

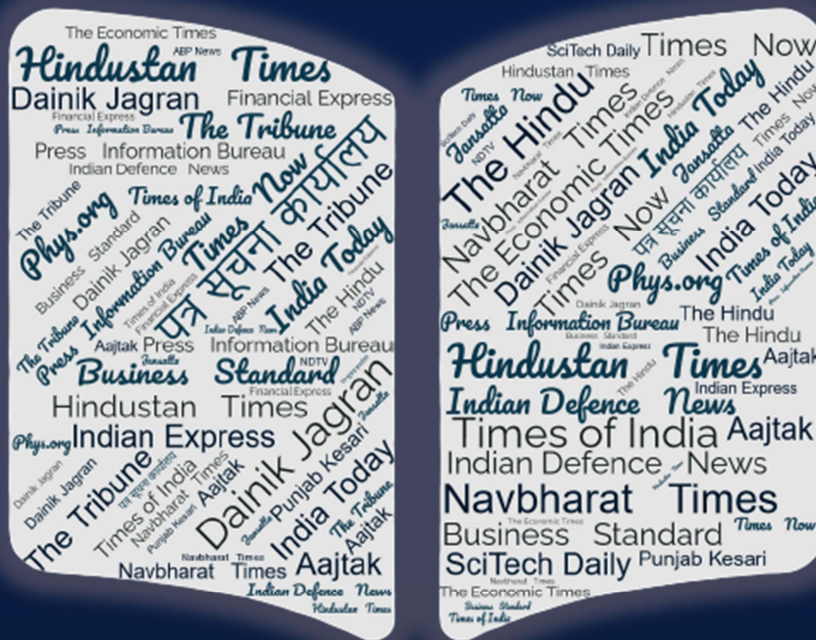
September
2022

समाचार पत्रों से चयित अंश Newspapers Clippings

A Daily service to keep DRDO Fraternity abreast with DRDO
Technologies, Defence Technologies, Defence Policies,
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DRDO News

DRDO Technology News

DAILYEXCELSIOR.COM 58th Year
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Wed, 14 Sep 2022

Secy Agri & Horti Visits DIHAR-DRDO Campus

Secretary Agriculture and Horticulture, Ladakh, Ravinder Kumar, today visited the DIHAR-DRDO campus and made a tour of Agriculture/Horticulture field activities being carried out by the institution.



Secretary Agriculture & Horticulture Ladakh Ravinder Kumar at
an agricultural field in DIHAR-DRDO campus.

During the visit, Director DIHAR-DRDO Dr Chaurasia apprised the Secretary about improved varieties of vegetables and fruits developed besides research of large Pumpkin, Reg, Green and Yellow Capsicum, Brinjal, Ladyfinger and other high produce and high-income crops.

The Secretary directed both the Agriculture and Horticulture departments to arrange progressive farmers' visits to learn about the new technologies and varieties of plants/fruits developed for Ladakh. The Director DRDO informed the Secretary that DRDO is planning to introduce new varieties of plants/fruits for the UT of Ladakh in the days to come.

Furthermore, the Secretary stated that the Department of Agriculture and Horticulture UT Ladakh will work more closely in collaboration with the DRDO-DIHAR and disseminate the varieties and technologies developed by the institution and increase the farmer's income.

<https://www.dailyexcelsior.com/secy-agri-horti-visits-dihar-drdo-campus/>

Defence News

Defence Strategic : National/International



Press Information Bureau
Government of India

Ministry of Defence

Tue, 13 Sep 2022 5:01 PM

INS Satpura and P8 I Maritime Patrol Aircraft Arrive in Darwin, Australia to Participate in Multinational Naval Ex Kakadu

INS Satpura and a P8 I Maritime Patrol Aircraft of the Indian Navy reached Darwin in Australia on 12 Sep 22, for participation in the multinational Exercise Kakadu – 2022, hosted by the Royal Australian Navy.

The two week-long Exercise, both in harbour and sea, involves ships and maritime aircraft from 14 navies. During the harbour phase of the exercise, the ship's crew will engage in operational planning interactions and sports activities with participating Navies.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1858965>



Press Information Bureau
Government of India

Ministry of Defence

Tue, 13 Sep 2022 4:04PM

Japan-India Maritime Bilateral Exercise – Jimex 2022

The sixth edition of Japan India Maritime Exercise 2022 (JIMEX 22) hosted by Indian Navy commenced in the Bay of Bengal on 11 Sep 22. The Japan Maritime Self Defence Force (JMSDF) ships are being led by R Adm Hirata Toshiyuki, Commander Escort Flotilla Four, and Indian Naval ships by R Adm Sanjay Bhalla, Flag Officer Commanding Eastern Fleet.

