

Monthly Defence Current Affairs

August 2026

Indigenous Xtreme Weather Grade Diesel

- General Dhiraj Seth, Chief of the Army Staff (COAS), today launched the indigenously developed Xtreme Weather Grade (XWG) Diesel in New Delhi.
- Developed jointly by the Indian Army and Oil Marketing Companies, the specialised fuel will enhance the mobility, safety and operational availability of combat and logistics vehicles in extreme climatic conditions.
- The technology also has wider civilian use in high-altitude and severe winter regions and represents a significant step towards Atmanirbhar Bharat.
- Conventional diesel can thicken and clog fuel filters at very low temperatures, affecting the operation of vehicles in high-altitude and snow-bound areas. XWG Diesel overcomes this challenge and remains effective at temperatures as low as minus 42 degrees Celsius.
- Compliant with BS-VI standards and IS 1460:2025 specifications, it can be used in the Indian Army's existing vehicle fleet without any engine modification or re-homologation.



Indian Navy Launches Fifth Diving Support Craft (DSC A24)

- The Indian Navy achieved another milestone in strengthening its indigenous naval capabilities with the launch of **DSC A24**, the **fifth Diving Support Craft (DSC)** under the Diving Support Craft Project. The vessel was launched in **Kolkata**, reflecting India's continued commitment to the '**Make in India**' initiative and self-reliance in defence manufacturing.
- **Background**
 - The Diving Support Craft project aims to provide specialised vessels capable of supporting underwater diving operations, maintenance tasks, and rescue missions. These crafts play a crucial role in assisting naval divers during underwater inspections, repairs, and salvage operations.
- **Key Highlights**
 - DSC A24 is the fifth vessel under the Diving Support Craft project.
 - Built by **Titagarh Rail Systems Limited (TRSL)**.
 - Designed according to the standards of the **Indian Register of Shipping (IRS)** and Naval regulations.
 - Features a **catamaran hull** design for improved stability.
 - Displacement ranges between **300–400 tonnes**.
 - Supports underwater diving and maintenance operations.
- **Significance**
 - The induction of DSC A24 strengthens the Indian Navy's underwater operational capability while promoting indigenous shipbuilding under the **Aatmanirbhar Bharat** initiative.
- **Key Points**
 - **Vessel:** DSC A24
 - **Builder:** Titagarh Rail Systems Limited (TRSL)
 - **Location of Launch:** Kolkata
 - **Design:** Catamaran Hull

- **Purpose:** Diving support and underwater operations



BEL, Esri India Sign MoU

- Bharat Electronics Limited (BEL) and Esri India have signed a Memorandum of Understanding (MoU) to collaborate on defence projects involving Geographic Information Systems (GIS), Location Intelligence, and GeoAI technologies. The partnership aims to enhance India's defence capabilities through advanced geospatial solutions.
- Key Highlights
 - Joint development of GIS and GeoAI-based defence applications.
 - Integration of BEL's defence electronics expertise with Esri India's geospatial technologies.
 - Training support through the Indo ArcGIS platform.
 - Focus on mission-critical defence and strategic applications.
- Significance
 - The collaboration supports India's defence modernisation programme and strengthens indigenous capabilities in geospatial intelligence and digital battlefield management.



Russia Introduces 'Volna' Electronic Warfare System Against Starlink

- Russia has unveiled a new electronic warfare system named **Volna Kupol Garant**, designed to interfere with **Starlink satellite communications** by targeting satellites instead of ground terminals. The system represents a new approach to space-based electronic warfare.
- **Key Highlights**
 - Uses **high-frequency narrow-beam radio transmissions**.
 - Targets **Starlink satellites directly** rather than user terminals.
 - Temporarily blocks satellites from receiving signals from ground stations.
 - Does not physically damage satellites.
 - Intended to counter military dependence on satellite-based communication networks.
- **Significance**
 - The development highlights the increasing role of space-based communications in modern warfare and demonstrates the evolution of electronic warfare technologies targeting satellite constellations.



Exercise ROTOR CLAP III

- The **Indian Air Force (IAF)** successfully concluded **Exercise ROTOR CLAP III** at the **Pokhran Field Firing Range** in **Jaisalmer, Rajasthan**, on **1–2 August 2026**. The exercise was designed to enhance the operational capabilities of the IAF in tackling the growing threat posed by **Unmanned Aerial Systems (UAS)**. Bringing together several helicopter units, the exercise focused on improving coordination, precision engagement, and rapid response against hostile drones.
- **Background**
 - Exercise ROTOR CLAP III is the **third edition** of a specialised rotary-wing military exercise aimed at strengthening helicopter-based counter-drone operations. With drones increasingly being used for surveillance, reconnaissance, and offensive missions, the Indian Air Force is continuously upgrading its tactics and operational readiness to effectively counter these emerging aerial threats.
- **Key Highlights**
 - Conducted at the **Pokhran Field Firing Range** in Rajasthan.
 - Held on **1–2 August 2026**.
 - Focused on **Counter-Unmanned Aerial Systems (Counter-UAS)** operations.
 - Included **live firing** of missiles and rockets to validate combat capabilities.
 - Evaluated helicopter-based tactics for detecting, tracking, and neutralising drone threats.

- Improved coordination among different helicopter units during complex battlefield scenarios.
- **Participating Helicopter Platforms**
- The exercise featured a wide range of helicopters serving different operational roles, including:
 - **AH-64 Apache** attack helicopters
 - **Mi-25/35** attack gunships
 - **HAL Prachand** Light Combat Helicopters
 - **CH-47F(I) Chinook** heavy-lift helicopters
 - **Mi-17** medium-lift helicopters
 - **HAL Dhruv (ALH)** Advanced Light Helicopters
- These platforms demonstrated capabilities in combat support, troop transport, logistics, surveillance, and precision strike missions.
- **Importance of Counter-UAS Operations**
- Counter-Unmanned Aerial Systems (Counter-UAS) involve technologies and operational procedures used to **detect, identify, track, and neutralise hostile drones**. As unmanned aerial vehicles become a major component of modern warfare, strengthening counter-drone capabilities has become a priority for armed forces worldwide. Exercises such as ROTOR CLAP III help validate operational concepts, improve battlefield coordination, and prepare forces to respond effectively to evolving aerial threats.
- **Significance**
- Exercise ROTOR CLAP III highlights the Indian Air Force's commitment to enhancing its combat readiness and adapting to modern warfare challenges. By integrating advanced helicopter platforms with specialised counter-drone tactics, the exercise strengthens India's air defence capabilities and improves the effectiveness of rotary-wing operations in future conflicts.
- **Key Facts for Exams**
- **Exercise:** ROTOR CLAP III

- **Conducted By:** Indian Air Force (IAF)
- **Venue:** Pokhran Field Firing Range, Jaisalmer, Rajasthan
- **Dates:** 1–2 August 2026
- **Theme:** Counter-Unmanned Aerial Systems (Counter-UAS)
- **Major Helicopters:** AH-64 Apache, Mi-25/35, HAL Prachand, Chinook, Mi-17, HAL Dhruv
- **Objective:** Enhance helicopter-based capabilities to detect, track, and neutralise drone threats.



