4 Lakh followers hence having a prominent say on leading issues of national interest.

The IADN has a spotless record, it has intact the quality of reporting as it should be. The team of editors, content writers and graphic designers from various backgrounds, represents every region of India- North, South, West and East which reflects the true spirit of India. Our serving/veteran team members have got the opportunity to associate with leading companies, institutions and government organisations.

On the occasion of its 10th year in service, the IADN launched E-magazine called "**IADN Strategic Focus**." The monthly magazine is a recap of all the happenings in the defence and strategic sector and policy briefs in the form of E-publication.



INDIAN AEROSPACE DEFENCE NEWS

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## NEW ACQUISITIONS AND PROCUREMENTS



### **AIRCRAFT CARRIER VIKRANT COMPLETES THE LAST PHASE OF TRIALS**

The fourth phase of sea trials for Indigenous Aircraft Carrier has been completed on July 10, the Indian Navy said. During the drill, trials of the majority of equipment and systems onboard including Aviation Facilities Complex equipment were undertaken. The warship, with a displacement of 37,500 tonnes, Vikrant has put India in a select league. During the trials, the majority of equipment and systems onboard were undertaken.

### **DEFENCE INNOVATIONS BY 22 STARTUPS DEMONSTRATED BEFORE ARMY PERSONNEL**

An Ahmedabad-based private university recently organised a demonstration of defence innovations. Some 22 startups in the defence

segment showcased their products and prototypes before 20 personnel of the Indian Army led by Major General Mohit Wadhwa, GoC, Golden Katar Division. The demonstration was organised by the Defence Design and Technology Incubator of India (DDTII) at Karnavati University at Uvarsad, near Gandhinagar.

### **MAZAGON DOCK LAUNCHES INDIGENOUS FUEL CELL POWERED CELL-POWERED ELECTRIC VESSEL**

It is the very first hydrogen boat prototype which has been conceptualized and developed by Mazagon Dock Shipbuilders Ltd. with Tata Advanced Systems Ltd & Vijai Marine Services Pvt Ltd as technology partners. It is a 6 Passenger boat, fitted with a 6 KW Electric OBM, a 10.2 KWH Battery, Fuel Cell System and can run for 22 Hours with compressed Hydrogen filled in PESO-approved Cylinders.

### **INDIAN ARMY ISSUES RFI FOR LIGHT ARMoured MULTIPURPOSE VEHICLE (LAMV)**

The Army has initiated the process for the procurement of approximately 800 Light Armoured Multipurpose Vehicles (LAMV) for its mechanised infantry and armoured corps by issuing the Request For Information (RFI). "The LAMV will be employed by reconnaissance (Recce) and surveillance platoons of Mechanised Infantry and Recce Troops of Armoured Corps for recce and surveillance tasks. Hence, the proposed LAMV must possess adequate mobility and provide protection for troops on board," the RFI stated. In addition, it should be able to carry the battle loads to include weapons, ammunition, surveillance and communication equipment required to carry out mandated operational tasks, it stated.



## INDIA CARRIES OUT MAIDEN TEST FLIGHT OF AUTONOMOUS FLYING WING TECHNOLOGY AIRCRAFT

In a breakthrough, the Defence Research and Development Organisation (DRDO) on Friday successfully carried out the maiden flight of the flying wing aircraft at the Aeronautical Test Range, Chitradurga, Karnataka. "Operating in a fully autonomous mode, the aircraft exhibited a perfect flight, including take-off, waypoint navigation and a smooth touchdown. This flight marks a major milestone in terms of proving critical technologies for the development of future unmanned aircraft and is a significant step towards self-reliance in such strategic defence technologies," read an official statement.

## ISRO TO TEST CREW ESCAPE SYSTEM EXTENSIVELY

The Indian space agency will extensively test the crew escape systems of its rocket before Indian astronauts are put into it and also the moon lander before the Chandrayaan-3 mission is launched, its chief said.

## FIRST FLIGHT OF ADVANCED LIGHT HELICOPTER WITH 2-SEGMENTED MAIN ROTOR BLADES, PRE-CONE MAIN ROTOR HEAD CARRIED OUT

The first flight of Advanced Light Helicopter (wheeled version) with segmented MRBs (Main Rotor Blades) and MRH (Main Rotor Head) in pre-cone configuration was carried out in Bengaluru, according to an official statement issued by Hindustan Aeronautics Limited (HAL). The flight was carried out by Wg Cdr Unni Pillai, ED (CTP-RW). The two-segment Main Rotor Blades (MRBs) and pre-cone configuration of Main Rotor Head (MRH) are developed to address the stringent stowage dimension requirement specified by the Indian Navy and to improve the Time Between Overhauls (TBO) life of the Main Gear Box, said R

Madhavan, Chairman and Managing Director, HAL in an official statement.

### **DRDO DEVELOPS INDIGENOUS AIP TECHNOLOGY; WILL RETROFIT ALL ITS KALVARI-CLASS ATTACK SUBS**

In a major boost to the Atma Nirbhar Bharat initiative of the government, the Fuel Cell-based Air Independent Propulsion (AIP) System of the Defence Research and Development Organisation will soon be ready to be fitted onboard INS Kalvari. Secretary, Department of Defence R&D and Chairman DRDO Dr G Satheesh Reddy said "When the boat comes up for retrofitting in 2025, it will be fitted with the indigenous AIP which has been made in India by DRDO and Indian industry."

### **DEFENCE MINISTER RAJNATH SINGH INAUGURATES WARHEAD AND RF SEEKER FACILITIES IN TELANGANA'S BHANUR**

Virtual inauguration of RF (Radio Frequency) Seeker facility, located at BDL, Kanchanbagh Unit, Central Storage facility at BDL Visakhapatnam Unit, which have been set up towards realisation of 'Atmanirbharta' (self-reliance) in defence manufacturing by the company by Defence Minister.

### **FRENCH SAFRAN TO SET UP ENGINE MRO IN INDIA, OFFERS TO PARTNER AMCA PROJECT**

The French aircraft engine major Safran is all set to announce MRO for commercial engines in India tomorrow with military engines as a next step. The company has also offered to



co-develop 110 KN thrust military engines with DRDO for its twin-engine fighter project.

### **DRDO ABHYAS: A STEP AHEAD OF ITS PREDECESSORS**

India successfully tested an indigenously-designed High-speed Expendable Aerial Target (HEAT) called Abhyas in Odisha. The trial, which took place from the Integrated Test Range (ITR) in Chandipur beach, was carried out by the Defence Research and Development Organisation (DRDO). During the demonstration, this aircraft was launched using twin under-slung boosters, which provided the initial acceleration. A ground-based controller flew the target air vehicle in a pre-designated low-altitude flight path. ITR deployed various tracking sensors (including an electro-optical targeting system and radar) to monitor the target. This particular test flight demonstrated the aircraft's performance at low altitudes. During this trial, Abhyas also showcased a high subsonic speed trajectory with high endurance in addition to sustained level and high manoeuvrability.