The Indian Naval ships welcomed JMSDF ships Izumo, a Helicopter Carrier, and Takanami, a Guided Missile Destroyer, on their arrival in the Bay of Bengal. The Indian Navy is being represented by three indigenously designed and built warships; Sahyadri, a multi-purpose stealth frigate and Anti-Submarine Warfare Corvettes Kadmatt and Kavaratti. Additionally, Guided Missile Destroyer Ranvijay, Fleet Tanker Jyoti, Offshore Patrol Vessel Sukanya, submarines, MIG 29K fighter aircraft, Long Range Maritime Patrol Aircraft and ship borne helicopters are also participating in the exercise.

JIMEX 22 involves two Phases; exercises at sea and a harbour phase at Visakhapatnam.

This edition marks the 10th anniversary of JIMEX, which began in Japan in 2012. It also coincides with the 70th anniversary of establishing of diplomatic relations between India and Japan. JIMEX 22 seeks to consolidate the high degree of interoperability that exists between maritime forces of the two countries, through complex exercises in the surface, sub-surface and air domains.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1858949>



Press Information Bureau
Government of India

Ministry of Science and Technology

Tue, 13 Sep 2022

TDB-DST Aids Another Defence Project, Supports Manufacturing of Indigenous Components Critical to Su- 30MK1 Aircraft & 1500 Hp Battle Tank Engine

TDB-DST pens agreement with M/s Ghaziabad Precision Products Private Limited, (GPP), Ghaziabad, Uttar Pradesh for ‘Development by Critical machining & Inspection process of accessory components of SU-30MK1 Aircraft

TDB-DST supports MSME – M/s Ghaziabad Precision Products Private Limited for manufacturing critical components essential to HAL, CVRDE & BEML for indigenous application

The Indian government is leaving no stone unturned to support its flagship ‘Make in India’ initiative. In recent years, the country has ramped up efforts towards facilitating global investments in India and strengthening local manufacturing. One major area of focus towards indigenization has been the defence sector, as several policy initiatives & reforms to encourage indigenous design, development has been taken up under the able leadership of Prime Minister Modi. Thus, reducing dependency on imports of defence equipment.

As part of this, Ministry of Defence has launched the 'SRIJAN' portal to promote indigenization by the industry. Where, 19509 defence items, which were earlier imported, have been uploaded on the portal for indigenisation till date. Out of them, the Indian industry has shown interest for indigenisation of 4006 defence items so far. With these actions from the Government, the expenditure on defence procurement from foreign sources has reduced from 46% to 36%, thereby reducing import burden, in the last 3 (three) years i.e., from 2018-19 to 2020-21. Further, the value of production of public & private sector defence companies have increased from Rs. 79,071 crores to Rs. 84,643 crores in last two years i.e., 2019-20 and 2020-21.



To supplement this public-private endeavour, Technology Development Board, a statutory body under Department of Science and Technology, Govt. of India supports M/s Ghaziabad Precision Products Private Limited, (GPP), Ghaziabad, Uttar Pradesh for 'Development by Critical machining & Inspection process of accessory components of SU-30MK1 Aircraft viz. Rotary Pipe Union & Cover respectively, valve train components of 1500 HP Battle Tank Engine and valve train components of Engine Components of Regular BEML Engines.' TDB has approved assistance of ₹5.5 crores out of ₹14.2 crores of the total project cost.

Through this project, the company aims to set up a facility for the development and supply of critically machined accessory components of 'SUKHOI-30MKI' to Hindustan Aeronautic Ltd (HAL) and valve train components of 1500 HP 12V, 25 Litres capacity diesel engine of Armoured Fighting Vehicle (AFV) being developed by Combat Vehicles Research and Development establishment (CVRDE), Avadi and regular Bharat Earth Movers Limited (BEML) engine to BEML. GPP is a registered vendor of both HAL and BEML and through this project will be participating in the process of import substitution for some of the components.