Agni-4 Ballistic Missile Successfully Test-Fired

- India successfully conducted the test launch of the **Agni-4 Medium-Range Ballistic Missile (MRBM)** from the **Integrated Test Range (ITR), Chandipur, Odisha**, on **6 August 2026**. The test was carried out under the supervision of the **Strategic Forces Command (SFC)** and successfully validated all operational and technical parameters. The successful launch further strengthens India's strategic deterrence capability.
- **Background**

- The **Defence Research and Development Organisation (DRDO)** initiated the Agni-4 programme in **2007** as part of India's long-range missile development efforts. Initially conceived as a 5,000-km class missile project, it was later developed as an upgraded version of the **Agni-II Prime** with significant technological improvements.
- **Key Highlights**
- Successfully tested from **ITR Chandipur, Odisha**.
- Conducted under the **Strategic Forces Command**.
- Two-stage **solid-fuelled** ballistic missile.
- Strike range of approximately **4,000 km**.
- Capable of carrying **nuclear and conventional payloads**.
- Equipped with advanced guidance, navigation and thrust vector control systems.
- Features a maraging steel first stage and carbon-fibre second stage.
- **Significance**
- The successful test demonstrates India's growing indigenous missile capability and enhances the country's strategic deterrence against long-range threats.



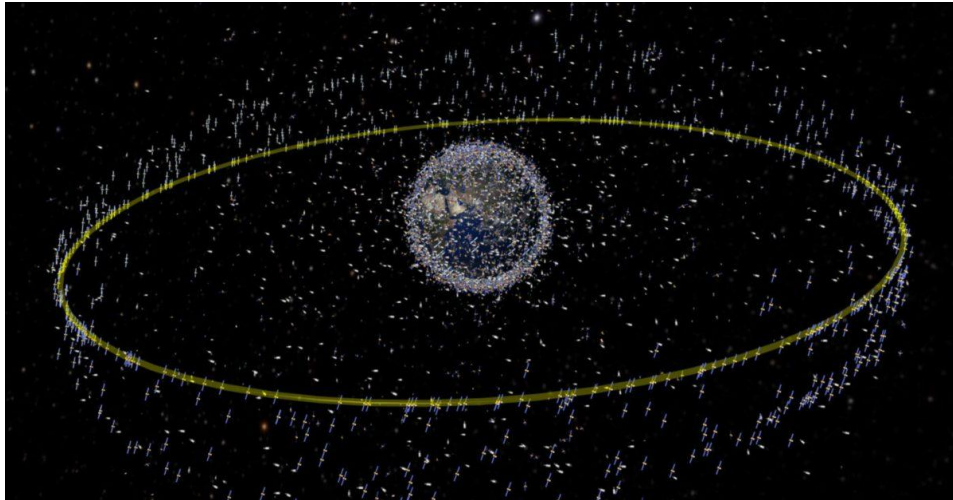
Twenty Indian LEO Satellites Face Higher Collision Risk

- The Government informed the **Lok Sabha** that **20 out of India's 22 active Low Earth Orbit (LEO) satellites** face an increased risk of collision due to the growing number of satellites and space debris in orbit.
- **Background**

- **Low Earth Orbit (LEO)** extends up to approximately **2,000 km** above Earth's surface and is widely used for Earth observation, communication, navigation and scientific missions.
- **Key Highlights**
 - 20 of India's 22 LEO satellites face higher collision risk.
 - Statement made by **Dr. Jitendra Singh** in Parliament.
 - Rising satellite launches have increased orbital congestion.
 - Space debris continues to grow rapidly.
 - Greater emphasis on space traffic management.
- **Significance**
 - The development highlights the need for international cooperation in space traffic management and sustainable utilisation of outer space.

Space Debris: A Growing Challenge for Space Operations

- The increasing amount of **space debris** has become one of the biggest threats to satellites operating in Earth orbit. Even tiny debris fragments travel at extremely high speeds and can severely damage operational spacecraft.
- **Background**
 - Space debris includes non-functional satellites, abandoned rocket stages and fragments produced by satellite collisions or explosions.
- **Key Highlights**
 - Debris travels at extremely high orbital velocities.
 - Even small fragments can destroy operational satellites.
 - Collision events generate additional debris.
 - Raises risks for communication, navigation and scientific satellites.
- **Significance**
 - Effective debris mitigation measures are essential for ensuring the long-term sustainability of space activities.



India Explores Participation in France-Led Sixth-Generation Fighter Programme

- India has begun exploring the possibility of joining the **Future Combat Air System (FCAS)** programme, a French-led initiative aimed at developing next-generation combat aircraft. The move reflects India's growing focus on preparing its air power for future warfare, where advanced technology, networked operations and highly capable combat platforms are expected to play a decisive role.
- A Parliamentary Standing Committee on Defence has recommended that India establish a clear roadmap for the development and acquisition of **sixth-generation fighter aircraft**. The committee emphasised that maintaining technological relevance is essential because modern warfare is becoming increasingly dependent on air power and advanced aerospace systems.
- According to the PPT, two major international groups are currently working on sixth-generation fighter programmes. One involves the **United Kingdom, Italy and Japan**, while the other brings together **France and Germany**. India is considering collaboration with one of these groups to avoid falling behind in the development of advanced combat aviation.
- The development of India's **Advanced Medium Combat Aircraft (AMCA)** is also progressing, with its design completed and discussions concerning its production underway.
- **Significance**
- Participation in an international sixth-generation fighter programme could provide India with access to advanced aerospace technologies while supporting the country's long-term goal of developing an increasingly capable indigenous air force.



