

सितम्बर

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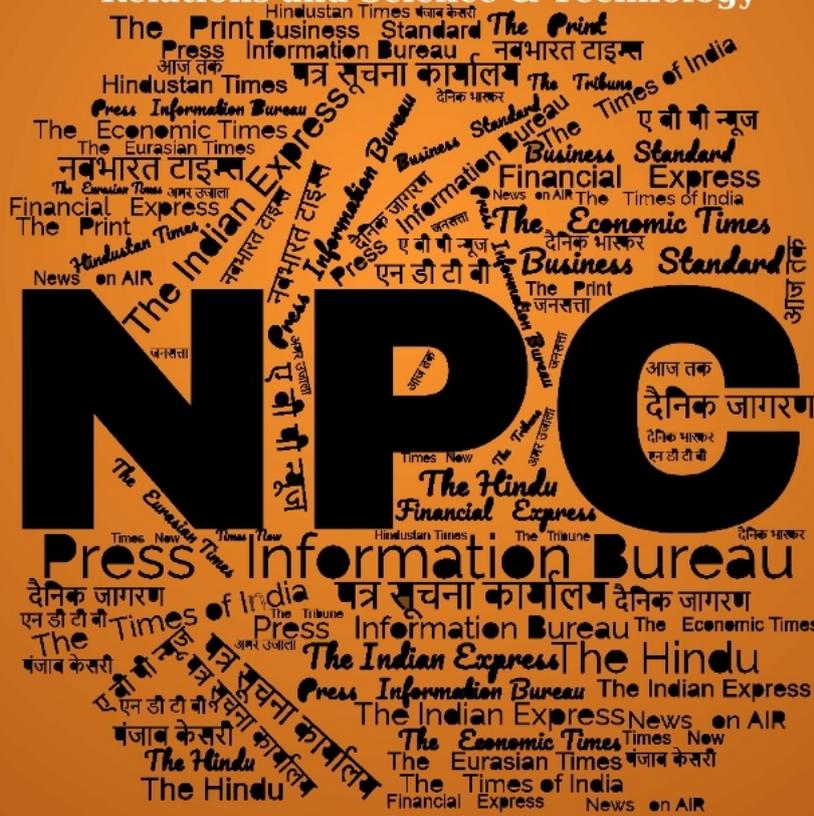
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समाचार पत्रों से चयनित अंश Newspapers Clippings

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

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Tue, 10 Sep 2024

DRDO बना रहा मिसाइलों का बाप... सबमरीन से लॉच होने वाली बैलिस्टिक मिसाइल K-5, जानिए ताकत

भारत लगातार नई मिसाइलों का परीक्षण कर रहा है. जमीन से और फाइटर जेट से दागी जाने वाली. अब तैयारी चल रही है भारतीय नौसेना की मिसाइलों को अपग्रेड करने की. वो मिसाइलें जो पनडुब्बी से लॉन्च की जाती हैं. अगली मिसाइल जो भारतीय नौसेना की पनडुब्बियों में लग सकती है, वो है K सीरीज की परमाणु बैलिस्टिक मिसाइल K-5. यह सबमरीन लॉन्च बैलिस्टिक मिसाइल (SLBM) है.

इस मिसाइल को देश में ही डेवलप किया गया है. इसमें 2000 kg वजनी वॉरहेड लगा सकते हैं. वह पारंपरिक हो या फिर परमाणु हो. इसकी रेंज फिलहाल 5 से 6 हजार km बताई जा रही है. लेकिन हल्के वॉरहेड के साथ यह 8 से 9 हजार किलोमीटर तक मार कर सकती है. इसे भारतीय रक्षा एवं विकास संगठन (DRDO) बना रहा है.

अगर इस मिसाइल को भारतीय समुद्री क्षेत्र (Indian Ocean Region - IOR) में मौजूद पनडुब्बी से लॉन्च किया जाए तो चीन और पाकिस्तान के कई प्रमुख शहर किसी भी मिनट खत्म हो सकते हैं. इसे फिलहाल अरिहंत क्लास सबमरीन और एस-5 क्लास सबमरीन में लगाया गया है. भविष्य में बाकी पनडुब्बियों में भी लगाया जा सकता है.

एक साथ कई टारगेट पर हमला भी कर सकेगी

K-5 बैलिस्टिक मिसाइल में राडार को धोखा देने की तकनीक और काउंटरमेजर्स भी लगाए जाने की उम्मीद है, ताकि दुश्मन को यह पता ही न चले कि मिसाइल कब और कहां से आ रही है. इसके अलावा इसमें MIRV तकनीक भी लगाई जा सकती है, ताकि एक ही बार में कई जगहों पर निशाना लगाया जा सके.

भारत के पास फिलहाल K-4 सीरीज की मिसाइलें

भारत के पास फिलहाल K-4 सबमरीन लॉन्च बैलिस्टिक मिसाइलों का जखीरा है. जिनकी रेंज 750 से 3500 km है. लेकिन जब नौसेना नई पनडुब्बियां बना रही है, तो नई मिसाइलों की भी जरूरत होगी. ऐसे में K-5 और K-6 SLBM मिसाइलों की जरूरत है. ताकि ज्यादा रेंज तक हमला किया जा सके.

