



About us

The Centre for Land Warfare Studies (CLAWS) is an independent think tank based in New Delhi, India, dedicated to strategic studies and land warfare in the Indian context. Established in 2004 and registered under the Societies Registration Act, 1860, CLAWS operates as a membership-based organization governed by a Board of Governors and an Executive Council, under the Aegis of the Indian Army.

With a futuristic outlook and a policy-oriented approach, CLAWS focuses on national security issues, conventional military operations, and sub-conventional warfare. The Centre closely monitors regional conflicts and military developments within India's strategic frontiers, particularly in South Asia.

Committed to fostering strategic culture and informed policymaking, CLAWS disseminates its research to armed forces personnel, policymakers, members of the strategic community, and interested civilians. By facilitating in-depth studies and discussions, CLAWS contributes to shaping India's defense policies and military preparedness.

The CLAWS Newsletter is a newly fortnightly series under the leadership of Dr. Tara Kartha, Director Research & Academics. The newsletter features insightful content curated by CLAWS researchers, each specializing in their respective verticals. This initiative aims to provide in-depth analysis, strategic insights, and updates on key issues.

International Defense Industry Fair (IDEF) 2025

The 17th International Defence Industry Fair (IDEF 2025) in Istanbul ran from July 22 to July 27, 2025. Türkiye's premiere defence exhibition saw a footfall of over 120,000 visitors and concluded with a record \$9 billion in agreements. Turkish President Recep Tayyip Erdogan took to the social media platform X sharing details about the success of the event. He said that the fair saw a total of 270 signing ceremonies with 65% of the agreements tied to exports. He added that the commercial volume of the contracts was in excess of \$9 billion. About 26 new defence products were unveiled at the exhibition with over 1,100 items displayed for the first time. Global firms from Saudi Arabia, Azerbaijan, the United Arab Emirates, China, South Africa, and Pakistan showcased their defense, aviation, and aerospace products in their national pavilions at the event. Defense and aviation giants such as BAE Systems, Rolls-Royce, Lockheed Martin, and Airbus also participated in the event with their products. (Daily Sabah, X/@RTErdogan, July 29)

Türkiye Unveils @IDEF 2025

1. Türkiye Unveils GAZAP and NEB-2 Bombs at IDEF 2025 (Hurriyet Daily, Interesting Engineering, July 28)

GAZAP: Türkiye introduced its most powerful non-nuclear aircraft bomb GAZAP at IDEF 2025. Designed by Türkiye's National Defence Ministry's R&D center, the GAZAP's warhead weighs in at 2,000 pounds and can be dropped from an F-16 fighter jet. It has completed all phases of design, testing and certification and is reportedly ready for operational use. The standout factor of the GAZAP is its deadly fragmentation system which disperses 10.16 fragment explosions per meter- over three times greater than the typical rate of the MK-series bombs, making it that much more powerful. Additionally, the fuel-air explosive method creates immense overpressure and heat, going up to 3,000 degree celsius, making it one of the deadliest conventional arms.

NEB-2 Ghost (Hayalet): Türkiye also unveiled the NEB-2 Ghost bunker buster bomb, built for deep penetration strikes. Explaining that the NEB-2 can penetrate 7 meters of C50 grade concrete, Turkish officials claimed that this was the most effective bunker buster out there. Another unique feature of the bomb is its delayed detonation system, exploding 240 milliseconds after contact, compared to the usual 25 milliseconds, giving it more time to penetrate deeper into the target. The destructive capability of the bomb was seen during its aircraft test where it penetrated 90 meters deep and caused landslides, gas leaks, and rock destruction across a 160 m diameter. The Hayalet too weighed in at 2,000 pounds and can be dropped from an F-16. Turkish officials described it as the "best bunker-buster in the field."

2. ROKETSAN presented Türkiye's first hypersonic missile (<u>Janes</u>, <u>Turdef</u>, July 28)

The Ankara-based weapons manufacturer debuted the TAYFUN Block 4- the hypersonic version of the TAYFUN missile. The new variant is 10 meters long and weighs in at 7,200 kgs- making it much larger and heavier than the baseline version. It carries a high explosive blast fragmentation warhead and has anti-jamming capabilities, with resistance to electronic warfare and GPS jamming. Some reports also suggest that Block 4's warhead has penetration capabilities, hinting at some bunker-busting capabilities as well.