Saudi Arabia, Türkiye and Pakistan Sign Joint Defence Agreement

- **Saudi Arabia, Türkiye and Pakistan** have signed a joint defence agreement amid heightened security tensions in the wider Middle East. The agreement is intended to strengthen cooperation among the three countries and establish a framework for collective deterrence against potential aggression.
- Under the agreement, an armed attack against any one of the three countries would be treated as an attack against all three, according to their joint statement. The countries described the arrangement as a mechanism for strengthening collective security and promoting regional stability.
- The agreement comes against the backdrop of continuing tensions involving regional powers. The three countries have emphasised that the arrangement is defensive in nature and is not directed against a particular state. Türkiye has also indicated that the framework remains open to other regional countries and does not replace existing bilateral or multilateral security arrangements.
- Saudi Arabia's strategic importance is linked to its position as a major energy exporter, while Türkiye possesses one of NATO's largest militaries. Pakistan brings extensive military experience and is the only nuclear-armed Muslim-majority state.
- **Significance**
- The agreement could reshape security cooperation among the three countries and strengthen their ability to coordinate responses to emerging regional security challenges.



Bhawana Kanth Becomes India's First Woman Fighter Combat Leader

- **Indian Air Force Squadron Leader Bhawana Kanth** has achieved another milestone by becoming the **first Indian woman pilot to successfully complete the Fighter Combat Leader (FCL) course**. She completed the advanced training programme on **6 August 2026** at the **Tactics and Air Combat Development Establishment (TACDE), Gwalior**.
- The FCL course is a highly specialised **20-week programme** designed for selected IAF fighter pilots. It focuses on advanced air-combat tactics, leadership and the ability to command complex frontline missions. The course has a highly selective completion rate, with only around one percent of selected pilots reportedly completing it successfully.
- Bhawana Kanth was commissioned into the Indian Air Force in **June 2016** as part of the country's first batch of women fighter pilots. The batch also included **Avani Chaturvedi and Mohana Singh**. In 2019, Kanth became the first Indian woman fighter pilot to qualify for daytime combat missions.
- She has flown the **MiG-21 Bison** and later transitioned to the **Su-30MKI**. She was also awarded the **Nari Shakti Puraskar** in 2020 and became the first female fighter pilot to appear in the Indian Air Force's Republic Day parade tableau in 2021.
- **Significance**
- Her achievement represents an important milestone in the increasing participation of women in India's combat aviation and leadership roles.



India–US Explosive Ordnance Disposal Exercise 2026 Begins in Kochi

- The **Indian Navy and US Navy** conducted the **Explosive Ordnance Disposal (EOD) Exercise 2026** at the **Southern Naval Command, Kochi**, from **10 to 14 August 2026**. The bilateral exercise focuses on strengthening cooperation between the specialist diving and EOD teams of both navies.
- The five-day programme includes **Subject Matter Expert Exchanges (SMEEs), cross-training, equipment demonstrations and scenario-based practical exercises**. These activities will allow personnel from both countries to share operational knowledge and improve their ability to respond to explosive hazards.
- The exercise will also facilitate the exchange of contemporary EOD techniques, emerging technologies and best practices. Participants will gain a better understanding of each other's operational concepts, capabilities and employment methods.
- India and the United States have been conducting joint **Salvage and EOD exercises since 2005**. The 2026 engagement marks the **eighth edition** of this specialised bilateral training exercise.
- **Significance**
- The exercise enhances **interoperability, specialised skills and professional cooperation** between the two navies and contributes to greater maritime security cooperation.



President's Colours To Puducherry Police

- The **Puducherry Police** has received the prestigious **President's Colours**, with Union Home Minister **Amit Shah** presenting the honour. The recognition places the Puducherry Police among the police forces in India that have received this distinguished national honour.
- The President's Colours, also known as **Rashtrapati ka Nishaan**, represent one of India's highest ceremonial honours for a military or police unit in recognition of distinguished and exceptional service to the nation.
- The honour is traditionally associated with the **President of India**, who is the Supreme Commander of the Armed Forces. It reflects an organisation's commitment to duty, professionalism, discipline and service to the country.
- The PPT also highlights the distinction between the **President's Colours** and the **President's Standard**. Both are prestigious ceremonial recognitions and have been presented to different units of the Indian Armed Forces.
- **Significance**
- The award is an important recognition of the **service, professionalism and contribution of the Puducherry Police** to the nation.



PM Modi Inaugurates Param Pragya Supercomputing Facility

- Prime Minister **Narendra Modi** inaugurated **Param Pragya**, an AI-enabled high-performance computing facility, at the **Sonipat Campus of IIT Delhi** on **8 August 2026**. The inauguration took place during the **57th Convocation Ceremony of IIT Delhi**.
- Param Pragya has been designed to support areas such as **artificial intelligence, data science, advanced computing and interdisciplinary research**. High-performance computing systems allow researchers to process huge volumes of information and perform complex calculations at very high speeds.
- The inauguration was part of a major academic event at IIT Delhi, where more than **3,000 students** graduated. The institute also awarded degrees to **587 doctoral scholars**.
- **Significance**
- Param Pragya can strengthen India's research infrastructure and support advanced work in **AI, scientific computing, data analysis and multidisciplinary innovation**.



Indian Navy Launches Next-Generation Offshore Patrol Vessel 'Shruti'

- The Indian Navy has taken another step towards strengthening its indigenous shipbuilding capability with the launch of **Yard 3037, named 'Shruti'**, a Next Generation Offshore Patrol Vessel (NGOPV), at **Garden Reach Shipbuilders & Engineers (GRSE), Kolkata**, on **11 August 2026**.
- The vessel was launched by **Mrs Manika Sadhu** in the presence of **Vice Admiral Sanjay Sadhu**, Controller of Warship Production & Acquisition. Senior representatives of the Indian Navy, Ministry of Defence and GRSE attended the ceremony.
- **Role of Next-Generation OPVs**
- The construction of NGOPVs is being undertaken simultaneously at two Indian shipyards:
 - **GRSE, Kolkata**
 - **Goa Shipyard Limited (GSL), Goa**
- These vessels have been **indigenously designed and built** and are intended to strengthen India's maritime operational capabilities.
- The ships will be capable of undertaking multiple missions, including:
 - Maritime surveillance
 - Search and rescue operations
 - Protection of offshore assets
 - Humanitarian Assistance and Disaster Relief (HADR)
 - Anti-piracy operations
- **Why is the Ship Named 'Shruti'?**
- The name '**Shruti**' has been drawn from India's ancient heritage and refers to the **four Vedas**. The ship's crest features the **Ursa Major constellation** along with a red-and-white lighthouse.
- **Significance**

- The launch reflects India's growing focus on **Aatmanirbhar Bharat and Make in India** in naval shipbuilding. Increasing domestic construction of warships can reduce dependence on foreign suppliers while strengthening India's maritime security capabilities.