इसके अलावा Agni-5 सीरीज की SLBM इस्तेमाल की जा सकती है. अग्नि-5 मिसाइल की ताकत को पूरी दुनिया जानती है. साथ ही चीन और पाकिस्तान तो खौफ खाते हैं. क्योंकि इसकी रेंज में पूरा पाकिस्तान और आधा चीन आता है. लेकिन के-सीरीज की एडवांस मिसाइलों को शामिल किया जा सकता है.

अग्नि-5 SLBM की ताकत

यह एक अंतरमहाद्वीपीय परमाणु बैलिस्टिक मिसाइल है. जिसकी रेंज 7 से 8 हजार किलोमीटर है. इसमें एक साथ कई वॉरहेड लगा सकते हैं. यानी यह MIRV तकनीक से लैस है. एक ही मिसाइल से पांच टारगेट्स को हिट किया जा सकता है. इसमें 400 किलोग्राम वजनी परमाणु या पारंपरिक हथियार लगा सकते हैं. इसकी अधिकतम गति 30 हजार किलोग्राम वजनी परमाणु या पारंपरिक हथियार लगा सकते हैं. इसकी अधिकतम गति 30 हजार किलोमीटर प्रतिघंटा से ज्यादा है.

K-6 मिसाइल भी दमदार

यह मिसाइल अभी बनाई जा रही है. 39 फीट लंबी इस मिसाइल में 3 हजार किलोग्राम वजनी परमाणु हथियार लगा सकते हैं. इससे कई टारगेट्स पर निशाना लगाया जा सकता है. इसकी रेंज 8 से 12 हजार किलोमीटर होगी. इसे एस-5 सबमरीन में लगाने की योजना है.

<https://www.aajtak.in/defence-news/story/india-is-making-k-5-submarine-launched-nuclear-ballistic-missile-will-challenge-china-and-pakistan-2036887-2024-09-10>



Tue, 10 Sep 2024

चौधरी चरण सिंह विश्वविद्यालय DRDO के साथ मिलकर आज से 5 दिन देगा AI पर प्रशिक्षण, देश-विदेश से पहुंचे विशेषज्ञ - CCSU 5 days training on AI

चौधरी चरण सिंह विश्वविद्यालय में आज से 5 दिवसीय विशेष आयोजन होने जा रहा है. इस कार्यक्रम में देश के अलग - अलग राज्यों से जहां विद्वान् शामिल होंगे, वहीं देश के बाहर से भी वक्ता शामिल होंगे. कार्यक्रम को विश्वविद्यालय का गणित विभाग और DRDO के द्वारा आयोजित किया जाएगा.

"कटिंग एज इनोवेशंस इन सॉफ्ट कम्प्यूटिंग", कम्युनिकेशन एंड आर्टिफिशियल इंटेलिजेन्स" यानी "सॉफ्ट कम्प्यूटिंग संचार और कृत्रिम बुद्धिमत्ता और नवाचार " विषय पर (Cutting edge innovations in soft computing communication and artificial intelligence) मंगलवार से पांच दिवसीय कार्यशाला रखी गई है.

इस कार्यशाला में देश के 15 राज्यों और देश के बाहर से कई देशों से जानकार वक्ता शामिल होंगे. उनके अलावा इस कार्यक्रम की खास बात यह है, कि इसमें जहां तमाम वर्तमान विषयों पर चर्चा होगी, वहीं इसमें अतिथि वक्ताओं को सुनने और ज्ञान पाने के लिए प्रोफेसर, रिसर्च स्कॉलर भी मौजूद रहेंगे. साथ ही संबंधित विषयों के स्टूडेंट्स को भी बुलाया गया है.

विश्वविद्यालय के गणित विभाग के विभागाध्यक्ष डॉक्टर मुकेश कुमार शर्मा ने कहा, कि आज यानी दस सितंबर को जहां विश्वविद्यालय के अटल सभागार में कार्यक्रम का विधिवत शुभारम्भ हो चुका है. 14 सितंबर तक विभिन्न सेशन संचालित होंगे. इस दौरान संचार के क्षेत्र में जहां 5 जी और 6 जी नेटवर्क, इंटरनेट से जुड़ी तमाम विषयवस्तुओं पर कार्यशाला आयोजित होगी. वहीं, आधुनिक कम्प्यूटिंग और साइबर सुरक्षा और गोपनीयता जैसे विषयों पर विस्तार से चर्चा होगी.

इसके अलावा कृत्रिम बुद्धिमत्ता यानी आर्टिफिशियल इंटेलिजेन्स, प्राकृतिक भाषा प्रसंस्करण यानी नेशनल लैंग्वेज प्रोसेसिंग (NLP), कम्प्यूटर विज्ञान और इमेज प्रोसेसिंग और रोबोटिक्स और स्वायत्त प्रणाली पर चर्चा की जाएगी. इसी प्रकार गणित के योगदान और आधुनिक परिवेश पर चर्चा होनी है. यह अपने तरह का बेहद ही खास कार्यक्रम आयोजित होने जा रहा है.