### **NAVY TO DEVELOP, AND INDUCT 75 NEW TECHS, PRODUCTS**

To achieve self-reliance in Defence manufacturing, the Navy has proposed to develop and induct at least 75 new technologies or products in the coming year. It will be part of the 'Azadi ka Amrit Mahotsav' to celebrate the 75th year of independence. A Memorandum of Understanding (MOU) has been signed between the Defence Innovation Organisation (DIO) and the Naval Innovation and Indigenisation Organisation (NIIO) to work on a collaborative project named SPRINT (Supporting Pole-Vaulting in Research and Development through iDEX, NIIO and TDAC), navy officials said here on Monday. The Navy in conjunction with the DIO will unveil the problem statements for Indian Industries as part of its (SPRINT) during the NIIO Seminar 'Swavlamban 2022' scheduled on July 18-19 at Dr Ambedkar International Centre, New Delhi.

## **DRDO SCIENTISTS CONCEIVE NEW TECHNIQUES TO DETECT MALWARE ON MOBILE PHONES**

Amid rising instances of cyber-crime across the world, scientists at the Defence Research and Development Organisation (DRDO) have proposed a new technique to detect malicious applications in mobile phones. A novel network traffic analysis-based framework has been conceived by experts at DRDO's Scientific Analysis Group (SAG) and Delhi Technological University (DTU) that exploits cellular traffic features to detect malware.

## **SPACETECH PLATFORM, DIGANTARA LAUNCHES WORLD'S SMALLEST DIGITAL SPACE WEATHER INSTRUMENT**

Digantara, a Spacetechn startup, has launched the world's first commercial space-based weather system, ROBI (ROBust Integrating proton fluence metre) aboard the Indian Space Research Organisation's PSLV - C53 Mission. Digantara was started by alumni of Lovely Professional University. The company was backed by Kalaari Capital, with a seed funding of \$2.5 million in 2021. Using this, the startup aggressively strengthened its technological infrastructure and sent an asset to space in less than a year.

## **KUDANKULAM NUCLEAR POWER PLANT TO GET NEW RUSSIAN THERMAL CONTROL SENSORS**

LUCH Scientific Production Association (part of Science and Innovations JSC, R&D Unit of ROSATOM State Corporation, Russian nuclear major) has signed an agreement to supply thermocouples for four power units of the Kudankulam Nuclear Power Plant (KNPP) in India. New sensors designed for NPP process equipment thermal control will replace the old ones in the internal reactor control systems of units 1 and 2 of KNPP.

## **IIT HYDERABAD LAUNCHED THE 1st TESTBED FOR AUTONOMOUS NAVIGATION**

Dr Jitendra Singh, the Union Minister of State (Independent Charge) for Science and Technology, the Minister of State (Independent Charge) for Earth Sciences, and the Minister of State (Independent Charge) for Personnel, Public Grievances, Pensions, Atomic Energy, and Space, inaugurated the TiHAN Testbed for Autonomous Navigation at IIT Hyderabad, highlighting the fact that it will serve as the hub for the next generation of safe, sustainable, and intelligent mobility solutions. "The TiHAN - IITH will be the source of futuristic technology generation for autonomous vehicles while The TiHAN-IITH testbed on Autonomous Navigations will allow us to test the next generation autonomous navigation technologies accurately and allow faster technology development and global market penetration," Dr Singh said while inaugurating the ceremony.

## **LEADING DRONE START-UP GARUDA AEROSPACE ANNOUNCES ARRIVAL INTO THE DEFENCE SECTOR WITH TIDCO PARTNERSHIP**

Garuda Aerospace has signed an MOU with the Tamil Nadu Industrial Development Corporation Limited (TIDCO) at the Tamil Nadu Investment Conclave 2022 in the presence of the Honorable Chief Minister of Tamil Nadu, M.K. Stalin. The MOU highlights the investments that Garuda has made in the sector and re-iterates its commitment to the defence sector.

## **SAFRAN GROUP MAKES BIG-TICKET ANNOUNCEMENTS ON DEFENCE PRODUCTION IN INDIA**

French defence major Safran Group on Tuesday announced the setting up of a production facility in Hyderabad to produce parts and components for advanced aircraft engines with an investment of Euro 36 million, besides a big-ticket joint venture with state-run aerospace behemoth HAL. After a meeting between Defence Minister Rajnath Singh and Safran CEO Olivier Andries, it was announced that the joint venture in Bengaluru will produce engines for helicopters, while the French

company will also set up an MRO facility for Indian and foreign commercial aircraft.

### **DEFENCE MINISTRY ISSUES TENDER TO PROCURE OVER 29,000 'NIGHT SIGHTS' FOR ARMY'S ASSAULT RIFLES**

The Ministry of Defence (MoD) issued a tender to procure 29,762 'night sights' for the Indian Army's 7.62x51 mm assault rifles. 'Night sight' is an optical instrument that glows in low light so that the soldier can aim better. The tender said: "The MoD intends to procure quantity 29,762 Night Sight (II) for 7.62 x 51 mm assault rifles along with accessories for each assault rifle [lens cover, eye guard, cleaning kit, battery pack charger and quantity three sets of batteries (each set of batteries corresponds to several batteries required to operate the night sight)]."

### **INDIA'S FIRST 'PRODUCTION' TEJAS MK-1A MADE A SECRET MAIDEN FLIGHT**

Indian authorities have announced that the prototype of the TEJAS MK-1A, which is the planned mass-production version of the TEJAS and the basis for all others, has secretly made its maiden flight. The Indian Ministry of Defence reported that Hindustan Aeronautics Limited [HAL] conducted the test flight in an area near their production facility reports an international internet defence platform.

### **HAL, SAFRAN SIGN PACT TO CREATE JV FOR DEVELOPING HELICOPTER ENGINES**

The HAL announced today that it has signed an agreement with Safran Helicopter Engines to create a new joint venture intended to develop helicopter engines. Both partners will extend their long-lasting partnership by establishing a new aero-engine company in India. It will be dedicated to the development, production, sales and support of helicopter engines and one of its main objectives will be to meet the

requirements of HAL and the Ministry of Defence's future helicopters, including the 13-ton IMRH (Indian Multi-Role Helicopter).

## **IAF'S OLDER GENERATION MI-17 HELICOPTERS IN FOR A MAJOR UPGRADE**

Under the project, 86 helicopters will be modified, which includes 54 Mi-17 and 32 Mi-17 1V variants. The works will be outsourced to the industry and undertaken at the IAF establishments in Chandigarh, Guwahati and Yehalanka. "The upgrade is aimed to facilitate Mi-17 and Mi-17 1V helicopters with state-of-the-art and advanced electronic warfare and surveillance equipment. The modification work comprises the fitment of 14 systems on Mi-17 and MI-17 1V each. Further, there are about 41 mechanical and 67 electrical installations for MI-17 and 46 mechanical and 73 electrical installations for MI-17 1V," a request for proposal issued by the IAF.

## **INDIAN ARMED FORCES AIMING TO GO BIG WITH ARTIFICIAL INTELLIGENCE**

From silent sentries to gesture recognition for determining if an approaching individual is a friend or foe - the armed forces are set to embrace artificial intelligence-based technologies in a big way. Another AI-based system would help the Indian Army reduce its heavy road accident toll, which is the number one cause of casualties in peacetime.