3. Other Missiles Showcased (TRT Global, July 22)

Several other Turkish missiles were seen at the IDEF 25, including the Akata, a submarine version of the Atmaca anti-ship missile, the Gokbora beyond-visual-range air-to air missile, Eren high-speed, multi-purpose loitering munition. 300 Er air-launched ballistic missile, and Simsek-2 satellite space launch vehicle.

4. ASELSAN Unveils New Air Dominance Systems (<u>Defense Mirror</u>, July 25)

Türkiye's ASELSAN launched two new air dominance technologies- the ASELFLIR 600 and the T-Link System- aimed at boosting surveillance, targeting and communications capabilities of aerial platforms. The ASELFLIR 600 is an electro-optical targeting system built specifically for HALE class UAVs. It supports long-range detection and features AI-driven object recognition and HD multi-band sensors. The T-LINK family of tactical data links offers encrypted, electronic warfare-resistant communication across air, land, sea, and missile platforms. It supports real-time data and voice exchange between mobile and fixed units and allows real-time transmission of video, target coordinates, and threat data to command centers, fighter jets, or artillery units.

5. Aselsan Develops Land-Launched Version Of Precision Glide Bomb (<u>Turkiye Today</u>, July 29)

Aselsan also introduced Goktan, a new ground-based precision strike system engineered for long-range, all-weather ground-to-ground engagements. The system uses the TOL-UN-S munition, which can strike targets over 150 km away with full 360-degree coverage. Equipped with an integrated propulsion system and INS/GNSS guidance, TOLUN-S is built for high-precision targeting across diverse operational environments. GÖKTAN is designed for compatibility with various mobile and fixed platforms, offering flexibility and enhanced battlefield effectiveness. ASELSAN also emphasised the system's modular design, which allows rapid deployment and simplifies maintenance to meet the fast-paced demands of modern warfare.

Deals @ IDEF 25

1. Indonesia Becomes First Buyer of Türkiye's KAAN Fighter Jets (<u>The Jakarta Post</u>, <u>Defence Security Asia</u>, July 27)

Türkiye and Indonesia signed an "implementation contract" finalising the sale of 48 KAAN Fighter Jets. The sale, while announced earlier this year, was finalised on the sidelines of IDEF 25. As per TAI's announcement, the agreement goes beyond procurement and includes collaboration in production engineering and technology sharing. Over the next decade,

KAAN fighter jets will be assembled and integrated with Türkiye manufactured engines, while new production and maintenance facilities will be built in Indonesia to strengthen its domestic aerospace capabilities. Türkiye is likely to deliver the aircraft to the Southeast Asian country over a 10-year period. Local media reports suggest the contract is valued at \$10 billion, although official figures are yet to be revealed. With this, Indonesia becomes the first buyer of Türkiye's indigenous aircraft. According to Türkiye's defence ministry, the KAAN is a fifth-gen aircraft powered by two GE F-110 engines, same as the F-16 jets. Additionally, Indonesia also signed an MoU with TAIS Shipyard at IDEF to purchase two MILGEM Istif class frigates and a contract with Roketsan to integrate their MIDLAS vertical launch system into naval platforms for use by the Indonesian Navy.

2. Airbus, TAI sign deal on Hürjet jet trainer collaboration for Spain (<u>Defense News</u>, <u>Aviationist</u>, July 30)

Turkish Aerospace Industries (TAI or TUSAS) and Airbus, a leading European aerospace company, signed an agreement during IDEF to formalise their collaboration for Spain's acquisition of the Hurjet jet trainer. The Spanish Air and Space Force is set to acquire 30 Hurjet airframes, with the deliveries scheduled to start in 2028. The Hurjet is a supersonic, single engine jet trainer with a payload capacity of 3,400 kgs, maximum speed of Mach 1.4, and maximum altitude of 45,000 feet. The deal formalises the collaboration between the two companies and outlines their individual role in Spain's procurement and integration procedure. The two are also going to work together to build a training system around the aircraft to train future pilots. The final commercial deal is set to be signed later this year, in September or October.

3. Turkish Firms Join Forces on AI-Powered UAVs (Anadolu Ajansi, July 31)

Turkish defence firms Buyutech and Titra signed a major agreement to incorporate AI-powered camera systems into domestically produced UAVs. Buyutech will design, manufacture, and install advanced AI-powered cameras across a variety of Titra made UAV platforms, including the Alpin and Alpin-2 unmanned helicopters, the Deli kamikaze drone, Pars observer drone, and Merkut FPV drones. The AI-enabled sensors are expected to significantly strengthen targeting and surveillance capabilities, leveraging real-time detection and recognition algorithms to boost performance in diverse operational scenarios.