विश्वविद्यालय की डीन प्रोफेसर जयमाला ने कहा कि ये पांच दिन बेहद ही महत्वपूर्ण हैं. इनमें छात्र और रिसर्च स्कॉलर अपनी तमाम जिज्ञासाओं के जवाब पा सकेंगे. गणित विभाग के प्रोफेसर शिवराज सिंह ने कहा, कि इस वर्कशॉप से बहुत से महत्वपूर्ण निष्कर्ष निकलने वाले हैं. जो आधुनिक समय में आज की जरूरतों को पूरा करेंगे.

<https://www.etvbharat.com/hi/!state/ccsu-collaboration-with-drdo-provide-5-days-training-on-ai-meerut-uttar-pradesh-news-ups24091002456>



Tue, 10 Sep 2024

Indian Navy looking to conclude 3 mega deals worth Rs 1.25 lakh crore by end of this fiscal year

In a move towards boosting its surveillance and fighting capabilities, the Indian Navy is looking towards concluding three major defence deals this financial year, including the 31 MQ-9B drone deal, 3 additional Scorpene submarines and the 26 Rafale-M fighter aircraft project.

The Indian Navy has also been provided full support by the government for its urgent modernisation requirements, as it has been provided the highest ever capital budget of Rs 61,000 crore this year.

Under the defence contracts, the government pays around 15 per cent in advance for the projects. Senior defence officials told ANI that the first project, which is likely to be concluded at the earliest, is for the MQ-9B drones that are going to be fitted with anti-submarine warfare capabilities.

The validity of the American proposal is till October 31 this year as per the Letter of Acceptance sent by the US administration and project is likely to be completed before that, they said. The Navy will get 15 of these drones, while the other two services will get eight each for their requirements. The integration of the Indian weapon systems with the drones has also been agreed upon between the two sides.

However, the Naval Anti-Ship Missile (Short Range) would be integrated with the drones when it is fully ready, they said. The second project which is in priority is the deal for building three additional Scorpene submarines in collaboration with French Naval Group and Indian Mazagaon Dockyards Limited.

The deal is making progress, with MDL having submitted its revised bids for building the submarines at a cost of around Rs 40,000 crores. The three boats will be equipped with more advanced capabilities than their six predecessors and will have an indigenous combat management system. The sources said that Indian government companies like Bharat Electronics Limited will have a significant share in the Rs 40,000 crore project.

The third project that the Indian Navy would be looking to complete in 2024-25 fiscal is for buying 26 Rafale M marine fighter jets for the INS Vikrant aircraft carrier. The two sides have already held two rounds of negotiations for finalising the project. India recently removed the requirement for

integrating the Uttam radar on the aircraft, as it would have been an expensive affair and also lead to a loss of time in doing so.

The deal is being done as per the last deal of buying 36 Rafale fighters for the Indian Air Force, with only the agreed rate of inflation being taken into account for detecting the price for the Rs 50,000 crore deal. The Indian Navy is working towards upgrading its capabilities in surveillance as well as for underwater war fighting.

<https://www.aninews.in/news/national/general-news/indian-navy-looking-to-conclude-3-mega-deals-worth-rs-125-lakh-crore-by-end-of-this-fiscal-year20240910195501/>



Press Information Bureau
Government of India

Ministry of Defence

Tue, 10 Sep 2024

Simultaneous Launch Of ‘Malpe And Mulki’, Fourth And Fifth Ships Of ASW SWC (CSL) Project

Malpe and Mulki, fourth and fifth ships of the Eight Anti-Submarine Warfare Shallow Water Craft project, being built by M/s Cochin Shipyard Ltd, for the Indian Navy, were launched on 09 Sep 24 at CSL, Kochi. In keeping with the maritime traditions, the two ships were launched by Mrs. Vijaya Srinivas in the presence of VAdm V Srinivas, Flag Officer Commanding in Chief, Southern Naval Command.

The Mahe class ASW Shallow Water Crafts have been named after ports of strategic importance along the coast of India, and will look to carry forward the glorious legacy of the erstwhile minesweepers which were their namesake.

The contract for building eight ASW SWC ships was signed between the Ministry of Defence and CSL on 30 Apr 19.

The Mahe class of ships will be equipped with indigenously developed, state-of-the-art underwater sensors, and are envisaged to undertake anti-submarine operations in coastal waters as well as Low Intensity Maritime Operations and Mine Laying Operations. The ASW SWC ships can achieve a maximum speed of 25 knots with endurance of up to 1800 nautical miles.