## **NAVY WARSHIPS TO GET INDIGENOUS SATCOM TERMINALS**

The SATCOM terminals connect the Navy's sea-going platforms with the naval satellite, GSAT-7 (Rukmini), which is connected to ground stations and relays real-time information and data. Originally sourced from Israel, the SATCOMs are being maintained by Bharat Electronics Limited, a public sector undertaking.



### **MH 60R DELIVERED TO THE NAVY**

MH 60R helicopters were delivered to the Indian Navy in Kochi. These are the first to be delivered to the Indian mainland. Previously 3 were delivered in the United States of America. These were delivered by USAF C17 Globemaster. They will be initially based out of Naval Air Station Garuda.

### **ISRO PLANS GAGANYAAN TEST DEMONSTRATION BY DECEMBER**

The Indian Space Research Organisation (ISRO) has planned to launch the Gaganyaan test vehicle for a crew abort mission this year, its Chairman S. Somanath said. "Several tests are under way for crew module, crew escape system, electronics, intelligence, software at many centres. We are developing a crew module, a training module, astronaut training, display systems, crew training facilities and simulators. This year, we aim to demonstrate a crew escape system, which is the first step. Next year, we will do an unmanned crew mission and recover the module. Then we will again test crew escape systems two times with improvements based on observation. Currently, we are targeting a human space flight in 2023," he said during his visit to the Karunya Institute of Technology and Sciences.

## **AFTER PUTTING AMERICAN PREDATOR DRONE DEAL ON HOLD, INDIA EYEING THE INDO-ISRAELI ARMED UAV**

The Central government is now considering the acquisition of an indigenous long-range unmanned aerial vehicle after putting the American predator drone deal on hold due to a push for the Make in India initiative. Armed with strike capabilities, the Indo-Israeli long-range armed UAV is being developed by a private Indian firm in partnership with an Israeli defence manufacturer.

## **HAWKING DEFENCE OFFERS SOLUTIONS TO INDIAN ARMED FORCES**

Chennai-based Hawking Defense showcased a range of solutions for the Indian Armed Forces at East Tech 2022, an event hosted by the Indian Army's Eastern Command in Kolkata on July 7 and 8. Capt (Retd) Amber Singh Uban, Company Director, said that Hawking Defense offers its solutions to the Indian Armed Forces, including a series of hand-held micro-unmanned aerial vehicles (UAVs), a wearable unmanned aerial system (C-UAS) and a "Drone Lighting System".

## **ENDUREAIR SYSTEMS SHOWCASES ELECTRIC VIBHRAM UAV**

Noida-based EndureAir Systems, a developer of aerial robotic solutions, displayed an electric version of its Vibhram unmanned aerial vehicle (UAV) at East Tech 2022, an event held in Kolkata by the Indian Army's Eastern Command on 7 and 8 July. According to EndureAir, Vibhram is a multi-purpose UAV developed in collaboration with the Indian Institute of Technology, Kanpur. The gasoline-powered version of Vibhram was also displayed earlier this year at the North Tech Symposium conducted by the Indian Army's Northern Command.

## **ARMY TO CONDUCT TRIALS OF AI ENABLED UNMANNED ALL-TERRAIN VEHICLES IN LADAKH NEXT MONTH**

The Indian Army will soon conduct trials of indigenously developed artificial intelligence (AI)-enabled, unmanned all-terrain vehicles in Ladakh for surveillance and logistics operations. Trials will also be held in deserts in Rajasthan before the Army selects a final product and goes for large-scale acquisition. One of the vehicles under consideration has been developed by the Kalyani Group that runs on both batteries and motors. The vehicle was one of the 75 products that were on display at the defence ministry's first AI symposium in Delhi.

## **CHENNAI-BASED BIG BANG BOOM SOLUTIONS WILL DELIVER ITS ANTI-DRONE DEFENCE SYSTEM (ADDS) TO THE IAF**

The ADDS provides continuous passive RF scanning on a wide band of frequencies, the manufacturer, Big Bang Boom Solutions, has said. (Big Bang Boom Solutions) Chennai-based Big Bang Boom Solutions will deliver its Anti-Drone Defence System (ADDS) to the Indian Air Force (IAF) from August, Gaurav Sharma, chief government relations officer of the defence start-up firm said. Speaking at the East Tech 2022 event in Kolkata on 8 July, Sharma said the company received a request for proposal (RFP) in June 2022 to provide an undisclosed number of ADDS units to the IAF. The complete ADDS system is portable and can be operated by a single person. The system utilises radar detection, electro-optic/infrared (EO/IR) tracking, and passive radio frequency (RF) scanning features to provide countermeasures against rogue unmanned aerial vehicles (UAVs), Big Bang Boom Solutions said.

## **INDIAN SECURITY FORCES TO TEST IDR'S NANO UAV**

Noida-based Indian Defence Reforms' (IDR's) Doot MK-I, a nano unmanned aerial vehicle (UAV) - designed for intelligence, surveillance and reconnaissance (ISR) - has undergone initial tests by India's National Security Guard (NSG) in June, Mayank Pratap Singh, co-founder and CEO of IDR.

## HAL CMD LAUNCHES METAL CUTTING FOR TITANIUM BULKHEAD OF AMCA STEALTH FIGHTER

The Chairman and Managing Director of Hindustan Aeronautics Limited, an Indian state-owned aerospace and defence company, Mr R Madhavan launched the 'Metal Cutting for Titanium Bulkhead of 5th generation AMCA Aircraft' as part of technology development at Aircraft Manufacturing Division, Nashik, on 13th July.

## ARMY SEEKS PATENT FOR NEW COMBAT DRESS



Six months after having unveiled a new pattern and design of a combat uniform for the troops, the Indian Army has applied for a patent that will prevent its sale at shops. The Army had, in April, applied for the patent at the office of the Controller General of Patents, Designs and Trade Marks. The patent and intellectual property rights (IPR) are expected soon.

## **AGNIKUL COSMOS INAUGURATES ONE OF ITS KIND FACTORIES FOR 3D PRINTED ROCKET ENGINES UNIT; GOES LIVE AT IIT-M**

Indian space-tech start-up Agnikul, on Wednesday announced the opening of its rocket factory-1, India's first-ever rocket facility dedicated to 3D printed rocket engines at scale. The facility has a production house with world-class machinery, including a 400mm x 400mm x 400mm metal 3D printer from EOS, and a host of other machines that will enable end-to-end manufacturing of a rocket engine under one roof. Additionally, the factory has been designed keeping in mind the ability to produce 2 rocket engines per week. Agnikul had agreed with EOS in 2021 as their 3D printing partner for engines and this is an important step in seeing that support translate to reality.

## **INS DUNAGIRI LAUNCHED**

Another warship was added to the arsenal of the Indian Navy on 15 July as Union Minister of Defence Rajnath Singh along with Chief of Naval Staff (CNS) Admiral R Hari Kumar attended the launch event of INS Dunagiri, a Project 17A frigate at the Hooghly river at Garden Reach Shipbuilders and Engineers (GRSE) Limited, Kolkata. Notably, INS Dunagiri, like all the other frigates of Project 17A, is named after a mountain range in the country. Dunagiri is one of the highest peaks of the Chamoli District in Uttarkhand.