Sh. Rajesh Kumar Pathak, IP&TAFS, Secretary, TDB said that, "To help in the development of indigenous manufacturing ecosystem under 'Make in India' initiative of the GOI, TDB has been supporting many imported technologies for wider domestic applications to enhance the local

capacity building for such critical machine components and services through private manufactures across sectors viz. Defence, Health & Pharma, Automobile and Drone Manufacturing etc. This project is one such initiative for Defence sector wherein M/s Ghaziabad Precision Products Private Limited will manufacture critical components essential to SU-30MK1 Aircraft, the backbone of the Indian Air Force's fighter fleet.”

<https://pib.gov.in/PressReleasePage.aspx?PRID=1858979>



Tue, 13 Sep 2022

India Stands Third in Defence Budget and Soon to Become a World Power – Union Minister Ajay Bhatt

The Minister of State for Defence, Ajay Bhatt on Monday said that the Micro, Small and Medium Enterprises (MSMEs) and Defence Public Sector Undertakings (PSUs) of the country are taking huge strides that the world is taking note, as per a report by The Times of India.

Bhatt was speaking after the launch of two-day National Defence MSME conclave and exhibition. The conclave was held at the Dausehra Ground, Kota with the objective to bring the work done by MSME and DPSUs into public domain, the report said.

Lauding Prime Minister Narendra Modi’s national level campaign, ‘Atmanirbhar Bharat’, the union minister highlighted that it has turned the country from a major importer of defence equipment to an exporter. India earned Rs 38,500 crore in five years by manufacturing and selling equipment and apparatus to foreign countries, he added.

India is now among the top 25 countries that export defence equipment and apparatus, Bhatt mentioned in reference to a 2020 survey. “India stands third in defence budget. We are no longer weak at any point and we are quickly becoming a world power,” he said.

Further, he said that the Kota region is filled with unlimited possibilities for MSME entrepreneurs. To give this sector a boost, efforts are in progress with government and private firms pumping big money into the sector, as per the report. Lok Sabha Speaker and Kota-Bundi MP Om Birla, along with Ajay Bhatt, inaugurated the conclave-cum-exhibition.

<https://www.financialexpress.com/industry/sme/msme-eodb-india-stands-third-in-defence-budget-and-soon-to-become-a-world-power-union-minister-ajay-bhatt/2665514/>

Tue, 13 Sep 2022

Armed Drones, Swarm Drones, Counter-Drone Systems on Agenda for Air Force: Air Marshal Radhakrishnan Radhish

Armed drones, swarm drones and counter-drone systems are on the agenda for the Indian Air Force (IAF), Air Marshal Radhakrishnan Radhish, senior officer at the Western Air Command said today.

Air Marshal Radish said the Centre has already sanctioned the development of aUCAV or Unmanned Combat Aerial Vehicle for the armed forces. The Aeronautical Development Establishment (ADE) of the Defence Research Development Organisation (DRDO) has begun work on it.

Swarm drones, which are armed, is also on the agenda. Initially, a trial involving 154 indigenous swarm drone manufacturers were made and final trials will be held before choosing the winners. Then, orders will be made.

Drones have already been used against India, particularly from across the line of control. He said work has begun on the purchase of anti-drone systems.

Lieutenant General Ajai Suri, director general, Army Aviation, also spoke of counter drone measures and hoped thatUCAVs like the Predator will be manufactured indigenously in the future. He added that the production of such weaponry in India was a matter of time. He mentioned that manufacturers needed to look at the development of engines and issues related to payloads.

<https://www.timesnownews.com/india/armed-drones-swarm-drones-counter-drone-systems-on-agenda-for-air-force-air-marshal-radhakrishnan-radhish-article-94171660>

Wed, 14 Sep 2022

Army Looking to Create Separate Cadre of UAV Operators

The Army is looking to create a separate cadre for operating its Unmanned Aerial Vehicles (UAVs), said Lt. Gen. A.K. Suri, Director General of Army Aviation on Tuesday while a senior Indian Air Force (IAF) officer said that a proposal to develop an indigenous Unmanned Combat Aerial Vehicle (UCAV) has been taken up.