Simultaneous launch of these ships highlights India's strides in indigenous shipbuilding, towards ‘Aatmanirbhar Bharat’. The ASW SWC ships will have over 80% indigenous content, thereby ensuring that large scale defence production is executed by Indian manufacturing units, generating employment and capability enhancement within the country.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2053322>



**Press Information Bureau
Government of India**

Ministry of Defence

Tue, 10 Sep 2024

Defence Secretary to co-chair 5th India-Philippines Joint Defence Cooperation Committee meeting in Manila

Defence Secretary Shri Giridhar Aramane will undertake a visit to Manila to co-chair the fifth meeting of India-Philippines Joint Defence Cooperation Committee (JDCC) on September 11, 2024. The meeting will be co-chaired by Senior Under Secretary from the Ministry of National Defence of Philippines Mr Irineo Cruz Espino.

During the visit, the Defence Secretary will discuss ways to further consolidate defence cooperation between the two countries. He will also meet with other dignitaries of the government of Philippines.

This visit assumes significance as India and Philippines celebrate 75 years of diplomatic relations and 10 years of India's Act East Policy. Both the countries have a vigorous and multifaceted relationship which have expanded into several strategic areas, including defence and security. They are committed to support each other towards achieving the goal of self-reliance in defence production.

The JDCC construct has been established under the ambit of the Memorandum of Understanding on defence cooperation signed between the two countries in 2006. The fourth edition of JDCC meeting was held in March 2023 in New Delhi at the Joint Secretary-level. The fifth edition marks the elevation of the co-chair to Secretary-level.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2053321>

THE ECONOMIC TIMES

Tue, 10 Sep 2024

India, Philippines to review defence ties, months after New Delhi supplies Brahmos missiles to Filipino military

India and the Philippines will carry out a comprehensive review of their defence and strategic partnership on Wednesday with a focus on ramping up military ties against the backdrop of mutual concern over China's aggressive posturing in the South China Sea.

The two sides will deliberate on various issues relating to bilateral defence ties and regional security situation at the fifth meeting of India-Philippines joint defence cooperation committee to be held in Manila, officials said.

The defence ties between the two countries have been on a significant upswing in the last few years. In April, India delivered the first batch of BrahMos supersonic cruise missiles to the Philippines, in reflection of the growing military ties.

The supplies came over two years India signed a USD 375 million deal with the Southeast Asian nation to supply the weapon systems.

While Defence Secretary Giridhar Aramane will lead the Indian delegation at the talks, the Filipino team will be headed by Senior Under Secretary in the Ministry of National Defence Irineo Cruz Espino.

The meeting is taking place amid increasing tensions between China and the Philippines following an incident of violent clash between their maritime security personnel in the South China Sea nearly two-and-half months ago.

"During the visit, the defence secretary will discuss ways to further consolidate defence cooperation between the two countries," an official readout said. The situation in the South China Sea will figure in the talks, officials said.

There have been growing global concerns over China's sweeping claims of sovereignty over all of the South China Sea, a huge source of hydrocarbons. Several countries in the region including Vietnam, the Philippines and Brunei, have counterclaims.

India and many other democratic countries have been pressing for peaceful settlement of the disputes and for adherence to international law, especially the UNCLOS (UN Convention on the Law of the Sea).

"This visit of (Aramane) assumes significance as India and Philippines celebrate 75 years of diplomatic relations and 10 years of India's Act East Policy," the defence ministry said in the readout.

"Both the countries have a vigorous and multifaceted relationship which have expanded into several strategic areas, including defence and security," it said.

"They are committed to support each other towards achieving the goal of selfreliance in defence production," it said.

<https://economictimes.indiatimes.com/news/defence/india-philippines-to-review-defence-ties-months-after-new-delhi-supplies-brahmos-missiles-to-filipino-military/articleshow/113227972.cms>

THE ECONOMIC TIMES

Tue, 10 Sep 2024

India and US poised to seal \$3.1 billion MQ-9B Predator drone deal before October end

The Indian Defence Ministry is progressing with a significant acquisition of Predator drones from US-based General Atomics, following approval from the Defence Acquisition Council (DAC) on July 30, according to a Hindustan Times report.

The deal, valued at approximately \$3.1 billion, is now pending expenditure approval from the Finance Ministry and final authorization from the Cabinet Committee on Security (CCS). The acquisition must be completed by October 31 to avoid potential price increases from the manufacturer.

Details of the Predator Drone Acquisition

India plans to purchase 31 MQ-9B Predator drones, each equipped with air-to-surface missiles and laser-guided bombs. Of these, 16 drones will enhance the Indian Navy's maritime security operations, eight will be assigned to the Indian Army, and the remaining eight will support the Indian Air Force.

The deal marks a strategic enhancement of India's defense capabilities across maritime and land operations. The Indian forces aim to induct 10 MQ-9B drones as soon as possible, with the remaining drones to be delivered in batches every six months.

The Navy's MQ9Bs will be stationed at command and control centers in Arakkonam and Porbandar, close to the coastline. The drones allocated to the Army and Air Force will focus on monitoring the Line of Actual Control (LAC).

During a visit to the US in August, Defence Minister Rajnath Singh received a detailed briefing on the Predator drone's capabilities from General Atomics. The Predator drones have a proven track record of precision strikes in the Middle East and Afghanistan, targeting high-value assets effectively.