## **INDIA TO MAKE DIESEL ENGINES FOR SHIPS**

In an important announcement on military technology, the Ministry of Defence will manufacture diesel-powered marine engines used in ships and also design and develop a heavy-lift helicopter for the three services. Both projects will have the participation of the private sector. The announcements were made at a seminar organised by the Naval Innovation and Indigenisation Organisation (NIIO) and the Society for Indian Defence Manufacturers here. Later, PM Narendra Modi spoke at the same seminar, titled "Swavlamban" (self-reliance), and described the goal of self-reliance in the Indian defence forces.

## A DRONE THAT CAN CARRY A HUMAN; UNVEILED IN THE PRESENCE OF PM MODI

In a historic feat, India's first drone that can carry a human payload of up to 130 kgs was unveiled in the presence of Prime Minister Narendra Modi during Naval Innovation and Indigenisation Organisation (NIIO) seminar 'Swavlamban' in New Delhi. 'Varuna' country's first human-carrying platform – a pilot-less drone, has been indigenously developed by the Indian start-up Sagar Defence Engineering. The drone can carry one person inside. During the demonstration, the pilot-less drone flew around two meters above and then moved forwards before coming back to land.

## A PEBBLE SIZED OBJECT DAMAGED JAMES WEBB TELESCOPE AS PER REPORTS

A micrometeoroid struck the James Webb Space Telescope between May 22 and 24, impacting one of the observatory's 18 hexagonal golden mirrors. NASA had disclosed the micrometeoroid strike in June and noted that the debris was more sizeable than pre-launch modelling had accounted for. Now, scientists on the mission have shared an image that drives home the severity of the blow in a report (opens in new tab) released July 12 describing what scientists on the mission learned about using the observatory during its first six months in space.



## BEL TO SUPPLY INTEGRATED ANTI-SUBMARINE WARFARE SYSTEMS TO INDIAN NAVY

Navratna Defence PSU Bharat Electronics Limited (BEL) yesterday signed a contract with the Ministry of Defence, Government of India, worth

around Rs. 250 crores, towards the supply of nine Integrated ASW Complex (IAC) MOD 'C' Systems. IAC MOD 'C' is an Integrated Anti-Submarine Warfare (ASW) system for all surface ships of the Indian Navy.

### **ARMY BUYS 20 SWEDISH ADVANCED AVALANCHE RESCUE SYSTEMS TO DETECT TRAPPED SOLDIERS WITH PRECISION**

The Army has got deliveries of 20 avalanche rescue systems from a Swedish firm this month, nearly two years after it placed an order for the equipment as an emergency procurement.

### **DEFENCE MINISTRY CLEARS ARMS PROCUREMENT WORTH RS 28,732CR FOR ARMY**

The Union government has approved the arms procurement proposals worth over Rs 28,000 crore, including swarm drones, bulletproof jackets and close-quarter battle carbines. The proposals were cleared by the Defence Acquisition Council (DAC) headed by Union Defence Minister Rajnath Singh. These proposals will enhance the overall combat prowess of the armed forces along the northern and western borders. "The Acceptance of Necessity (AoN) for capital acquisition proposals of the armed forces amounting to Rs 28,732 crore was accorded by the DAC," the Defence Ministry said in a statement.

### **INDIA KICK STARTS PROGRAM TO BUILD ARMED DRONE SWARMS INDIGENOUSLY**

India has kicked off an indigenous program to acquire Autonomous Surveillance and Armed Drone Swarms for the Army under the Buy (Indian-Indigenously Designed Developed and Manufactured) category. This program was accorded Stage-1 approval - or Acceptance of Necessity (AON) - by the Defence Acquisition Council (DAC), which on July 26 approved the initiation of a host of military procurement programs worth Rs 28,732 Crore (\$3.6 Billion).

## **INDIAN ARMY TO GET LIGHTWEIGHT TANKS BY 2023**

Indian Army is expected to have lightweight tanks by 2023 which will be made in India in collaboration with Defence Research and Development Organisation (DRDO) and Larsen & Turbo (L&T). While speaking to the media, DRDO Dr G Satheesh Reddy said, "Work on the Light Weight Tank is going on in full swing. By 2023 the tank will be fully ready for production."

## **MOD ISSUES RFI FOR CELLULAR COMMUNICATION SYSTEM FOR THE INDIAN ARMY**

MoD, intends to procure 4G (Long Term Evolution-Advance), 4G (LTE-A), and Fifth Generation (5g) in Stand Alone/Non-Stand-Alone architecture-based mobile cellular communication network on a turnkey basis. To seek inputs seeking suitable Telecommunication Service providers, and original equipment manufacturers.

## **TATA ADVANCED SYSTEMS SUCCESSFULLY DELIVERED INDIGENOUSLY DEVELOPED QUICK REACTION FIGHTING VEHICLE TO THE INDIAN ARMY**

The TATA Advanced Systems Limited (TASL) successfully delivered the indigenously developed Quick Reaction Fighting Vehicle-Medium (QRFV) to the Indian Army. "TASL has successfully delivered the QRFV to the Indian Army," the TASL tweeted. It is further said that the induction of this vehicle will enhance the operational capabilities of the Indian Army in future conflicts. "The induction of this vehicle developed by TASL would greatly enhance the operational capabilities of the Indian Army in future conflicts," it added.

## ALH DHRUV MK3 MR SQUADRON INAS 324 COMMISSIONED



The unit is the first Naval Squadron on the Eastern Seaboard operating the indigenously designed and built Advanced Light Helicopter (ALH) MK III (MR) helicopters. INAS 324 has been named "KESTRELS" which are birds of prey and have good sensory capabilities symbolising the

envisaged role of the Aircraft and the Air Squadron. The Insignia of the Squadron depicts a 'KESTREL' searching over vast blue and white sea waves, which signifies the integral Maritime Reconnaissance (MR) and Search and Rescue (SAR) role of the Squadron. ALH MK III helicopters are fitted with state-of-the-art equipment which includes modern surveillance radar and electro-optical sensors.



# IADN BRIEFS

## **MIG-21 CRASHES: IAF-POLITICO-BUREAUCRATIC LOGJAM**

*Mr Shantanu K. Bansal*

The loss of Wing Commander M Rana and Flight Lieutenant Adivitya Bal in the MIG-21 crash this year caused jitters around the nation. The crash happened on the night of 28th July and it is the 6th crash in the row involving the same fighter aircraft, since 2021.

### **A BRIEF BACKGROUND**

In 1963, the Indian Air Force (IAF) first inducted a fleet of 874 MiG-21 fighter jets of Soviet origin to increase its combat ability during the cold war. However, more than 400 of these jets crashed since 1971-72, killing over 200 pilots and another 50 civilians on the ground, Times of India, reported.