“This cadre will be of operators in terms of piloting and will reduce the load on helicopter pilots,” Lt. Gen. Suri said speaking at a seminar on UAVs organised by the Centre for Air Power Studies. Stating that Indian Army has been using UAVs for the last two decades, he said they have primarily used them in the northern and western borders. A major part of the surveillance is carried out by them, he added. The proposal is currently with the Army headquarters and once cleared, will be sent to the Defence Ministry for approval, officials said on its status. A similar

proposal for a separate UAV cadre by the IAF has been long pending with the Defence Ministry for approval. In August 2021, Army Aviation got control of the UAVs of the Army which were earlier under Artillery. The Army operates over 30 Heron UAVs procured from Israel.

Speaking at the seminar, Air Marshal Radhakrishnan Radhish, Senior Air Staff Officer (SASO) at Western Air Command, said the IAF has a road map for induction of more capable medium-altitude long-endurance UAVs as well as high-altitude long-endurance UAVs. IAF is joining an indigenous effort to develop a UCAV and Aeronautical Development Establishment (ADE) has been sanctioned to develop the niche technologies, he stated.

The Bengaluru-based ADE is under the Defence Research and Development Organisation (DRDO). Stating that the “unmanned market” is expected to see a significant growth in India, Air Marshal Radhish added that by 2026 it is anticipated to be the world’s third largest market.

<https://www.thehindu.com/news/national/army-looking-to-create-separate-cadre-of-uav-operators/article65887077.ece>



Tue, 13 Sep 2022

Insighteon Consulting Indicates Domestic Aero Engine Creation Strategic

Smaller, more numerous, and effective weapons systems are being developed as a result of changes in the nature of combat. Nearly all forms of weapon systems exhibit this tendency, with aerial combat experiencing the most drastic transformation with the introduction of AI-enabled Unmanned Aerial Vehicles.

Work has already begun at HAL on its three distinct aspects – the CATS Warrior (a teaming drone), the CATS Hunter (an air-launched cruise missile), and the Alpha-S (a glider drone). These unmanned systems are all equipped with electro-optical and infrared sensors.

To this effect with the aim of ascertaining a roadmap for the development of an aero engine ecosystem in India, an interactive war-game between August 23-25 was held.

Insighteon Consulting undertook this initiative and it saw participation by retired Defence Research and Development Organisation senior scientists, academia, retired defence officers, bureaucrats, diplomats and members of various think tanks. Key public sector players also joined in including the likes of ISRO, Hindustan Aeronautics, National Aerospace Laboratories, Gas Turbine Research Establishment and private sector firms like Godrej Aerospace, Paninian India and Bharat Forge also were part of this.

Some of the key takeaways include-

- The creation of domestic aero engines is strategic. Future military strategic challenges are made even more urgent by the growing demand and variety of uses for aero engines brought on by the increased use of UAVs and low-cost cruise missiles. India has no option but to develop its own aero engines as well as establish resilient supply chains for

the products. By not indigenising aero engines, India runs a huge risk of compromising national security.

- The defence ministry will save Rs 3 lakh crore with indigenised gas turbine engines over a 20-year period.
- India will be investing more of its defence budget in unmanned aerial vehicles and low-cost cruise missiles, which will complement more and more activities in military operations.
- The market for small engines is anticipated to generate Rs 61,000 crores over the next 20 years.

The experts further highlighted that as a first step, India needs to put restrictions on itself on import of small aero engines and add it to the “positive list of indigenisation”.

A new module titled National Commission for Aero Engine Development (NCAED) was suggested. The analysts recommended that design and development as well as production should come under one head at the top level, to have a seamless coordinated development programme which allows cross pollination of technologies and prevents duplication of effort.

<https://www.financialexpress.com/defence/insight-on-indigenisation-indicates-domestic-aero-engine-creation-strategic/2665431>



Wed, 14 Sep 2022

Indian Army के खतरनाक टैंक देख दुश्मन के छूट जाते हैं पसीने, जानें कौन हैं इनमें सबसे घातक

भारतीय सेना को दुनिया की सबसे काबिल सेनाओं में से एक माना जाता है. भारतीय सेना के हौसले और सूझबूझ की तारीफ हर तरफ की जाती है. आज हम बात करने वाले हैं Indian Army में शामिल एडवांस टेक्नोलॉजी के टैंक के बारे में जिनका इस्तेमाल कर सेना ने एक से बड़े एक जंग में फतेह हासिल की है. इसके साथ ही इन टैंक की खासियत पर भी हम बात करेंगे. ऐसे तो भारत के पास कई टैंक्स हैं. इनमें से कुछ में टैंक्स के बारे में हम यहां जानने वाले हैं.