Currently, India is utilizing two Sea Guardian drones, which are the unarmed variants of the Predator, on lease from General Atomics for maritime surveillance. Although the lease was set to expire in January 2024, the Indian Navy has extended it for an additional four years.

These drones offer real-time maritime domain awareness, covering critical areas from the Sunda Straits in Indonesia to the Suez Canal and the southern Indian Ocean.

Why India is buying Predator drones

The decision to acquire armed drones has become more urgent due to the increasing use of such technology in global conflicts, including Ukraine and Gaza. Non-state actors like the Houthis and Hezbollah have also begun deploying drones in their operations.

Additionally, China and Pakistan currently operate weaponized drones, with Beijing supplying such platforms to Islamabad. This acquisition reflects India's strategic response to the evolving landscape of modern warfare and regional security dynamics.

This deal represents a significant step in enhancing India's defense infrastructure and addressing the growing importance of unmanned aerial systems in contemporary conflicts.

<https://economictimes.indiatimes.com/news/defence/india-and-us-poised-to-seal-3-1-billion-mq-9b-predator-drone-deal-before-october-end/articleshow/113220129.cms>



Wed, 11 Sep 2024

With an eye on Indo-Pacific, Germany seeks greater defence ties with India

In mid-August, India witnessed one of the most extensive multilateral air exercises hosted by the Indian Air Force (IAF) called Tarang Shakti (Phase I). It was the first instance of the German Luftwaffe (German Air Force) doing sorties in Indian skies. Towards the end, IAF Air Chief Marshal V. R. Chaudhari announced this would become a biennial event.

Speaking to the press in India, German Luftwaffe Inspector General Lieutenant Ingo Gerhartz said that Tarang Shakti was not meant to be against any particular country but rather an exercise among partner countries.

“Tarang Shakti was the fifth tryout for Pacific Skies 24. We have flown around 1.3 million flying kilometres. In the last two months, we have flown so many flight hours that one German organisation would fly in an entire year,” noted Gen. Gerhartz.

Pacific Skies 24 is the largest-ever air exercise held jointly by France, Germany, and Spain to note its presence in the Indo-Pacific region. Regarding military and defence partnerships, Russia has been India’s go-to country, being its top supplier for decades. Over the years, the U.S. and France have increased their defence partnerships with India to be among the top three suppliers. Despite being in the top five arms suppliers globally, Germany has no significant presence when it comes to supplying to India.

Back in 2006, Indian and German Defence Ministries had signed an agreement on deeper security and defence cooperation, which included training of military personnel, increased technology transfer, and collaboration in joint defence projects.

During the Indo-German intergovernmental consultations in 2019, the two countries decided to further deepen bilateral defence ties, with Germany working towards facilitating the export of military equipment with India.

“If you look at the global defence market, Russia used to be number 2, but in the lowprice segment, they were very dominant. Defence equipment from NATO and Israel is rather expensive. The only other country that can replace Russia in the low-cost segment is China – from an Indian perspective, it is not a good way to go,” said Dr. Adrian Haack, Director of Konrad Adenauer Foundation’s India office.

Mr. Haack was present at the Sullur Air Force Station in Tamil Nadu in August to witness Tarang Shakti phase 1. According to him, a large part of the exercise was the presence of Gen. Gerhartz himself, who flew the Eurofighter and had an easygoing attitude towards everyone else. “Gen. Gerhartz always wore the pilot’s jacket with the General’s rank sign and not his General’s uniform. It was an informal diplomatic way in which the General behaved to show that Germany comes as a friend,” said Mr. Haack.

Germany-India defence partnership

Regarding defence equipment imported by India, Russia leads the charts, followed by France, the U.S., Israel, and South Korea. Germany does not even figure in the top countries and therein lies the opportunity. However, given the Russia-Ukraine war, Russia’s industrial capacity is focused on making weapons for the war.

“Germany was quite late in engaging India’s defence interests. To be frank, Germany just woke up, as compared to the U.S. and France, who have way more advanced defence cooperation than Germany,” said Mr. Haack, noting that Germany is merely copying the U.S.’s and France’s strategy to woo India in the defence sector.

Prof. Harsh Pant, Vice President, Studies and Foreign Policy, at the Observer Research Foundation said, “The strategic picture has shifted completely, and there is a debate about Germany being forced to become a more involved player in the defence and security sector. Given the Indo-German relations, India could establish a long-term defence partnership.”

German defence manufacturers have been present in India. For instance, ThyssenKrupp Marine Systems (TKMS) and Mazagon Dock Shipbuilders Ltd. (MDL) signed an MoU in 2023 for the

local construction of submarines for the Indian Navy. They have not only worked for the modernisation of the Indian submarine INS Shankush but have also jointly bid for the \$4.8 billion Project 75 (India) programme for the construction of diesel submarines. While TKMS would be responsible for the submarine design, engineering, and consultancy, MDL would manage the construction and delivery to the Indian Navy.