There has been no accountability of any sort for these deaths so far, while we saw no IAF official held responsible for the crashes, when it comes to questioning politico class, the figures are diverted to previous governments. While the bureaucratic class dwells in silence ever since the inception, someone says 'silence, corrupts, absolute silence corrupts absolutely!!' Experts in governance have long questioned the politico-bureaucratic class of the country for unaccountability, in the case of prolonged



**SHANTANU K. BANSAL**

Founder of IADN. He has more than 10 years of experience in research and analysis. An award-winning researcher, he writes for the leading defence and security journals, think tanks and in-service publications. He has been a senior consultant at the Army Training Command (ARTRAC), Shimla and Helicopter Training School (HTS), Hyderabad.

Contact:

[Shantanukbansal2@gmail.com](mailto:Shantanukbansal2@gmail.com)

service of the older fighters, the accountability of IAF along with the state PSUs like HAL and ADA remains in quandary.

In 2012, former Defense Minister AK Antony had said in Parliament that more than half of the 872 MiG aircraft purchased from Russia had crashed. Due to this, more than 200 persons, including 171 pilots, 39 civilians, and eight other *service people*, had lost their lives.

Approximately 60 countries of four continents have flown the MiG-21, and it still serves many nations six decades after its maiden flight. No fighter aircraft in history has been as mass-produced compared to the MiG-21 aircraft. At least 11,000 MiG-21 have been produced and exported by the erstwhile Soviet Union (now Russia) to various countries since its first lot of production in 1959, most of the older version has been retired by now.

The only supersonic fighter aircraft which comes second to MiG-21 production levels is the F-16 of the USA. As per Lockheed Martin's record, at least 4,604 units of these fighter jet has been produced ever since the late 1970s and their upgraded version are still undergoing production. At least 40 countries operate these aircraft including the older version. The 2020 F-16.net report states that worldwide ever since F-16 started its operations there have been at least 130 mishaps with 87 pilots dying. No parallel record of the MiG-21 fighter has been found in the open domain.



**IN THE MEMORY OF THE PILOTS, WE LOST IN  
THE RECENT MIG-21 CRASHES**



**5th Jan 2021, Suratgarh, Flt. Lt. Abhijeet Anil Gadgil**

**17th March 2021, Gwalior, Gp. Capt. A. Gupta**

**20 May 2021, Moga, Sqn. Ldr. Abhinav Chaudhary**

**25 Aug 2021, Barmer, no loss of life reported**

**24 Dec 2021, Jaisalmer, Wg. Cdr. Harshit Sinha**

**28 July 2022, Barmer, Wg Cdr M Rana and**

**Flt. Lt. Adivitya Bal**

There is a general saying in the defence corridors that western defence products are comparatively available at a higher cost but are rather long-lasting and of greater quality assurance as compared to Russian products with cheaper rates. Although, Russia is nowhere to be called a culprit for these crashes as a lot of upgradations have been done by the HAL on the MiG-21 aircraft. In terms of crash rates around the world, the MiG-21 may stand at the highest position that is also because counting the number of aircraft produced - the flying-rate to fatal ratio would always stand higher comparatively to any other fighter aircraft.

The Indian Air Force (IAF) has been planning to replace MIG-21 fighters since the early 1980s when the government sanctioned the Light Combat Aircraft (LCA) programme as a possible replacement for the MIG-21 fighters. Under the leadership of Hindustan Aeronautics Limited (HAL), the LCA Tejas programme took more than 30 years to develop and the Tejas has still not achieved the requisite production levels to date which can sustain the nation's already limited offset requirements.

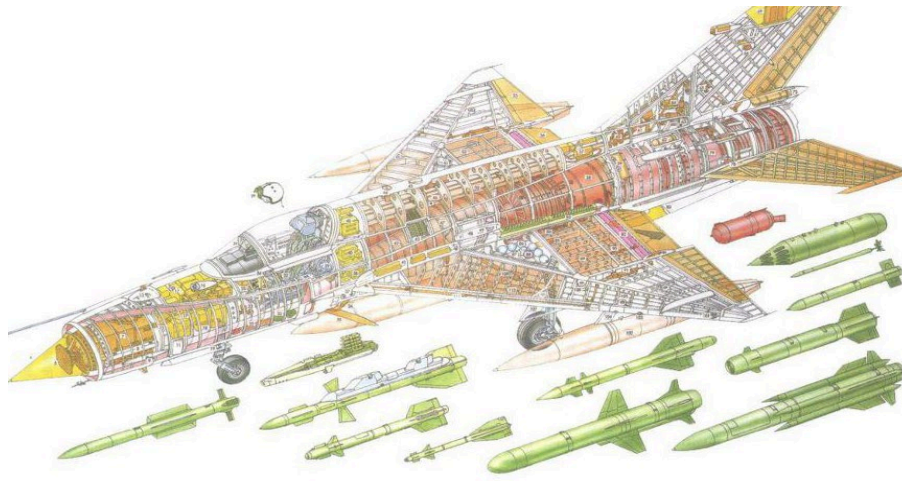
As per the IAF's Performance Audit by CAG in 2015, the LCA was required to be inducted in 1994 as a replacement of MiG-21 fighter. It was in 1983 that the Government of India, then led by Indira Gandhi, rolled out a project to build a new LCA as a replacement for the Russian MiG-21s. However, the LCA was airborne only in 1994, and it missed



*MiG-21 completes 67 years of service*

several deadlines due to various factors. It was in 2019 when LCA Tejas was given Final Operational Clearance (FOC), the first order itself came in 2021 by the government to procure 73 LCA Mk1A Tejas. It is recommendable that the government should come up with more sanctions to increase the LCA present rate of production, as a possible quick alternative. As per the government records, amount spent so far on the manufacture of 24 LCA Tejas delivered till 30.09.2021 is Rs 6,653 crore.

## MIG 21 IS OLD BUT TECHNOLOGICALLY NOT OUTDATED



The MIG-21 fighter aircraft is a technically sound design and in its present form in IAF, yes, it is old but it's not technologically outdated, says IADN in-house expert, Mr Ankit Kumar. Possible design defects though encountered while flying the MIG-21 Fighter Aircraft which might not have any direct link with crashes include: -

- When in afterburner, the engine operates very close to its surge line and the ingestion of even a small bird can lead to an engine surge/seizure and flame out.
- Being a single-engine aircraft means it is always under threat. The chance of a plane crash increases when a bird collides or the engine fails.
- According to a BBC report, pilots have been complaining that some models of the MIG aircraft land very fast and the design of the cockpit windows is such that the pilot cannot see the runway properly.

To keep Falcon fleet up to date given the changing trends in the air warfare, the government time to time decided to extend the Total Technical Life (TTL) of the MIG-21s by upgrading turbofan engines, radars, avionics Etc.

## IMMEDIATE REPLACEMENT MAY NOT BE AN OPTION

On 31 January 2012, it was announced that the Dassault Rafale had won the MMRCA bid, the biggest defence offset tender in history due to the aircraft's lower life-cycle cost and technology suitability but given the slow policy and decision-making process of the government, the programme doesn't succeed as a result MiGs still continue to serve the nation.