अर्जुन टैंक को देख दुश्मन भी कांपने लगता है

इस लिस्ट में पहला नंबर है अर्जुन टैंक का. अर्जुन टैंक को आप देशी टैंक भी कह सकते हैं क्योंकि इसे बनाने का क्रेडिट डिफेंस रिसर्च एंड डेवलपमेंट आर्गनाइजेशन (Defence Research and Development Organisation-DRDO) को जाता है. इसे बनाने में कॉम्बैट व्हीकल्स रिसर्च एंड डेवलपमेंट एस्टेब्लिशमेंट (Combat Vehicles Research & Development Establishment-CVRDE) ने भी अपना योगदान दिया है. 70 किलोमीटर प्रति घंटे स्पीड वाला ये टैंक उबड़खाबड़ रास्ते पर

भी 40 किलोमाटर प्रति घंटे की स्पीड से भागता है. एडवांस टेक्नोलॉजी से लैस इस टैंक का वजन करीब 58 टन है. अर्जुन टैंक मात्र एक मिनट 6-8 राउंड फायर करने सक्षम है.

T-90 भीष्म टैंक के सामने दुश्मन पस्त

देश की सुरक्षा के लिहाज से साल 2001 में भारत ने रूस से 310 T-90 टैंक के लिए एक सौदा किया. इनमें से 124 टैंकों को रूस ने बनाकर दिया था और बाकि बचे सभी टैंक्स को भारत में असेंबल किया गया था जो भारत में असेंबल किया गया उन्हें भीष्म कहा गया. अभी भारत के पास करीब 2000 से ज्यादा T-90 टैंक मौजूद हैं. 60 किलोमीटर की स्पीड से चलने वाला ये टैंक 125 मिलीमीटर स्मूथबोर गन से लैस है और इसकी ऑपरेशनल रेंज करीब 550 किलोमीटर तक है.

T-72 टैंक को देख दुश्मन भागता दूर

लाइटवेट टैंक की बात करें तो भारतीय सेना के पास T-72 टैंक हैं जिसका वेट करीब 41 टन के आस पास है. इस टैंक के तीन वर्जन हैं अजेय MK1, अजेय MK2 और कॉम्बैट इमप्रूव्ड अजेय जिनका भारत इस्तेमाल करता है. 125 मिलीमीटर स्मूथबोर गन से लैस ये टैंक 60 से 70 किलोमीटर की स्पीड से चलता है. कम गहराई वाली नदियों को ये टैंक आसानी से पार कर लेता है. इस टैंक की खासियत है कि ये रीस्टार्ट होने में केवल 6-7 सेकेंड्स का वक्त लेता है. भारतीय सेना में इनकी संख्या करीब 2400 के आस-पास है.

<https://zeenews.india.com/hindi/india/tank-use-by-indian-army-in-battle-list-of-top-weapons-types-of-tanks/1350125>



Tue, 13 Sep 2022

Exercise Pitch Black 2022 Concludes

The Indian Air Force contingent participating in Exercise Pitch Black 22 in Australia has returned after successful participation in the multinational exercise.

The exercise, Pitch Black 22 was hosted by the Royal Australian Air Force at its Darwin Air Base. Over 2500 military troops from 17 Air Forces participated in the exercise, which lasted three weeks. Two C-17 aircraft and four Su-30 MKI were part of the IAF contingent. The participating troops participated in a number of multi-aircraft combat drills both during the day and at night that simulated intricate aerial situations involving massive formations.

The exercise gave the air force teams from across participating nations a chance to exchange knowledge and successful strategies. The event demonstrated a cooperative spirit that has helped the participating nations better comprehend one another's capabilities and a camaraderie that will result in long-lasting ties.

The Royal Australian Air Force (RAAF) carried out the training from August 19 to September 6. 100 aircraft and almost 2,500 participants from more than 17 nations will take part in offensive and defensive counterair combat drills.

Australia will become a prominent actor in regional security and collaboration in the Indo-Pacific is the key driving theme of the exercise.

The United States, Canada, France (New Caledonia), Australia, Germany, Indonesia, the Netherlands, New Zealand, Singapore, Thailand, Malaysia, and India took part in Pitch Black for the first time in 2018.