“The submarine cooperation between India and Germany is great, allowing Germany to be a defence partner in a crucial, high-tech weapons system. This is a good step and a strong commitment from the German side. From the Indian perspective, it also shows that, on the one hand, they want to be more self-reliant but also replace their older systems with more advanced systems. They are not buying the cheapest submarine but investing in expensive and advanced systems. The same is the case with the Air Force with Rafale, for example,” said Mr. Haack.

Technology transfer is one of the major pre-conditions for defence partnerships as India also focuses on manufacturing defence equipment domestically. According to Mr. Pant, the technology transfer precondition could be a roadblock to high-end technology transfer but that is a concern for the future.

“Countries that are more pragmatic in this regard will benefit. The U.S., for instance, has changed its response, and they are pushing for more technology transfer. Without tech transfer, the defence partnerships with India will be constrained. But in the case of Germany, as the defence partnership is just starting to take shape, it should not be as big of an issue.

It depends on how high up the pecking order the technology transfer requirement is,” said Mr. Pant. Experts note that India has been exposed to Russian and Western defence technologies and platforms.

“If you have many West-based vendors, then interoperability is not an issue. It only becomes a problem when we use Russian and Western systems together,” said Mr. Pant.

“If you look at Germany, there is the Eurofighter and the Tornado, and the Tornado is being replaced by the F35 by Lockheed Martin. At any moment, there will be two fighter jets in service. If you look at France, they have Rafale and Mirage. But India has way more models. The Indian Army may be slightly different regarding platforms. Still, the Indian Airforce and Navy are very diverse, so it should not be a problem if India gets weapons with German/European systems,” said Mr. Haack.

German interest in the Indo-Pacific region

China’s aggressive policies in the waters of the Indo-Pacific have been a concern for many countries in the region.

The German Bundeswehr (armed forces) notes: “By building artificial islands, for instance, in the South China Sea, China has established military bases outside its national territory, thus provoking conflicts over sea routes, natural resources, and fishing rights. This poses a threat to peace in the region and to the security of international shipping and trade routes.”

The Indo-Pacific region is home to nine of the ten largest ports in the world. According to Mr. Haack, while Germany has clear political positions regarding China, it has a substantial economic trading volume with China, which puts Germany in a tricky situation. “Germany has a great interest in free shipping routes and preserving peace and stability in the region. That is why we are now more engaged in security policy,” according to the German government release.

“Regarding the Indo-Pacific region, (Germany’s presence in the waters) is a political sign. Since there is no rule of law on open waters, the presence of ships is always a sign that you are willing to implement rules,” said Mr. Haack.

Mr. Pant believes German interest in the Indo-Pacific region is partly due to Europe’s changing worldview and the shift in the balance of power in that region. Around 60% of the world’s economic output is generated within the Indo-Pacific region, which could have a direct impact on the economic interests of export nations like Germany.

“After the Russia-Ukraine war and Russia and China’s close cooperation, there is a sense that the behavioural patterns of Europe could be replicated in Asia-Pacific. The centre of gravity is shifting to the Indo-Pacific region, and Europe wants to be a geopolitical actor here. Germany, the largest economy in Europe, will also have to do more heavy lifting,” said Mr. Pant.

The German Navy is also expected to navigate India’s west coast with the German frigate Bayern for a joint exercise, which was also conducted in 2019.

“The optics for Germany are important – projecting their interests in making it clear to the Chinese that Germany will play an important role in the Indo-Pacific. They also aim at creating a sense that Germany is willing to increase its regional security presence,” said Mr. Pant.

<https://www.thehindu.com/news/international/with-an-eye-on-indo-pacific-germany-seeks-greater-defence-ties-with-india/article68626508.ece>

THE ECONOMIC TIMES

Tue, 10 Sep 2024

Lockheed and Tata collaborate for manufacturing special operations aircraft C-130J Super Hercules in India

Lockheed Martin and Tata Advanced Systems Limited have announced a new partnership aimed at enhancing India's defence and aerospace capabilities through the C-130J Super Hercules tactical airlifter.

This agreement, marking a significant step in strengthening India-U.S. strategic ties, includes plans for expanding manufacturing and establishing a maintenance facility in India.

This agreement provides a framework for collaboration on future potential business opportunities that include establishing a Maintenance, Repair and Overhaul (MRO) facility in India to support the Indian Air Force's (IAF) existing fleet of 12 C-130Js as well as other global Super Hercules fleets.

New Collaboration Details

The agreement outlines two key areas of collaboration:

- **Maintenance Facility:** A new Maintenance, Repair, and Overhaul (MRO) facility will be set up in India to support the Indian Air Force’s (IAF) current fleet of 12 C-130Js, as well as other global fleets of Super Hercules aircraft.
- **Manufacturing Expansion:** The expansion of C-130J production and assembly in India will aim to produce aircraft for the IAF's Medium Transport Aircraft (MTA) program, contingent upon approval from both U.S. and Indian governments.

Sukaran Singh, CEO and Managing Director of Tata Advanced Systems, said, “Collaborating with Lockheed Martin on the C-130J platform proposition for IAF’s MTA project is a milestone for Tata Advanced Systems. This announcement also signifies our entry into the defence MRO space for large aircraft platforms and deepens our relationship with Lockheed Martin.”