Considering government's target of having 42 squadrons to face a two-front conflict. The NDA government formed in 2014 do get a leap by ordering 36 Rafale fighter aircraft from France but mere such aircraft will not make much difference in fleet quantity while the same government's efforts to come-up with MMRCA 2.0 acquisition plan have provided no fruitful results so far.

Needless to say, since India decided to get the Rafale fighter as part of the MMRCA which is almost making a decade time now, the cost of this particular fighter aircraft must have got skyrocketed ever since besides the fact that after India decided to get the Rafale fighter aircraft in 2012, many countries followed the league and now the rafale order book totals to 242, by some account.

The Air Force is already down to 33 fighter squadrons against the sanctioned strength of 42 squadrons to face a two-front conflict. The IAF has witnessed significant delays in introducing new fighters and phasing out the old fighters within the required timeframe given the lack of long-term planning and decision-making at the highest echelons of the defence corridors.

Not being mentioned by many but the idea of having 42 fighter squadrons in the fighter inventory as an optimal fleet strength was against the IAF 'wish list' for having 60 squadrons to fight a two-front war. Hence, scrapping the entire fleet of MiG-21s would leave a critical void in numbers, and is not a viable immediate option. As of 2019, 113 MiG-21s

are still known to be in operation. It is recommendable that the IAF may have to reduce the flying hours of this particular jet for the meantime, to be preserved to fly in full effect only during times of real national emergency.

All in all, one can rightfully say that India's own slow and outdated decision-making process, combined with the lack of long-term force development plans of the IAF has led MIG-21 in service even till now, despite its poor safety record. On the other hand, China which CDS General Bipin Rawat considered the "enemy number one" of India is closing the technology gap with the West and Russia and India cannot afford to lag behind. More importantly, India needs a culture of accountability and answerability in echelons of governance including the forces otherwise we won't require to call China as "enemy number one" of India.

## TOWARDS BETTER CAPABILITY FORECASTING

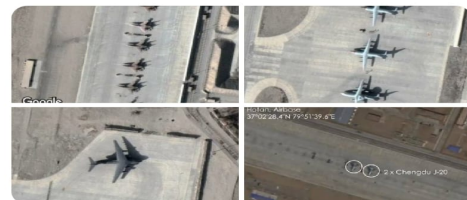
Air Marshal Anil Chopra (Retd.) notes that with fast depleting squadrons, the IAF will require 500 fighter aircraft of the fourth-generation ++ category. He suggests that a good mix could be around 200 LCA Tejas Mk 1A, 125 twin-engine MMRCA class, ideally already selected Rafale. The remaining nearly 175 aircraft should be single-engine MMRCA class, much cheaper than the Rafale such as the Tejas Mk 2.

The upgradation of the combat aircraft fleet is a continuous process to maintain the operational relevance but it is high time India gets the required reforms in its planning processes to ensure optimal force



Indian Aerospace Defence News...  
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The Chinese Air Force has now have 25 frontline fighters at the Hotan air base which include J-11, and J-20 fighters. The Chinese earlier used to maintain detachments of MiG-21 class fighters there but they have now been replaced with more sophisticated aircraft in larger numbers



development levels in sync with the modern threats to the nation and technology development levels around the world.

The introduction of the UAVs to the contemporary trends of air warfare has the potential to get drastic changes in the conventional concepts of air engagements, besides advancing capabilities in the area of Air Defence (AD), all needs to be interlinked with the potential force development plans which should be addressed by the new doctrines. The Ministry of Defence along with the Department of Military Affairs (DMA) have to evolve a better force capability planning mechanism which may require developing a quasi-think-tank within the echelons of Ministry of Defence (MoD) as the present bureaucratic set-up has no ability to do any sort of long-term capability planning and development keeping in view the evolving nature of warfare.

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## INDIA AND IPEF: ITS TIME FOR INDIA TO TAKE RESPONSIBILITY

*Mr. Purushendra Singh*

**A** proposal made by the U.S. President during the East Asia Summit in October 2021 has fructified recently during the second in-person Quadrilateral alliance (Quad) summit in Tokyo amidst the European war

The U.S. and 'Oceans 12' - a baker's dozen of 13 nations have launched the Indo-Pacific Economic Framework (IPEF) for Prosperity on 24<sup>th</sup> May 2022 which now has plus one - Fiji as the latest nation from the south Pacific to join the framework to make it 'Oceans 14'. More sovereign, democratic and emerging economies would follow to achieve sustainable and inclusive economic growth promised by the new framework and India is rightfully placed to become a container vessel for the framework.

India's long coastline with deep-water ports, ancient trading experience by the Cholas and Pandya dynasties possessing the oldest dockyard at Lothal; Gujarat and having strategically located natural Islands make the nation-state a unique position in the Indian Ocean Region (IOR) which accounts for one-third of bulk cargo and half of container traffic pass through it.

The Modi government has been giving priority to ocean diplomacy, the Look west - Act East policy and importance to IOR and the Indo-Pacific vision. The current government has also rolled out various measures to



**PURUSHENDRA SINGH**

Research Associate in Indo-U.S. relations at CUTS International WDC. He writes about Affairs concerning geo-political security and diplomatic affairs.

Follow him on Twitter:  
[@puru\\_354](https://twitter.com/puru_354)

make the ease of doing business much simpler and quicker, schemes such as *SagarMala*, the O-SMART scheme to unlock the potential of waterways and coastline for better connectivity, infrastructure, logistics and to encourage research in deep ocean study has been advanced.

India as a bridge between the developing nations and the developed nations provides an opportunity for countries which are looking at taking advantage of this arrangement while balancing the economic security risks posed by China's rise.

As the fastest growing economy, India provides an alternative manufacturing destination for multi-national companies looking for a way out of China. With over 2.37 million sq. km. of Exclusive Economic Zone (EEZ), a successful democratic model, liberalized administrative policies, rapid economic growth and experience in leading a regional forum: The Bay of Bengal Initiative for Multi-Sectoral Technical and economic cooperation (BIMSTEC) - India has the capacity and the potential to drive the region towards prosperity and to bridge the gaps between public-private investments and supply chains.

The IPEF is not a free trade agreement (FTA) but it is a 21<sup>st</sup>-century economic arrangement that will seek to tackle the 21<sup>st</sup>-century economic challenges shared by like-minded nations remarked by Jake Sullivan, U.S. National Security Adviser. This is the first plurilateral framework that India has agreed to join after exiting the Regional Comprehensive Economic Partnership (RCEP) in 2019.



India has concerns about some of the pillars, particularly trade, and digital governance which includes cross-border data flows and data localization and labour standards. There is also a small apprehension about the simultaneous existence of IPEF and RCEP which would draw a raised eyebrow by the Communist Party of China. Another challenge for India is in the area of green and clean energy. As India currently relies heavily on coal-based power plants for electricity generation, the transition from traditional to eco-friendly energy use and its adaptability would continue to pose challenges.

India and the U.S. having several contentions and diverging views on various pillars covered under this framework have both joined this comprehensive plurilateral framework and this has not only reinvigorated multilateralism but has provided a much-required boost to polylaterals. As this framework focuses more on facilitation than liberalisation, Polylaterals tend to play an important part in reviving multilateralism and sustainable economic democracy.