Who all attended?

India, Germany, France, the United Arab Emirates, Malaysia, the United States, New Zealand, Indonesia, Singapore, Japan, the Republic of Korea, the United Kingdom, the Philippines, Thailand, Canada, and the Netherlands are among the participants apart from Australia, the host nation.

Japan, Germany, and the Republic of Korea participated for the first time, and there will be an international observer group programme that will allow other nations to be present to watch the exercise's preparation and execution.

<https://www.financialexpress.com/defence/exercise-pitch-black-2022-concludes/2665620>

THE TIMES OF INDIA

Tue, 13 Sep 2022

India, China Disengage Troops at PP-15 but Final Verification Awaited

India and China on Monday 'virtually' completed the troop disengagement at Patrolling Point-15 in the Gogra-Hot Springs area of eastern Ladakh, which India hopes will set the stage for further negotiations on the more crucial face-offs at the strategically-located Depsang Plains and Demchok.

The phased mutual pullback of troops from the standoff site at PP-15 near the Kugrang Nallah, with dismantling of temporary structures erected in the area and the creation of a “no-patrol buffer zone”, was initially slated to be fully completed by Monday.

Sources, however, said there has been “a slight delay” in the overall disengagement process because the final physical verification is still to be carried out by the two sides. “It should be completed by Tuesday,” a source said.

The buffer zone at PP-15 will be the fourth one to be established in the over 28-month-long military confrontation with China in eastern Ladakh. The earlier ones, varying from 3-km to almost 10-km, came up at PP-14 (Galwan Valley), PP-17A (Gogra) and Pangong Tso-Kailash Range region after troop disengagements at those face-off sites.

A major concern is that the buffer zones have largely come up in what India claims to be its territory, putting a stop to patrolling by Indian troops in those areas. In the buffer zone on the north bank of Pangong Tso, for instance, Indian troops withdrew westwards to their permanent Dhan Singh Thapa post between ‘Finger-2’ and ‘Finger-3’ (mountainous spurs) in February last year.

Chinese troops withdrew from ‘Finger-4’ to its Sirijap positions east of ‘Finger-8’. In effect, Indian troops can no longer patrol an around 10-km stretch in ‘Finger’ area now, though Indian maps show the line of actual control runs north to south at ‘Finger-8’.

Moreover, China till now has flatly refused to de-escalate the major face-off at the Depsang Plains, where its troops have been actively blocking Indian patrols around 18-km inside what India considers its own territory since April-May 2020.

Echoing these concerns, ex-Army chief General VP Malik (retd) said there is “no need to make much” of the disengagement at PP-15 because it is just “a tiny step” after the encroachments by the PLA in April-May 2020. “Every disengagement takes longer and longer. Major friction areas, Depsang and Demchok where five PPs are blocked, are yet to be resolved. China continues to maintain that LAC ‘was illegally crossed by India’,” he tweeted. The creation of buffer zones is also no guarantee that PLA will not transgress hereafter.

<https://timesofindia.indiatimes.com/india/pp-15-pullback-complete-final-verification-awaited/articleshowprint/94162717.cms>

Tue, 13 Sep 2022

India Calls for Freedom of Navigation and Territorial Integrity of Nations, in Accordance with UNCLOS

At the Second India – Vietnam Security Dialogue, India reiterated its firm stands for the freedom of navigation and overflight and respect for sovereignty and territorial integrity of nations. At the meeting in New Delhi, at the level of Deputy National Security Advisor and Deputy Minister, both countries agreed to cooperate and collaborate on Counter-terrorism. And to fight against radicalisation, trafficking of narcotics and illegal arms in the region there is a need for deeper coordination.

The National Security Council Secretariat (NSCS) was led by Vikram Misri, Deputy National Security Adviser and Senior Lieutenant General Luong Tam Quang, Deputy Minister of the Ministry of Public Security led the Ministry of Public Security, Socialist Republic of Vietnam.

During the meeting India has also called for unimpeded lawful commerce in national waters in accordance with international laws, notably UNCLOS. Sources indicated that “The Code of Conduct on the South China Sea, which India talked about, should be completely consistent with relevant UN conventions.” Sources further added that “negotiations should not discriminate against the legitimate interests and rights of the countries that are not party to the discussions.”