Mumbai Start-Up Develops Indigenous Joule-Thomson Cooler for Missile Seekers

- A Mumbai-based defence start-up, Techno Defence Pvt Ltd, has developed an indigenous Joule-Thomson (JT) Cooler used in missile seeker systems. The technology represents an important development because such systems have historically been controlled by a limited number of technologically advanced countries.
- The development was supported by the Defence Research and Development Organisation (DRDO).
- What Is a Joule-Thomson Cooler?
- A JT Cooler is a compact cooling device used to rapidly reduce the temperature of certain sensors.
- In missile systems using infrared-guided seekers, sensors and focal-plane arrays need to be cooled to extremely low temperatures to operate effectively.
- The device developed by Techno Defence can cool infrared sensors to approximately -196°C . It is described as miniature, lightweight and vibration-free.
- How Was the Technology Developed?

- The project originated from an interaction between IIT-Bombay alumnus Dr Pravin Salinkar and a DRDO laboratory director around 2017–18.
- Dr Salinkar subsequently co-founded Techno Defence with fellow IIT-Bombay alumnus Sudarshan Saraf. The company assembled a small team of engineers and technicians to work on the technology.
- In 2020, the company received funding under the DRDO Technology Development Fund (TDF) scheme to design and develop the JT Cooler.
- The company also collaborated with DRDO's Solid State Physics Laboratory (SSPL) and Research Centre Imarat (RCI).
- Strategic Importance
- JT Cooler technology is particularly important for infrared-guided missile seekers. The technology is subject to Missile Technology Control Regime (MTCR) restrictions and has historically been available mainly to countries such as the United States, France and Israel.
- India's indigenous capability in this area can:
 - Reduce dependence on foreign technology
 - Support domestic missile production
 - Strengthen India's defence technology base
 - Potentially create opportunities for defence exports



Government Advances 'PRAHAAR' Counter-Terrorism Strategy

- The Government of India has reaffirmed its commitment to the phased implementation of 'PRAHAAR', described in the PPT as India's first comprehensive National Counter Terrorist Policy and Strategy.

- The Ministry of Home Affairs stated that the strategy provides a national framework for preventing and responding to terrorism and radicalisation through a coordinated whole-of-government and whole-of-society approach.
- PRAHAAR was unveiled on 23 February. Its framework includes preventing terrorist attacks, ensuring swift and proportionate responses, strengthening coordination among government agencies, protecting human rights and the rule of law, addressing radicalisation, strengthening international counter-terrorism cooperation, and building recovery and resilience.
- The strategy also emphasises real-time intelligence sharing through the Multi Agency Centre (MAC), protection of critical infrastructure and coordination between state police forces and specialised central forces such as the National Security Guard (NSG).
- Key Points
- Strategy: PRAHAAR
- Area: Counter-terrorism
- Approach: Whole-of-government + whole-of-society
- Important mechanism: Multi Agency Centre
- Specialised force mentioned: NSG
- Focus: Prevention, response, intelligence, resilience and counter-radicalisation



Exercise Udara Shakti 2026

- The Indian Air Force (IAF) and the Royal Malaysian Air Force (RMAF) commenced the bilateral air exercise Udara Shakti 2026 on 10 August 2026. The five-day

exercise is being conducted at Subang Air Base, Malaysia, and concludes on 14 August 2026.

- The exercise is designed to strengthen operational cooperation and exchange expertise between the two air forces. The IAF has deployed four Rafale fighter aircraft from No. 101 Squadron and two C-17 Globemaster III strategic transport aircraft from No. 81 Squadron.
- The RMAF has participated with two Su-30MKM fighters from No. 12 Squadron, two F/A-18D fighters from No. 18 Squadron and one A400M transport aircraft from No. 8 Squadron.
- The exercise includes complex air-combat manoeuvring, air-to-air refuelling and strategic airlift operations. Joint field training and Subject Matter Expert Exchanges have also been conducted to facilitate the exchange of operational procedures, tactics and best practices.
- Key Points
 - Exercise: Udara Shakti 2026
 - Countries: India and Malaysia
 - Venue: Subang Air Base, Malaysia
 - Duration: 10–14 August 2026
 - IAF: 4 Rafale + 2 C-17
 - RMAF: 2 Su-30MKM + 2 F/A-18D + 1 A400M
 - Major activities: Air combat, air-to-air refuelling, strategic airlift



Pakistan's First Lunar Rover Named 'Jinnah-1'

- Pakistan has named its first-ever lunar rover 'Jinnah-1'. The rover has been named by SUPARCO (Space and Upper Atmosphere Research Commission) and is planned to travel to the Moon aboard China's Chang'e-8 mission in 2029.
- The rover is intended to operate in the Moon's south polar region. SUPARCO, Pakistan's national space agency, was established in 1961 and works in areas including satellite development, space science and remote sensing.
- The name Jinnah-1 honours Muhammad Ali Jinnah, who founded Pakistan in 1947. The name was selected through a nationwide public competition that received more than 4,000 submissions.
- Pakistan's participation in the mission follows a Memorandum of Understanding signed between SUPARCO and the China National Space Administration (CNSA) in Beijing on 5 February 2025.
- Key Points
- Rover: Jinnah-1
- Country: Pakistan
- Space agency: SUPARCO
- Planned launch: 2029
- Mission: China's Chang'e-8
- Target region: Moon's south polar region
- MoU with CNSA: 5 February 2025



India Optel Launches Indigenous 'GARUD' Binoculars

- India Optel Limited (IOL) has launched 'GARUD' High Resolution Binoculars for the civilian market. IOL is a Mini Ratna Category-I Defence Public Sector Undertaking under the Department of Defence Production.
- The binoculars have been developed and manufactured by Ordnance Factory, Dehradun, an IOL unit. The product reflects India's focus on indigenous design and manufacturing under Aatmanirbhar Bharat.
- GARUD provides 8× magnification and a 7.6-degree field of view. It also features ± 5 diopter adjustment, soft-touch eyecups and an ergonomic grip.
- The binoculars weigh approximately 610 grams and can be used for birdwatching, wildlife observation, travel, sports, forestry, marine activities and security-related applications.
- Key Points
- Product: GARUD High Resolution Binoculars
- Company: India Optel Limited
- Manufacturing unit: Ordnance Factory, Dehradun
- Magnification: 8×
- Field of view: 7.6°
- Weight: About 610 grams
- Theme: Aatmanirbhar Bharat



Reliance, Rolls-Royce Join India's AMCA Engine Programme

- Reliance Industries and Rolls-Royce announced a strategic partnership on 14 August 2026 to design, develop and manufacture an indigenous combat aircraft

engine in India. The collaboration is linked to India's Advanced Medium Combat Aircraft (AMCA) programme.