## IPEF IS AN OFFER WHICH INDIA SHOULDN'T REFUSE



IPEF is a large canvas and India along with other Asia-Pacific countries should look towards taking advantage of this framework which focuses on supply chain resilience, sustainability, inclusiveness, shared economic growth and competitiveness.

The twelve members apart from the US in the framework account for almost 33.3% of India's export which could further go up and mutually benefit with the help of IPEF. India's mission of becoming a global manufacturing hub may also actualize sooner.

Peace in Indian Ocean region key to global prosperity, rules-based, open Indo-pacific essential for global prosperity - Rajnath Singh (Defence Minister of India) As India recently hosted the Association of South East Asian Nations (ASEAN) Foreign Ministers' meet in mid-June where seven out of ten members are members of the IPEF, the focus on the side-line meetings was to build an *"inclusive and flexible"* IPEF as emphasised by PM Narendra Modi at the launch event to collectively make the Indo-Pacific region an engine of global economic growth and prosperity.

The ASEAN-India Foreign Ministers' Meeting in June 2022 also proposed an ASEAN-India Maritime Exercise and informal meeting between India and ASEAN Defence Ministers in November 2022. Both sides are also looking at collaboration around the seven pillars of the Indo-Pacific Oceans Initiative (IPOI).

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## TECHNOLOGY FOCUS

### **HUMAN SPACEFLIGHT TEST FLIGHTS COULD BE WITHIN A YEAR: FORMER ISRO CHIEF**

Indian human space flight program or 'Gaganyaan' will reach a decisive state when test flights to evaluate the safety reliability of the systems developed could be taken up within a year, said former ISRO chairman K Kasturirangan. "Lot of work has gone into this human flight program and once the test flights are successful, it won't take much time to put Indians into space. Within the next decade there will also be missions to Moon when we will try to land a rover and missions to study other planetary systems," he informed.



### **ROBOTS AS SENTRIES, DEVICES DECIPHERING MANDARIN: ARTIFICIAL INTELLIGENCE TO STRENGTHEN INDIA'S DEFENCE**

India's focus on the new age of disruptive technology Artificial Intelligence (AI) will lead the forces soon to have not just robots doing sentry duty but also the soldiers in mine-laden fields will have robots marking and warning about the mines. Even those soldiers operating along the Northern Border will have an AI device to decipher Mandarin into English for them. These three and 72 more such devices and products as Defence Minister Rajnath Singh launched 75 newly-developed Artificial Intelligence (AI) products/technologies during the first-ever 'AI in Defence' (AIDef) symposium and exhibition, organised by the Ministry of Defence in New Delhi. These included AI Platform

Automation; Autonomous/Unmanned/Robotics systems; Block Chain-based Automation; Command, Control, Communication, Computer & Intelligence, Surveillance & Reconnaissance; Cyber Security; Human Behavioural Analysis; Intelligent Monitoring Systems; Lethal Autonomous Weapon Systems; Logistics and Supply Chain Management, Operational Data Analytics; Manufacturing and Maintenance; Simulators/Test Equipment and speech/voice analysis using Natural Language Processing.

### **DRDO CHIEF TELLS YOUNG BRAINS TO INNOVATE**

Defence Research and Development Organisation (DRDO) Chairman G. Satheesh Reddy has invited young brains to take up innovation on a large scale to take the nation forward. Speaking after inaugurating the Innovation, Science and Technology Foundation (ISTF) headquartered in Tirupati on Saturday, he spoke on the opportunities provided by the DRDO to the young minds to come up with innovative products and services.

### **NEW UNMANNED COMBAT AIRCRAFT DESIGNS REVEALED BY BAE SYSTEMS**

British defence contractor BAE Systems has unveiled two new "agile and affordable" unmanned aircraft concepts to meet the demands of a "complex and rapidly evolving battlespace." The public debut of these designs follows recent and very open discussions on the part of the U.K. Royal Air Force, including additional details announced just earlier this week, about its new and evolving plans to integrate drones into future operations.



## **RUSSIA'S NUCLEAR-POWERED SPACE TUG TO DELIVER INTERSTELLAR STATIONS TO PLANETS**

The Zeus unmanned nuclear-powered space tug, which is currently under development in Russia, would be delivering an interstellar space station to the planets of the Solar System while cosmonauts would be flying to the station separately due to long flights, Dmitry Rogozin, the former head of Russian space agency ROSCOSMOS, has told Sputnik.

## **IRAN UNVEILS 1ST NAVAL DRONE-CARRIER DIVISION**

The Iranian Navy on 15 July unveiled its first naval drone-carrier division in a ceremony in southern Iran, according to the official news agency IRNA. Belonging to the Iranian Navy's southern flotilla, the division consists of units of surface and subsurface vessels capable of carrying out different kinds of reconnaissance, as well as combat and explosive unmanned aerial vehicles (UAVs).

## **CDSpace SHOWCASES SPOT V3 UAV**

An Indian firm CDSpace Robotics exhibited its new SPOT V3 fixed-wing vertical take-off and landing (VTOL) unmanned aerial vehicle (UAV) at East Tech 2022, an event held in Kolkata by the Indian Army's Eastern Command on 7 and 8 July. Piyush Negi, co-founder and chief product officer of CDSpace Robotics, told Janes that the SPOT V3 system is based on an indigenous design and is being developed in-house primarily for intelligence, surveillance, and reconnaissance (ISR) roles.

## **RUSSIAN NAVY RECEIVES 1ST SUBMARINE CARRYING NUCLEAR-POWERED DRONES**

A "doomsday" submarine with nuclear torpedoes "the size of a school bus" that are so potent they may trigger a "radioactive tsunami" was handed to the Russian Navy. According to US Naval Institute News, the 184m (604ft), 30,000-ton Belgorod submarine is the biggest one to be built in 30 years and can accommodate six 80ft long Poseidon nuclear torpedo drones that are equipped with a 100-megaton nuclear warhead.



### **ATMANIRBHAR BHARAT: LIGHT WEIGHT TANKS FOR THE INDIAN ARMY WILL ROLL OUT NEXT YEAR, SAYS DRDO CHIEF**

In 2023, Indian Army will soon have Light Weight Tanks which have been made in India in collaboration with Defence Research and Development Organisation (DRDO) and Larsen & Toubro (L&T). The making of the Light Weight Tank comes under Make-I, or “government funded” project category.

### **MULTIPURPOSE VESSELS (MPV) BY L&T FOR INDIAN NAVY**

Having multi-role support functions such as maritime surveillance & patrol, launching/ recovery of torpedoes and operation of various types of aerial, surface and underwater targets for Gunnery/ ASW firing exercises.

## INTERNATIONAL RELATIONS



### **INDIA OPPOSES THE EXPANSION OF CPEC PROJECTS TO THIRD COUNTRIES**

While expressing the security concerns, the MEA spokesperson Arindam Bagchi stated that India strongly opposes the expansion of CPEC to any third country as it threatens India's sovereignty. In a response to the matter, he said, "We have put out a clear statement where we brought up two major points. One is about the activity in POK which is against the sovereignty and territorial integrity of India. We object to this. And the second is that any third country must not enter as it is a breach of India's sovereignty."