Sources have confirmed to Financial Express Online that India has offered its expertise and domain knowledge to the ASEAN nations in the field of cyber security. And based on the requirements of Vietnam India has offered to continue its assistance for capacity building programmes like providing training to Ministry of Public Security officials in undertaking UN Peacekeeping Missions. Since both countries are maritime neighbours, the two are keen to ensure peace and security in the shared maritime space. Today both sides also talked about issues related to piracy and illegal fishing and have agreed to exchange views in important areas like marine connectivity, blue economy and sustainable oceans.

According to sources, Dy. NSA Misri also repeated Prime Minister Narendra Modi’s Indo-Pacific Oceans Initiative (IPOI) at the meeting and the discussions focused more on a collaborative effort to secure maritime domain, which shares strong convergence with the ASEAN Outlook on the Indo-Pacific.

During the meeting, Vietnam expressed its appreciation for India’s role shaping the Indo-Pacific architecture and promoting peace and security in the region.

Background

An MoU for Cooperation between the NSCS and the Vietnamese Ministry of Public Security was signed in 2016 and this established an institutional mechanism between the two sides. The inaugural dialogue had taken place in April 2018 in Hanoi. In 2015 as part of his visit to the region, Ajit Doval, KC, National Security Adviser, had visited Vietnam, along with Thailand.

<https://www.financialexpress.com/defence/india-calls-for-freedom-of-navigation-and-territorial-integrity-of-nations-in-accordance-with-unclos/2665754>

THE ECONOMIC TIMES

Wed, 14 Sep 2022

Ukraine Shoots Down Iranian-Made Drone Used by Russian Defence Force

Ukraine's defence ministry said on Tuesday it had shot down an Iranian-made Shahed-136 drone used by Russia's armed forces in the northeastern region of Kharkiv, the first time Kyiv claimed to have eliminated one of the devices.

Ukraine and the United States have accused Iran of supplying drones to Russia, something Tehran has denied.

The defence ministry posted images of what appeared to be parts of a destroyed drone with "Geran-2" written on the side in Russian. The wingtip appeared to match that of a Shahed-136.

It said the drone, or unmanned aerial vehicle (UAV), had been "eliminated" near Kupiansk, a town in the Kharkiv region recently recaptured by Ukraine. Military experts have said Iranian drones would be useful to Russia for both reconnaissance and as loitering munitions that can bide their time in locating and engaging suitable targets.

<https://economictimes.indiatimes.com/news/international/world-news/ukraine-shoots-down-iranian-made-drone-used-by-russian-defence-ministry/printarticle/94183813.cms>

The Tribune

Tue, 13 Sep 2022

Seoul says North Korea will Self-Destruct If It Uses Nukes

South Korea on Tuesday warned North Korea that using its nuclear weapons would put it on a "path of self-destruction", in unusually harsh language that came days after North Korea legislated a new law that would allow it to use its nuclear weapons pre-emptively.

North Korea will likely be infuriated by the South Korean rhetoric as Seoul typically shuns such strong words to avoid raising tensions on the Korean Peninsula.

South Korea's Defence Ministry said the legislation would only deepen North Korea's isolation and prompt Seoul and Washington to "further strengthen their deterrence and reaction capacities".

To get North Korea not to use its nuclear weapons, the ministry said South Korea would sharply boost its own pre-emptive attack, missile defence and massive retaliation capacities while seeking a greater US security commitment to defend its ally South Korea with all available capabilities, including nuclear one.

“We warn that the North Korean government would face the overwhelming response by the South Korea-US military alliance and go on the path of self-destruction, if it attempts to use nuclear weapons,” Moon Hong Sik, an acting ministry spokesperson, told reporters.

Last week, North Korea’s rubber-stamp parliament adopted the legislation on the governing rules of its nuclear arsenal. The legislation would allow North Korea to use its nuclear weapons if its leadership faced an imminent attack or if it aimed to prevent an unspecified “catastrophic crisis” to its people.

<https://www.tribuneindia.com/news/world/seoul-says-north-korea-will-self-destruct-if-it-uses-nukes-431266>

Science & Technology News

INDIA
TODAY

Tue, 13 Sep 2022

Blue Origin Rocket Exploded Midair, but Crew Escape System Saved Mission. Here's How

Blue Origin, after successfully launching three tourism flights into space this year, was hoping for a fourth successful mission late on Monday evening. But, not all was well with the launch vehicle.