- The AMCA is India's planned fifth-generation stealth fighter aircraft programme. Such aircraft are generally associated with low observability, advanced avionics, sensor fusion and internal weapons carriage. The AMCA programme requires a high-thrust engine to support indigenous development and production.
- The two companies have also indicated the possibility of establishing an Aerospace Gas Turbine Complex in India. The proposed facility could support engine design, development, manufacturing, testing and through-life maintenance.
- The partnership would combine Rolls-Royce's propulsion technology with Reliance's manufacturing capabilities for aerospace production in India.
- The material also notes that Safran of France is associated with DRDO's Gas Turbine Research Establishment (GTRE) on another high-thrust AMCA engine proposal.



India Targets 100 GW Nuclear Power by 2047

- India has set an ambitious target of achieving 100 GW of nuclear power capacity by 2047. The expansion plan combines indigenous reactor technologies, Small Modular Reactors (SMRs) and new regulatory provisions for private participation in the civil nuclear sector.
- India's nuclear programme follows a three-stage approach, involving Pressurised Heavy Water Reactors (PHWRs), Fast Breeder Reactors (FBRs), and thorium-based systems.

- PHWRs use natural uranium as fuel and heavy water as moderator and coolant, while SMRs are compact reactors designed for smaller unit sizes and modular deployment.
- The Bhabha Atomic Research Centre (BARC) is India's principal nuclear research institution, while BHAVINI is responsible for fast breeder reactor projects.
- The Atomic Energy Commission has approved Tarapur in Maharashtra for the lead units of the 220 MWe Bharat Small Modular Reactor and 55 MWe SMR-55. Meanwhile, the Prototype Fast Breeder Reactor (PFBR) at Kalpakkam, Tamil Nadu, attained first criticality in 2026.
- The SHANTI Act, 2025, is also highlighted as an important part of the new nuclear framework. According to the PPT, it repealed the Atomic Energy Act, 1962 and the Civil Liability for Nuclear Damage Act, 2010, while establishing provisions concerning insurance, licensing and foreign-designed reactors.



Joint Military Exercise Maitree-XV

- The Indian Army contingent departed for Thailand to participate in the **15th edition** of the **India-Thailand** Joint Military Exercise MAITREE-XV (2026).
- The exercise will be conducted from 18 to 31 August 2026 at Vibhavadi Rangsit Camp, Surat Thani, Thailand. Last edition of the same exercise was conducted at Foreign Training Node, Umroi, Meghalaya in September 2025.
- The Indian Army and Royal Thai Army contingents comprise 85 personnel each. The Indian Army contingent is represented primarily by troops from 9 Gorkha Rifles, while the Royal Thai Army contingent comprises personnel from the 3rd Battalion, 25th Infantry Brigade, 5th Division.

- The exercise will involve company-level joint training focused on operations in jungle and semi-urban terrain.
- Aim of Exercise MAITREE is to foster Military Cooperation between India and Thailand. The Exercise will enhance combined capabilities in executing Joint Counter Insurgency/ Terrorist Operations in Jungle and semi-urban Environment under Chapter VII of United Nations Charter.
- Instituted in 2006, Exercise MAITREE is an important platform for sharing best practices and strengthening military cooperation between India and Thailand.



MoD inks Contract With General Atomics Aeronautical Systems

- Ministry of Defence has signed a contract with General Atomics Aeronautical Systems, Inc. (GA-ASI) for the leasing of two **MQ-9B Sea Guardian High-Altitude Long-Endurance (HALE)** Remotely Piloted Aircraft Systems (RPAS) for the Indian Navy for a period of 30 months.
- The contract is valued at approximately Rs 1,943 crore. It was signed in the presence of Additional Secretary & Director General (Acquisition), Department of Defence, Shri A. Anbarasu, at Kartavya Bhawan-2, New Delhi on August 17, 2026.
- The **MQ-9B Sea Guardian HALE RPAS**, equipped with advanced systems, state-of-the-art sensors and sophisticated payloads, will significantly enhance the Indian Navy's Maritime Domain Awareness capabilities.
- The systems will provide persistent Intelligence, Surveillance and Reconnaissance coverage over vast areas of the maritime domain, strengthening

India's ability to monitor and respond to developments across the Indian Ocean Region.



65TH Subroto Cup International Football Tournament

- The 65' edition of Subroto Cup International Football Tournament commenced on 18 Aug 26 at Dr. B.R. Ambedkar Stadium in New Delhi.
- The opening day featured an exciting encounter in the Junior Girls (under-17) category, with Meghalaya scoring victory over Chandigarh by 2-0 in the featured match. The goal scorers from Meghalaya were Ms Genefa and Ms Wandari.
- The opening ceremony featured a vibrant line-up of performances that added color and energy to the occasion. Highlights included performance by the Air Warriors Drill Team, and a cultural presentation by students of the Air Force Golden Jubilee Institute.
- Featuring 108 teams in three categories, Junior Girls (U-17), Junior Boys (U-17), and Sub-Junior Boys (U-15), the tournament is divided into eight groups per category. Group winners will advance to the knockout stages, culminating in the tournament finals.
- The 65' Subroto Cup underlines its enduring commitment to nurturing grassroots football and providing young athletes with a platform to compete, develop and aspire for greater heights in the sport.