## **NORTH KOREA SAYS THEY WILL MOBILIZE NUCLEAR WEAPONS IF NEEDED**

North Korean President Kim Jong Un released a statement regarding the mobilization of its nuclear weapons against the United States and South Korea if he senses any threat in near future. North Korea has already admitted to carrying out its seventh nuclear test ahead which provoked United States' concern on "swift and forceful" response.

## **EXPLOSIONS IN RUSSIAN-HELD PRISONS CLAIMED MANY LIVES**

Approximately 50 Ukrainians died in the explosions happened in a Russian-held prison in Eastern Ukraine. As per the reports, nobody took the responsibility for the blasts and both Russia and Ukraine are blaming each other for the incident.

## **IRAN IS ALL SET TO EXPORT MILITARY DRONES TO OTHER COUNTRIES SAYS, IRANIAN GENERAL**

As per the statements of Iranian General Kioumars Heydari, Iran is ready to export military drones and other equipment to friendly countries. He further added that Iran's drones are already being operated far away and beyond Iran's border. According to the sources, the United States has warned that Iran is trying to deliver its technology to several militant groups and countries like Sudan and Venezuela to jeopardize international security.



## PROTESTS DISRUPTED IN IRAQ; PROTESTERS OCCUPIED IRAQI PARLIAMENT

Iraq is again back to its political crisis after supporters of Islamic cleric Moqtada Sadr hegemonized Iraqi Parliament while penetrating Baghdad's fortified "Green Zone". Protests were emerged after the former Prime Minister of Iraq Nouri al- Maliki, an Iran-backed rival of Moqtada Sadr, nominated as the new leader of Iraq. Iraq is said to be running without government for ten months.

## FLOODS IN THE UNITED STATES KILLED NINETEEN

A cataclysmic flood has taken approximately nineteen lives in Kentucky, United States while the death toll is rising. Rescue operations are still going on as per the US officials. According to the reports, over 300 people are said to be displaced during heavy water flow in residential areas.



## CHINA THREATENED THE UNITED STATES WITH DIRE CONSEQUENCES IF PELOSI VISITS TAIWAN

The Chinese Government has warned the United States about its latest move to send Speaker Nancy Pelosi to meet Taiwanese leaders. In a statement by Chinese Spokesperson Zhao Lijian, he said that "We are firmly opposed to United States Speaker Pelosi's visit to Taiwan", he further added that "If the United States pushes ahead and challenges China's bottom line.... the US side will bear all the consequences".

## **TURKEY KILLED KURDS IN A MILITARY STRIKE IN THE KURDISTAN REGION OF NORTHERN SYRIA**

On July 20, 2022, Turkey attacked Tal Rifaat and Manbij city of Kurds in the Northern Syrian region resulting in many civilian deaths. The latest strike by Turkey was aimed to push back Kurdish forces from their territory as Turkey sensed the apprehension that the separatist movement of Kurdistan can jeopardize the narcissistic establishment of Turkey.

## **RUSSIA WILL BREAK COLLABORATION WITH THE UNITED STATES AND EUROPE BY DUMPING ISS IN 2024**

The Russian space agency has announced that Russia will abandon International Space Station (ISS) in 2024 to build its own Space Station. Russia has decided to break 23 years of collaboration with the United States and Europe following the financial sanctions imposed against it by western powers. Yury Borisov, the new chief of Russian Space Agency Roscosmos, told the media that made a "Russian Space Station" is the priority of the country.

## **SOUTH KOREA TO EXPORT MILITARY TANKS AND FIGHTER PLANES TO POLAND**

Amid the ongoing Russian-Ukraine war, Poland has decided to buy Military Tanks, Howitzers and Fighter Planes from South Korea to strengthen its armed forces against any possible attacks from the Russian side says a Poland source. The defence deals included 48 FA-50 Light Combat Fighter Jets, 180 K2 "Black Panther" Tanks and an undefined number of K9 Howitzers.

## MYANMAR AMBASSADOR SUMMONED TO FRANCE

Following the execution of four political prisoners in Myanmar by the Military Junta, France summoned Myanmar's ambassador to protest against the executions transpired by the Burmese regime. Myanmar's Ambassador called for an immediate end to the extra-judicial executions perpetrated by Military Junta in Myanmar and fledging the violence against political prisoners as well as citizens.



## HUMAN RIGHTS ACTIVISTS PROTEST AGAINST FRANCE AND EGYPT BILATERAL MEETING

French President Emmanuel Macron and Egyptian President Fattah al-Sisi met each other to boost their military and security ties. The bilateral meeting took place on July 22, 2022, in Paris where matters related to strengthening defence ties between the two countries were discussed. According to the reports, Egypt has received 30 Rafale Jets from France in exchange for multi-billion dollars. However, the meeting was opposed by Human Rights Activists as the Egyptian leader is accused of Human Rights violations while incarcerating over 60,000 political activists forcefully.

## SPECIAL HIGHLIGHTS



### **INS SINDHUDHVAJ, A KILO CLASS SUBMARINE OF THE INDIAN NAVY WAS DECOMMISSIONED**

The submarine was decommissioned after 35 years of glorious service. The submarine crest depicts a grey colour nurse shark and the name means flag bearer at sea. Sindhudhvaj, as the name suggests, was the flag bearer of indigenisation and the Indian Navy's efforts towards achieving Atmanirbharta in the Russian-built Sindhughosh class submarines throughout her journey in the navy. She had many firsts to her credit including operationalisation of the indigenised sonar USHUS, Indigenised Satellite Communication systems Rukmani and MSS, Inertial Navigation System and Indigenised Torpedo Fire Control System. She also successfully undertook mating and personnel transfer with Deep Submergence Rescue Vessel and was the only submarine to be awarded the CNS Rolling trophy for Innovation by the Honourable Prime Minister Mr Narendra Modi.

## DEVELOPING STORIES

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**#ISRO's AstroSat reveals secret of distant dwarf galaxy formation.**

A big triumph for Indian research community.

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Naval Order of Battle **#ORBAT** in the South China Sea and Taiwan Strait.

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**Breaking: Hindustan Lead in Fighter Trainer HLFT-42**

**#HAL** has taken an initiative and started a program to develop a LIFT aircraft. HAL has had in past tried to move with HJT-39 in past but BAE HAWK import killed it. HAL has also proposed a LIFT based on Tejas Trainer in past.




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**HLFT-42 from HAL Annual Report.**

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Annual Report 2021-22 3



**New Initiatives**

During the year, your Company has taken many new initiatives. Some of the major initiatives are as under:

- HAL has launched new platform design and development programmes such as Combat Air Teaming System (CATS) Warrior, Hindustan Lead in Fighter Trainer HLFT-42, High Altitude Pseudo Satellite (HAPS), Utility Helicopter-Maritime, Deck Based Multi Role Helicopter (DBMRH).

19:38 · 01 Aug 22 · [Twitter for Android](#)