Just over a minute after launching from Launch Site One in West Texas, the spacecraft triggered an emergency abort, which activated the escape system, jettisoning the crew capsule away from the booster in a synergised dance of computational algorithms and aerospace engineering.

The good news — there were no humans on board this time, and if there were, the system showed they would have been safe.

The spacecraft was carrying 36 payloads from academia, research institutions, and students across the globe into space, which came down thudding to the surface of the planet under a parachute. Two of the payloads were flying on the exterior of the New Shepard booster for ambient exposure to the space environment.

What is Crew Escape System?

The crew escape system is a unique attribute of space flights that is designed to save lives and assets in case of eventualities after launch.

According to the Indian Space Research Organisation (Isro), it is an emergency escape measure designed to quickly pull the crew module along with the astronauts to a safe distance from the launch vehicle in the event of a launch abort. The Indian space agency in 2018 tested the unique

ability and is preparing for two such abort missions to test the systems for the Gaganyaan crewed mission that is scheduled for next year.

The Crew Escape System is also part of the Artemis-1 mission, which is preparing to launch on its maiden mission to the Moon. The abort system comprises of three solid rocket motors: the abort motor pulls the crew module away from the rocket; the attitude control motor steers and orients the capsule; then the jettison motor ignites to separate the launch abort system from Orion for parachute deployment and a safe crew landing.

Nasa has said that the launch abort system will safely lift the Orion crew module away from the Space Launch System rocket in the event of an emergency on the launch pad or during ascent.

Blue Origin blamed the failure of the mission to a booster anomaly as it hit the ground seconds after the crew capsule was blasted away from it. "During today's flight, the capsule escape system successfully separated the capsule from the booster. The booster impacted the ground. There are no reported injuries; all personnel have been accounted for," Blue Origin said in a statement.

While the boosters' engines flared unexpectedly during ascent as seen in the Livestream, the company-led by Jeff Bezos is yet to release any more information about the reason that the abort was triggered.

Blue Origin's fleet of New Shepard rockets is grounded until the FAA signs off on the outcome of a company-led investigation into the mishap.

<https://www.indiatoday.in/science/story/blue-origin-rocket-exploded-midair-but-crew-escape-system-saved-mission-here-s-how-1999799-2022-09-13>



Wed, 14 Sep 2022

Gaganyaan: First Test Flight of India's First Manned Space Mission this Year

The first test flight of the Gaganyaan mission is scheduled to take place later this year, said Union Minister Jitendra Singh on Tuesday. On the sidelines of an event, while speaking to reporters, the minister said the government had planned human space flight for 2022, the year of India's 75th anniversary of Independence. However, due to the COVID-19 pandemic, the schedule went awry. The pandemic took a toll on the training of astronauts in Russia as well as India, Singh said. Next year, in outer space, the first test flight will be followed by sending a female-looking spacefaring humanoid robot, Vyom Mitra, the minister informed.

As the potential crew for the human space flight mission, the Indian Air Force had identified four fighter pilots. In Russia, the potential crew had undergone basic training. Gaganyaan, India's maiden human space-flight mission is expected to be launched in 2024, Union Minister Jitendra Singh said on Tuesday. In 2024, the Indian Space Research Organisation (ISRO) will send at

least two astronauts into a low earth orbit. However, it will be done after assessing the outcome of the two orbital test flights, Singh said.

The second orbital test flight will take the Gaganyaan crew capsule to a higher altitude and undergo a similar abort scenario to perfect the system.

In his Independence Day address in 2018, Prime Minister Narendra Modi announced the Gaganyaan mission at a cost of Rs 10,000 crores.

Also, sometime next year, ISRO plans to launch the Chandrayaan-3 mission to the moon. Officials said, next year, there were two launch windows for the moon mission, in February and July. Chandrayaan-3 is a successor to the Chandrayaan-2 mission that crash-landed on the lunar surface.

About Gaganyaan

It is an Indian crewed orbital spacecraft and is being designed to carry three people. A planned upgraded version will be equipped with rendezvous and docking capability.

<https://www.financialexpress.com/lifestyle/science/gaganyaan-first-test-flight-of-indias-first-manned-space-mission-this-year/2666162/>