Australia Agrees To Supply Uranium To Bharat

- Australia has agreed to sell uranium to India, ending a long stalemate that had persisted for more than a decade. The move marks a significant shift in Canberra's non-proliferation stance and comes at a time when India's power demand is rising rapidly.
- India, with a population of 1.4 billion and a rapidly expanding middle class, has set an ambitious target of installing 100 gigawatts of nuclear power capacity by 2047.
- This would be sufficient to power nearly 60 million homes annually. Although India has doubled its nuclear power capacity in the past decade, nuclear energy still accounts for only 3 percent of its electricity generation.
- India is not a signatory to the Nuclear Non-Proliferation Treaty, which recognises only five nuclear weapon states. New Delhi has long argued that the treaty is discriminatory, as it permanently excludes countries that tested nuclear devices after January 1967. Following its nuclear tests in 1998, India faced international sanctions and bans on uranium trade.
- India is currently Australia's fifth-largest trading partner, with two-way trade in goods and services valued at 54.4 billion Australian dollars (\$37.7 billion) in the 2024-25 financial year.
- PM Modi's visit to Australia is part of a wider tour that included Indonesia, where he signed agreements on agriculture and defence, including the BrahMos missile system. He will travel to New Zealand next, marking his first official visit to the country since the signing of a free trade agreement in April.



Delivery of Mangrol

- 'Mangrol', the third Anti-Submarine Warfare Shallow Water Craft built by Cochin Shipyard Limited (CSL), Kochi, was delivered to Indian Navy on 21 Aug 2026.
- The ship comprises of over 80 percent indigenous content and is equipped for underwater surveillance, Anti-Submarine Warfare (ASW) operations in coastal waters, Low-Intensity Maritime Operations (LIMO), along with mine warfare capabilities.
- The ship is propelled by waterjets and equipped with state-of-the-art Torpedoes, Anti-Submarine rockets, along with advanced radars and sonars.
- Mangrol derives its name from the coastal town and minor port of 'Mangrol', located in Junagadh district of Gujarat, which is a prominent harbour for the marine fishing industry.
- The ship also encapsulates the legacy of erstwhile INS Mangrol, an Indian Naval Minesweeper which remained in service till 2004, thereby continuing the naval tradition of preserving distinguished warship names.
- The delivery of Mangrol is yet another milestone in the Indian Navy's indigenous shipbuilding journey and a reaffirmation of the Government's vision of 'Aatmanirbhar Bharat'. The ship stands as a testament to the growing strength of the indigenous defence manufacturing ecosystem.



IAF Concludes Exercises Pitch Black And Udara Shakti 2026

- IAF has successfully concluded its participation in two pivotal international flight engagements: Exercise Pitch Black 2026 in Australia and Exercise Udara Shakti 2026 in Malaysia.
- The dual-nation deployment underscored the IAF's operational reach, advanced tactical coordination, and commitment to strengthening strategic defence partnerships across the Indo-Pacific region.
- During Exercise Pitch Black 2026, hosted by the Royal Australian Air Force (RAAF), the IAF deployed its frontline Rafale aircraft to operate alongside Air Forces from over 20 participating nations.
- Executing complex Large Force Employment (LFE) missions in a high-threat, multi-domain environment, the exercise enabled seamless tactical integration, cross-learning, and enhanced interoperability among coalition partners.
- Throughout both deployments, joint operations extended beyond the cockpit to include maintenance practices, mission planning exchanges, and cultural interactions, bolstering professional camaraderie across ranks.
- The Indian Air Force remains dedicated to enhancing regional stability, fostering interoperability, and advancing collaborative security initiatives through continuous joint training engagements across the global defence community.



TOT of DRDO-developed Missile Systems To Indian Defence Industry

- Rajnath Singh has approved the transfer of DRDO-developed technologies of all conventional missile systems to the Indian defence industry for production within the country.
- This Transfer of Technology marks an important milestone in promoting greater participation of the domestic industries in the defence ecosystem by enabling them to undertake indigenous production, as per applicable qualifications, certifications and regulatory requirements.
- The provision will enable successful transition of missile system development to industrial production, reflecting the continued efforts of DRDO to leverage the capabilities of the Indian industry for the development and manufacture of advanced defence systems.
- The objective is to enhance domestic manufacturing capabilities, strengthen the defence industrial base and create opportunities for the participation of Indian MSMEs and other technology partners in the supply chain.
- The initiative aims to enhance operational capability, reduce import dependence and increase domestic value addition, while supporting the growth of India's defence manufacturing sector.



GSL Hands Over ICGS Ajit to Indian Coast Guard

- Goa Shipyard Limited (GSL), a leading Defence Public Sector Undertaking, achieved another milestone in indigenous shipbuilding with the formal handing over of ICGS Ajit (Yard 1277), a state-of-the-art Fast Patrol Vessel to the ICG.
- Built with more than 65 per cent indigenous content, ICGS Ajit reflects the growing capabilities of India's domestic defence shipbuilding industry and the Government's vision of Atmanirbhar Bharat.
- The 51.43-metre-long and 8-metre-wide vessel has a displacement of 330 tonnes at a draught of 2.5 metres. It is powered by twin marine diesel engines driving controllable pitch propellers (CPP), a first-of-its-kind feature in this class of Fast Patrol Vessels, providing improved propulsion efficiency and operational performance.
- With a top speed of more than 27 knots and an endurance of 1,500 nautical miles, the vessel is equipped with an advanced integrated machinery control system to enhance operational readiness, efficiency and sustainability.
- ICGS Ajit will be operated by a crew of 6 officers and 35 sailors. The vessel has been designed to undertake a range of critical maritime security missions, including fisheries protection, Exclusive Economic Zone surveillance, coastal patrolling, anti-smuggling and anti-piracy operations, as well as search and rescue missions.
- The induction of ICGS Ajit will strengthen the Indian Coast Guard's capabilities in safeguarding India's coastal and offshore areas and contribute to the country's maritime security architecture.

- The handing over of the vessel further underlines Goa Shipyard Limited's commitment to delivering advanced, high-performance platforms for India's defence forces.
- It also reinforces GSL's role in advancing indigenous shipbuilding, promoting defence self-reliance and supporting India's ambition to emerge as a global shipbuilding hub under the Make in India initiative.