4. Tubitak signs several significant deals with Turkish companies (<u>Anadolu Ajansi</u>, July 25)

Türkiye's Scientific and Technological Research Council (Tubitak) signed eight significant defense cooperation deals with leading Turkish firms. The first four deals were brokered between Tubuitak's Informatics & Information Security Advanced Technologies Research Center (BILGEM) and the Turkish Armed Forces to provide cloud software infrastructure for the latter. This included contracts for Safir cloud integration, multi-cloud platform development, technical support services, Ethernet crypto device development, and port product marketing collaboration. A fifth agreement was signed between Tubitak's Marmara Research Center and defense firm HAVELSAN for collaborating on R&D and commercialization initiatives spanning defense, space materials, and climate technology. Tubitak's Defense Industry R&D Institute also signed a pair of MoUs with the state-owned contractor ASFAT, targeting joint development of the Gokce- guidance kit for MK-83 bombs and collaboration on the TF-2000

air defence destroyer programme. The eighth agreement formalized a collaboration between Tubitak, SAHA Istanbul, and Middle East Technical University (METU) to launch a SAHA MBA–METU graduate program, blending academic rigor with industry insights.

5. Baykar and Koeeran Air Sign MoU (Aviation Next July 25)

Turkish drone manufacturer Baykar and South Korea's flag carrier Korean Air signed a MoU to increase collaboration across R&D, technology sharing, training and operational experience at the intersection of the defence and aerospace sector. South Korea has been very impressed with Türkiye's UAV journey and previously even approached the country with a request to learn how to manufacture UAVs. This partnership is seen as a solid step in that direction

6. Havelsan and Karel Europe Ink MoU (<u>TurDef</u>, July 26)

Havelsan and Karel Europe (the Romanian subsidiary of Türkiye's Karel) signed a MoU to carry out joint business development activities and collaborate operationally on projects in the field of defence and information technology. The MoU is aimed to boost Romania's defence sector through joint development of better, more integrated solutions for the country's military sector

7. ROKESTAN to deliver Sungur to Turkish Armed Forces (Anadolu Ajansi, July 24)

Turkish defense firm Roketsan signed an agreement with the National Defense Ministry, Turksat, and Military Factory and Shipyard Management to supply its next-generation Sungur air defense systems. Equipped with advanced guidance technologies and the longest range in its class, Sungur will be integrated into Türkiye's layered air defense architecture, the Steel Dome.

8. Türkiye's Katmerciler and Malaysia Signed Eren 4×4 Deal at IDEF 2025 (Anadolu Ajansi, July 24)

Turkish defence and vehicle firm Katmeriler signed an agreement with Malaysia's Deftech regarding the dynamic and versatile EREN 4x4 armoured vehicles. As per the agreement, the EREN 4x4 will be jointly produced and exported from Malaysia.

9. SYS Group Signs Defence Deals with Pakistan, Bangladesh, Azerbaijan at IDEF 25 (<u>Turkiye Today</u>, July 25)

Turkish small arms and defense systems manufacturer, SYS Group, signed several MoUs with Pakistan, Bangladesh, Azerbaijan at IDEF 25. With Pakistan, the group signed a long-term defence supply agreement. The details of the same weren't revealed but it was part of an expanded procurement program by the Pakistani Armed Forces. Azerbaijan formally initiated the procurement process for CANIK-made 9x19 mm pistols and related accessories. Meanwhile, the Bangladesh Navy sealed a deal for advanced systems, including the CANIK M2 QCB 12.7 mm heavy machine gun and VENOM LR 30x113 mm low-recoil ammunition for counter-drone operations.drone operations.

10. Turkish Company HAVELSAN Partners with Emirati Calidus for Training System (Army Recognition, July 24)

HAVELSAN signed a cooperation agreement with UAE-based defense technology firm

Calidus to develop integrated training systems for the B-250 light attack aircraft. Under the agreement, HAVELSAN will deliver a comprehensive set of training tools tailored to the B-250 platform. These include a Flight Training Device (FTD), Part Task Trainers (PTT), a Cockpit Entry/Exit Simulator (CIES), Briefing and Debriefing Stations (DBR), and a Computer-Based Training (CBT) system. The collaboration marks a key step in expanding Türkiye-UAE defense industrial ties, with HAVELSAN's systems set to support Calidus in delivering structured, high-fidelity training for B-250 operators.