Rod Mclean, Vice President and General Manager at Lockheed Martin, stated, “The C-130J is recognized for its global presence and robust international supply chain, including our partnership with Tata Lockheed Martin Aerostructures Limited. This agreement reflects our commitment to a selfreliant India and the confidence we have in our Indian partners.”

What is the C-130J Super Hercules

The C-130J-30 Super Hercules has been in service with the IAF since 2011, showcasing capabilities such as operations at high altitudes and in severe weather. The aircraft is known for its interoperability, cost efficiency, and fuel savings. Globally, the C-130J fleet operates in 23 countries and supports a wide range of missions, including search and rescue, combat delivery, and humanitarian response.

The Lockheed Martin C-130J Super Hercules, introduced in 1999, has four turboprop engines and is mostly used as a military transport aircraft. Lockheed Martin’s C-130 Hercules had received a complete upgrade with the C-130J that contained new engines, a flying deck, and other equipment.

Long-standing Partnership

Lockheed Martin has provided India with advanced defence technologies, including the 12 C-130Js used by the IAF. Through a joint venture with Tata Advanced Systems Limited, Tata Lockheed Martin Aerostructures Ltd. (TLMAL) in Hyderabad has been the sole global source of C-130J empennage assemblies since 2010.

TLMAL has delivered over 200 empennages and increased the use of locally sourced components. In 2023, the U.S. and India launched INDUS-X and completed a roadmap for US-India Defence Industrial Cooperation. This initiative aims to further enhance bilateral defence cooperation and innovation, underscoring the growing strategic partnership between the two nations.

Established in 2010, TLMAL focuses on complementing India's "Make in India" objectives and has the distinction of being the single global source of C130J empennage assemblies included on all new Super Hercules aircraft produced in the US. To date, TLMAL has manufactured more than 220 C-130J empennages, the Tata Advance Systems said.

<https://economictimes.indiatimes.com/news/defence/lockheed-and-tata-collaborate-for-manufacturing-special-operations-aircraft-c-130j-super-hercules-in-india/articleshow/113219646.cms>



Tue, 10 Sep 2024

Navy chief meets Commander of the Brazilian Air Force, discuss bilateral defence cooperation

Chief of the Naval Staff, Admiral Dinesh K Tripathi on Tuesday met Lieutenant Brigadier Marcelo Kanitz Damasceno, Commander of the Brazilian Air Force and discussed aspects of bilateral

defence cooperation and avenues to further enhance existing defence relations between the two countries.

The visit comes as part of a broader agenda to deepen maritime collaboration between the two nations. Admiral Marcos Sampaio Olsen, the Commander of the Brazilian Navy, is on an official visit to India from August 19 to 24, 2024.

His visit aims to reinforce maritime cooperation and demonstrate the commitment of both navies to address shared maritime security challenges. During his visit, Olsen met with Adm Tripathi on August 21, 2024. The meeting covered a range of topics, including operational engagements, technical cooperation, and training.

The Brazilian Admiral was honoured with a ceremonial Guard of Honour at South Block Lawns. This visit is a testament to the strong operational interactions and training cooperation between the Indian and Brazilian navies, which are also active participants in multilateral forums such as MILAN and IndiaBrazil-South Africa Maritime (IBSAMAR).

In addition to his diplomatic efforts, Adm Tripathi recently presided over operational-level discussions in Kochi from August 27 to 30. This four-day event brought together senior leaders from the Indian Navy, sister services, HQIDS, and the Coast Guard.

The deliberations focused on operational concepts, tri-service synergy, and responses to emerging maritime challenges. Key topics included advancements in warfare, technological support needs, operational logistics, and manpower optimisation.

These discussions underscore Adm Tripathi's commitment to enhancing joint efforts and improving coordination among various maritime agencies to address evolving security challenges. The meeting between Lt Damasceno and Adm Tripathi underscores a pivotal moment in strengthening bilateral relations.

Their discussions pave the way for enhanced defence cooperation and mutual strategic interests. This collaboration highlights the growing partnership between Brazil and India, aiming for greater synergy in addressing regional and global security challenges.

<https://www.aninews.in/news/world/asia/navy-chief-meets-commander-of-the-brazilian-air-force-discuss-bilateral-defence-cooperation20240910230330/>

Science & Technology News



Tue, 10 Sep 2024

Training for Gaganyatri mission to ISS begins with tour of Axiom Space

Two Gaganyatris, Shubhanshu Shukla and Prasanth Nair are undergoing training as pilot and backup pilot for the Axiom 4 mission to the International Space Station (ISS). The Gaganyatris

have already been training in India for the ambitious Gaganyaan programme to send Indian spacefarers into Earth orbit and return them safely on domestic hardware. The hands-on experience on the Axiom 4 mission will benefit the Gaganyaan programme.