US Launches Operation Economic Outcast

- On 24 August 2026, the United States announced “Operation Economic Outcast”, a sanctions campaign led by Treasury Secretary Scott Bessent against Iran.
- The measures expanded U.S. sanctions coverage to five sectors of the Iranian economy and targeted 60 individuals, entities, and vessels linked to cyber operations, oil sales, and procurement networks.
- Operation Economic Outcast is a U.S. economic and diplomatic pressure campaign directed at Iran. The United States Department of the Treasury used the campaign to widen restrictions on digital assets and cryptocurrency, weapons-related technology, gold, airlines, and shipping.
- Secondary sanctions are penalties imposed by one country on third-party persons, firms, or banks that conduct business with a sanctioned state. In this case, U.S. officials warned that foreign entities facilitating transactions with Iran could face exclusion from the U.S. dollar system.



NSG Launches First All-Women Commando Course

- The **National Security Guard (NSG) Training Academy** launched India's first-ever **Mahila Commando Conversion Course (MCCC)** on 24 August 2026 at its garrison in **Manesar, Haryana**.
- The 12-week residential programme is designed for selected women personnel from State Police Forces and Central Armed Police Forces (CAPFs) and includes counter-terrorism training, weapons handling, marksmanship, tactical intervention, and hostage rescue drills.
- The National Security Guard is a federal counter-terrorism force under the MHA. It was raised in 1984 after **Operation Blue Star** and the **assassination of PM Indira Gandhi**, and it functions as a specialised force for anti-hijacking, counter-terror operations, and high-risk security duties.
- The **Mahila Commando Conversion Course** is a 12-week intensive residential training programme. It is structured to build advanced operational skills in female personnel drawn from police and paramilitary formations.
- The course began on 24 August 2026 at the NSG Training Academy in Manesar.
- The first batch included 25 women constables from the Rajasthan Armed Constabulary's 5th Battalion at Ghatgate.
- The training syllabus includes physical conditioning, weapons proficiency, marksmanship, tactical intervention, and hostage rescue drills.
- The programme uses the theme and hashtag "She Who Dares, Leads".



HAL and Safran Sign Aravalli Helicopter Engine Contract

- HAL and Safran Helicopter Engines signed a final contract in Bengaluru on 26 August 2026 to develop and produce a new high-power turboshaft engine for 13-tonne helicopters. The agreement was signed through **SAFHAL Helicopter Engines Pvt. Ltd. (SAFHAL)**, a joint venture between HAL and Safran Helicopter Engines.
- The new engine has been named Aravalli after the Indian mountain range. It is designed for the 3,500 to 4,000 shaft horsepower power class, which places it in the high-power segment of helicopter propulsion systems. The contract covers design, development, manufacture, supply, and lifecycle support of the engine.
- The Aravalli engine has been selected for HAL's planned Indian Multi-Role Helicopter (IMRH) and its naval variant, the Deck-Based Multi-Role Helicopter (DBMRH). The IMRH is a 13-tonne class helicopter programme, and the DBMRH is intended for shipborne operations in the Indian Navy.
- HAL has stated that the programme may support civil aviation uses such as offshore transport, utility missions, and VVIP transport. The programme also includes plans to develop domestic Maintenance, Repair and Overhaul capabilities for the engine family.



Delivery of Samarthak

- Samarthak, the first Multi-Purpose Vessel (MPV), built by Larsen & Toubro Ltd. (L&T), Kattupalli, was delivered to the Indian Navy on 27 Aug 2026.
- The ship comprises over 75 percent indigenous content and has been conceived as a versatile trial and evaluation platform.
- Further, the ship is engineered to perform maritime surveillance and reconnaissance, Offshore patrolling and support Humanitarian Assistance and Disaster Relief operations, when required.
- The ship has been aptly named 'Samarthak', meaning 'The Proponent'. The name signifies the ship's intended role as a dependable enabler of multiple missions.
- True to its designation, Samarthak is not limited to one specific task but is engineered to support a wide spectrum of activities, thereby embodying the concept of a multi-purpose vessel.



India, US sign Rs 292 crore deal for buying Javelin missiles

- India and the United States have signed a Rs 292 crore deal to buy around 60 Javelin anti-tank guided missiles for the Indian Army under the emergency procurement powers.
- The procurement has been done under the Emergency Procurement powers granted to the defence forces to build their capabilities post Operation Sindoor last year, Defence sources told.
- The contracts under the (EP-6) are expected to start being delivered to the armed forces by the end of 2026-27.
- The missile is being procured by the Indian Army in limited numbers only, as the Emergency procurement powers allow them to make purchases only up to Rs 300 crore per equipment.
- The American side has been pushing for the sale of these missiles to India under a government-to-government deal. India is also developing its own man-portable anti-tank guided missile and has done multiple trials of the system, which is still under development.



REVIEW QUESTIONS

1. The Indigenous Xtreme Weather Grade (XWG) Diesel launched by the Indian Army remains operational at temperatures as low as:

- A) -20°C
- B) -30°C
- C) -35°C
- D) -42°C

Answer: D) -42°C

2. The fifth Diving Support Craft (DSC A24) launched for the Indian Navy was built by:

- A) Garden Reach Shipbuilders & Engineers (GRSE)
- B) Cochin Shipyard Limited (CSL)
- C) Titagarh Rail Systems Limited (TRSL)
- D) Mazagon Dock Shipbuilders Limited (MDL)

Answer: C) Titagarh Rail Systems Limited (TRSL)

3. Who assumed charge as the 13th Commandant of the Indian Naval Academy (INA), Ezhimala, on 1 August 2026?

- A) Vice Admiral Manish Chadha
- B) Vice Admiral Dinesh Tripathi
- C) Vice Admiral Sanjay Jasjit Singh
- D) Vice Admiral Alok Ananda

Answer: D) Vice Admiral Alok Ananda

4. Bharat Electronics Limited (BEL) signed an MoU with Esri India primarily to collaborate in which field?

- A) Missile manufacturing
- B) Naval shipbuilding
- C) GIS, Location Intelligence and GeoAI for defence projects
- D) Space launch technology

Answer: C) GIS, Location Intelligence and GeoAI for defence projects

5. Russia's newly unveiled 'Volna Kupol Garant' system is designed to:

- A) Destroy enemy fighter aircraft
- B) Intercept ballistic missiles
- C) Disrupt Starlink satellite communications through electronic warfare
- D) Detect underwater submarines

Answer: C) Disrupt Starlink satellite communications through electronic warfare

6. Exercise ROTOR CLAP III, conducted by the Indian Air Force, primarily focused on:

- A) Maritime Anti-Submarine Warfare
- B) High-Altitude Logistics Operations
- C) Counter-Unmanned Aerial Systems (Counter-UAS) Operations
- D) Air-to-Air Refuelling Operations