11. ASELSAN and South Africa Pamodzi signs MoU on indigenous Communication Systems (Military Africa, July 23)

ASELSAN and South Africa's Pamodzi Group signed an MoU to jointly produce two-way combat radios and a range of advanced communication systems entirely within South Africa. The partnership will leverage ASELSAN's regional presence and is anchored in a strong technology transfer framework. Instead of exporting finished systems, the collaboration will focus on full-scale local production, including workforce training, technical documentation sharing, and joint R&D efforts.

International presence @IDEF 25

1. Pakistan Presents Fatah Systems at IDEF (Janes, July 28)

Pakistan's Global Industrial & Defence Solutions (GIDS) presented its indigenous Fatah Guided Multiple Launch Rocket System (GMLRS). The exhibit model was a 8×8 multilaunch vehicle carrying two pods, one with four 301 mm Fatah-I rockets, the other with a 600 mm Fatah-II unit. GIDS confirmed that the system is now operational in Pakistan and that development is complete, actively seeking international partners for export and co-production. The Fatah-II boasts a 365 kg warhead, range of 100–290 km, in-flight maneuverability, and a CEP under 50 m.

2. GIDS, MKE Sign MoU for Aerospace Munitions (Resonant News, July 25)

GIDS inked a MoU with Türkiye's Mechanical and Chemical Industry Corporation (MKE) focusing on the supply and potential co-production of advanced aerospace munitions. MKE makes a comprehensive range of aerial bombs and drone-compatible weapons, designed to complement Pakistan Air Force platforms like the F-16, JF-17, and UCAVs.

3. Bangladesh Naval Chief Visits GIDS Pavilion at IDEF (Facebook/International Defence Analysis, July 23)

The GIDS stand was also visited by the Chief of Naval Staff of Bangladesh, Admiral M Nazmul Hassan. GIDS CEO Asad Kamal briefed the Bangladesh Naval Chief on their comprehensive range of naval defense systems. The Bangladesh naval chief expressed appreciation for GIDS' technological innovations and manufacturing capabilities, indicating potential collaboration opportunities between the two nations in naval defense technology development & procurement.

Domestic Defence Updates

1. Türkiye's Siper Missile System Ready for Deployment After Final Tests (International Defence Analysis, Daily Sabah, July 30)

Türkiye's long-range air defense missile system, Siper, has successfully completed its final serial production tests and is now ready for integration into the country's multi-layered Steel Dome air defense architecture. This marks a major milestone in Türkiye's drive for self-reliance in advanced defense systems. The Siper system is designed to operate at ranges exceeding 100 kms for high altitude air defence missions, which means that now altitudes of Türkiye's air defense are covered by domestically built systems. Equipped with advanced radar, precision guidance, and multi-target engagement features, the system is built to perform even under complex threat scenarios. Siper is the result of a strategic collaboration coordinated by the Presidency of Defence Industries (SSB), bringing together ASELSAN, ROKETSAN, and TÜBİTAK SAGE.

2. Türkiye Nears Euro Fighter Jet Procurement (The Star, July 23)

The UK and Türkiye signed a memorandum of understanding in Istanbul to pave the way for Ankara's potential purchase of up to 40 Eurofighter Typhoon jets, marking a significant step in strengthening NATO's collective defense and deepening bilateral industrial ties. The Eurofighter is jointly produced by BAE Systems (UK), Airbus (Germany/Spain), and Leonardo (Italy). The UK will manufacture 37% of each aircraft if the deal proceeds. Negotiations will continue in the coming weeks, following years of stalled discussions due to Germany's export license concerns over Türkiye's foreign policy. However, a shift in Berlin's stance has revived the possibility of the multibillion-dollar deal moving forward.

3. Trendyol, Baykar CEO, ADQ and Ant International to develop fintech platform in Türkiye (Reuters, Gulf News, July 17)

Trendyol, one of Türkiye's biggest ecommerce platforms along with Baykar, a leading UAV manufacturer, partnered with Abu Dhabi's sovereign investment firm ADQ and Singapore based Ant International (an affiliate of China's Alibaba Group) to set up a new fintech system. As per the MoU, the platform will offer a full suite of digital financial services, including payments, SME loans, deposits, investments, and insurance. A statement by Trendyol announcing the MoU said the new venture aims to enhance the efficiency of financial transactions for individuals and small businesses across Türkiye, both within and beyond the Trendyol ecosystem. Baykar CEO Haluk Bayraktar stated the venture will combine Trendyol's seller network, Baykar's AI and cybersecurity tools, and Ant's global fintech experience to build a secure, fully domestic infrastructure. The platform is expected to launch in the coming months, pending regulatory approvals.

4. Türkiye Officially Orders 6th KAAN Fighter Jet Prototype (<u>Defense Post</u>, July 22)

Türkiye has got its hands on the sixth prototype of the indigenously built KAAN fighter jet for critical evaluations. This will allow the Turkish government to conduct thorough inspections like stress tests, avionics checks, high-speed taxi runs and runway maneuvers to evaluate its performance. With these prototypes, many critical phases such as wind, environmental

impact, avionics system validation, acceleration and runway running tests will be carried out in parallel. As per reports, Ankara views these tests as essential precursors to complete operational capability and the assembly and induction of the jets into Turkish Air Force.

International Defence Updates

1. Malaysia to Receive Turkish ANKA-S Drones by March 2026 (<u>Defence Security Asia</u>, July 16)

Malaysia is set to take delivery of its first Turkish-built ANKA-S Medium Altitude Long Endurance (MALE) drones by March 2026, strengthening its maritime surveillance and ISR capabilities in the South China Sea. Developed by Turkish Aerospace Industries (TAI), each ANKA-S drone can stay airborne for over 30 hours at altitudes of up to 30,000 feet. The drones are currently undergoing radar and communications integration, with some key components sourced from Germany. The Royal Malaysian Air Force (RMAF) personnel are receiving operational training in Türkiye, ahead of the deployment. The acquisition of the three drones and its associated systems was finalised via a government-to-government agreement in 2023. The drones will be based at RMAF Labuan, enhancing Malaysia's ability to monitor its Exclusive Economic Zone, particularly in the South China Sea.

2. ASELSAN and Czech Defence Group Unite for Eastern Europe Expansion (<u>Defence Agenda</u>)

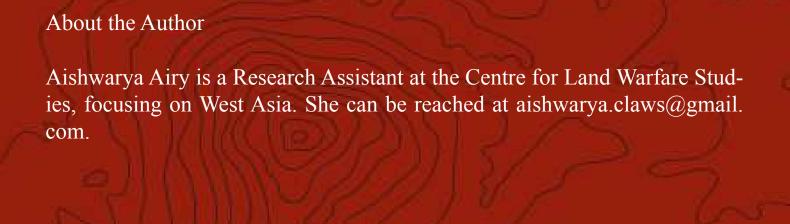
ASELSAN and Czech defense firm Excalibur International have formalised a strategic partnership covering broad technical cooperation in land systems and border security technologies. The agreement will focus on the joint development and production of Remote-Controlled Weapon Stations (RCWS), advanced ammunition with programmable fuses, and integrated smart border surveillance platforms. The collaboration is expected to strengthen ASELSAN's footprint in Eastern Europe and contribute to NATO-aligned modernization programs across the region.

3. Aselsan to Share Space Tech with Azerbaijan in Strategic Partnership (<u>Broadcast Pro ME</u>, July 24)

Türkiye's ASELSAN has signed a strategic agreement with Azerbaijan to co-develop satellite payloads, including Ku- and X-band communication systems. The partnership aims to localize production, boost Azerbaijan's satellite capabilities, and enable joint R&D and tech transfer. Building on the success of Türkiye's TÜRKSAT-6A, the deal positions Azerbaijan as a future co-developer in space systems, deepening regional aerospace cooperation.

4. Turkish firm signs deal with Brazilian arms maker for long-range anti-ship missiles (Anadolu Ajansi, July 30)

Turkish defense manufacturer Repkon has signed an agreement with Brazilian arms company SIATT to support the production of the MANSUP-ER long-range anti-ship missile using its advanced flowforming technology. The deal, signed in São Paulo, will support SIATT's recent contract with the Brazilian Navy to supply MANSUP missiles for Tamandare-class frigates. The MANSUP-ER, co-developed by SIATT and UAE's EDGE Group, extends the original missile's range from 70 km to 200 km with a turbofan engine. Repkon's rare flowforming expertise—used to manufacture high-precision, symmetrical components, will play a key role in producing this next-gen missile system.



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