Answer: C) Counter-Unmanned Aerial Systems (Counter-UAS) Operations

7. Agni-4 ballistic missile was successfully test-fired from which test range?

- A) Pokhran Test Range, Rajasthan
- B) Abdul Kalam Island, Odisha
- C) Integrated Test Range (ITR), Chandipur, Odisha
- D) Sriharikota, Andhra Pradesh

Answer: C) Integrated Test Range (ITR), Chandipur, Odisha

8. The Agni-4 ballistic missile has a maximum strike range of approximately:

- A) 2,000 km
- B) 2,500 km
- C) 3,500 km
- D) 4,000 km

Answer: D) 4,000 km

9. The Indian Army plans to procure how many Extended-Range (ER) BrahMos missiles?

- A) 100
- B) 120
- C) 150
- D) 200

Answer: C) 150

10. Which sixth-generation fighter programme is India exploring participation in?

- A) GCAP
- B) Future Combat Air System (FCAS)
- C) Tempest
- D) NGAD

Answer: B) Future Combat Air System (FCAS)

11. What is the primary significance of India's proposed participation in the French-led FCAS programme?

- A) Development of civilian aircraft
- B) Expansion of commercial aviation
- C) Access to advanced next-generation combat-aircraft technology and cooperation
- D) Development of passenger aircraft

Answer: C) Access to advanced next-generation combat-aircraft technology and cooperation

12. Bhawana Kanth became the first Indian woman pilot to successfully complete which course?

- A) Combat Air Controller Course
- B) Basic Fighter Training Course
- C) Fighter Combat Leader (FCL) Course
- D) Test Pilot Course

Answer: C) Fighter Combat Leader (FCL) Course

13. Which three countries signed the joint defence agreement discussed in the article?

- A) Saudi Arabia, Iran and Türkiye
- B) Türkiye, Qatar and Pakistan

- C) Saudi Arabia, Türkiye and Pakistan
- D) Saudi Arabia, UAE and Pakistan

Answer: C) Saudi Arabia, Türkiye and Pakistan

14. The India–US Explosive Ordnance Disposal (EOD) Exercise 2026 is being conducted at:

- A) Visakhapatnam
- B) Kochi
- C) Mumbai
- D) Chennai

Answer: B) Kochi

15. The 2026 India–US EOD Exercise marks which edition of the bilateral exercise?

- A) 5th
- B) 6th
- C) 7th
- D) 8th

Answer: D) 8th

16. Which police force was recently presented with the President's Colours?

- A) Goa Police
- B) Kerala Police
- C) Puducherry Police
- D) Chandigarh Police

Answer: C) Puducherry Police

17. Taiwan's proposed 2027 defence budget is expected to cross which milestone?

- A) T\$500 billion
- B) T\$750 billion
- C) T\$1 trillion
- D) T\$2 trillion

Answer: C) T\$1 trillion

18. By what maximum rate could the proposed US sanctions bill impose tariffs on imports from countries continuing to purchase Russian oil and gas?

- A) 25%
- B) 50%

- C) 75%
- D) 100%

Answer: D) 100%

19. Where was the Param Pragya high-performance computing facility inaugurated?

- A) IIT Bombay
- B) IIT Kanpur
- C) IIT Madras
- D) IIT Delhi's Sonipat Campus

Answer: D) IIT Delhi's Sonipat Campus

20. 'Shruti', the Next Generation Offshore Patrol Vessel (NGOPV), was launched at which shipyard?

- A) Cochin Shipyard Limited
- B) Goa Shipyard Limited
- C) Garden Reach Shipbuilders & Engineers (GRSE)
- D) Mazagon Dock Shipbuilders Limited

Answer: C) Garden Reach Shipbuilders & Engineers (GRSE)

21. The NGOPVs being constructed by GRSE and GSL are primarily intended for which of the following missions?

- A) Only anti-submarine warfare
- B) Only aircraft carrier operations
- C) Maritime surveillance, search and rescue, anti-piracy and HADR
- D) Strategic nuclear deterrence

Answer: C) Maritime surveillance, search and rescue, anti-piracy and HADR

22. Exercise Udara Shakti 2026 is being conducted between India and which country?

- A) Indonesia
- B) Japan
- C) Malaysia
- D) Singapore

Answer: C) Malaysia

23. Pakistan's first lunar rover, planned for China's Chang'e-8 mission, has been named:

- A) Chandrayaan-1
- B) Jinnah-1
- C) SUPARCO-1
- D) Pakistan-1

Answer: B) Jinnah-1

24. 'GARUD' High Resolution Binoculars have been developed and manufactured by which organisation?

- A) DRDO
- B) HAL
- C) Bharat Electronics Limited
- D) India Optel Limited

Answer: D) India Optel Limited

25. Which two companies announced a strategic partnership for the development and manufacture of an indigenous combat aircraft engine linked to the AMCA programme?

- A) HAL and Safran
- B) DRDO and Rolls-Royce
- C) Reliance Industries and Rolls-Royce
- D) Tata Advanced Systems and GE Aerospace

Answer: C) Reliance Industries and Rolls-Royce

26. The 15th edition of Exercise MAITREE-XV 2026 is being conducted between India and which country?

- A) Vietnam
- B) Thailand
- C) Indonesia
- D) Malaysia

Answer: B) Thailand

27. Where is Exercise MAITREE-XV 2026 being conducted?

- A) Umroi, Meghalaya
- B) New Delhi, India

- C) Vibhavadi Rangsit Camp, Surat Thani
- D) Bangkok, Thailand

Answer: C) Vibhavadi Rangsit Camp, Surat Thani

28. The Indian Navy has leased two MQ-9B Sea Guardian HALE RPAS from which company?

- A) Boeing
- B) Airbus Defence
- C) General Atomics Aeronautical Systems
- D) Lockheed Martin

Answer: C) General Atomics Aeronautical Systems

29. The 65th Subroto Cup International Football Tournament commenced in which city?

- A) Mumbai
- B) New Delhi
- C) Kolkata
- D) Bengaluru

Answer: B) New Delhi

30. NIPUN belongs to which class of vessels?

- A. Vikrant Class
- B. Nistar Class
- C. Shivalik Class
- D. Sandhayak Class

Answer: B. Nistar Class