Welcome to Axiom Space, #Ax4. Since the crew's arrival in Houston in August, they have been hard at work preparing for their mission. One part of training is onboarding, which includes tours of our facilities and meetings with numerous members of #TeamAxiom who are playing a...
pic.twitter.com/hBhbca3cnT

— Axiom Space (@Axiom_Space) September 8, 2024

The two Gaganyatris will now undergo intensive training in the facilities at Axiom Space, which offers commercial flights to the ISS, including those contracted by NASA. The Gaganyatris had earlier undergone training at Star City in Russia, where the Cosmonauts are trained.

Plans for the Axiom 4 mission

The Axiom 4 mission was originally supposed to take place by the end of the year, but was pushed to next year because of the juggling in plans on ISS operations needed after NASA made the call to bring the Boeing Starliner home on its first crew flight test, extending the stay of NASA astronauts Sunita Williams and Barry Wilmore.

The Axiom 4 mission will only take place after the next crew rotation by the SpaceX Crew 9 Dragon, in February 2025. Shubhanshu Shukla is the prime candidate for the flight, and will primarily focus on scientific experiments and outreach activities over the course of the 14 day mission.

The mission is expected to strengthen the cooperation between ISRO and NASA when it comes to human spaceflight, and paves the way for the Indian scientific community to conduct cutting edge experiments on board the orbital platform.

<https://www.news9live.com/science/training-for-gaganyatri-mission-to-iss-begins-with-tour-of-axiom-space-2689185>

THE TIMES OF INDIA

Wed, 11 Sep 2024

ISRO tracks giant asteroid that will come 'very close' to Earth in 2029

ISRO is monitoring a large asteroid that is expected to come very close to Earth in 2029. Asteroid 99942 Apophis, nicknamed the 'God of Chaos', is set to pass remarkably close to Earth on April 13, 2029, at a distance of just 20,000 miles (32,000 km) — closer than many geostationary satellites, which are parked in a geo orbit of 36,000km altitude from the Earth's surface.

Apophis is the Greek name of Apep, an enemy of the Ancient Egyptian Sun God Ra. At 32,000 km above Earth, no other asteroid of this size has ever come so close to our planet. Such close approaches are useful for planetary defence researchers. Isro is using its Network for Space Objects Tracking and Analysis (NETRA) to keep a constant eye on Apophis.

'NETRA' is India's indigenously-developed early warning system in space to detect debris and other hazards to Indian satellites. It has given the country its own capability in Space Situational

Awareness like other space powers US and Russia. Originally discovered in 2004 by Roy A Tucker, David J Tholen and Fabrizio Bernardi at the Kitt Peak National Observatory, Apophis gained key attention due to initial concerns about a potential collision in 2029.

With a diameter of approximately 1,100 feet (335 metres), it was classified as one of the most dangerous near-Earth objects. However, continuous tracking and high-resolution radar mapping from 's Goldstone Deep Space Communications Complex and Green Bank Telescope have since ruled out any immediate threat.

Apophis is an S-type asteroid composed of silicate materials with nickel and iron, and it has a peanut-like shape that adds to its scientific intrigue. On average, an asteroid the size of Apophis (370 metres) is expected to impact Earth once in about 80,000 years.

Nasa is also keeping a close watch on Apophis and will provide regular updates in 2029 on its trajectory through official channels. Apophis's close encounter with the Earth, though safe, is an exceptional event in space science, giving space scientists and enthusiasts a unique opportunity to study near-Earth objects up close.

<https://timesofindia.indiatimes.com/india/isro-tracks-giant-asteroid-that-will-come-very-close-to-earth-in-2029/articleshow/113242986.cms>



Press Information Bureau
Government of India

Prime Minister's Office

Wed, 10 Sep 2024

PM chairs First meeting of Governing Body of Anusandhan National Research Foundation

The scientific community of the country should have faith that there will be no dearth of resources for their endeavours: PM

PM stresses on the need to identify and remove obstacles in the research ecosystem

Focus on Localised solution to Global problems: PM

PM suggests development of a dashboard for easier tracking of information related to research and development

PM stresses on the need for Scientific monitoring of utilisation of resources for Research and Innovation

A programme in hub and spoke mode by pairing universities where research is at nascent stage with top tier established institutions in mentorship mode to be launched

Researchers to be empowered with flexible and transparent funding mechanism towards achieving Ease of Doing Research

ANRF to launch programmes on solution-focussed research in mission mode in select priority areas

ANRF strategies to align with the goals of Viksit Bharat 2047 and follow global best practices adopted by R&D agencies

Centres of Excellence to be set up to support interdisciplinary research in humanities and social sciences

Prime Minister Shri Narendra Modi chaired the first meeting of the Governing Board of Anusandhan National Research Foundation at his residence at 7, Lok Kalyan Marg earlier today. The meeting focussed on discussion about India's Science and Technology landscape and redesigning of research and development programmes.

During the meeting, Prime Minister said that today a new beginning has been made with the first meeting of the Governing Body of Anusandhan National Research Foundation. Prime Minister stressed on the need to identify and remove obstacles in the research ecosystem of the country. He talked about setting big targets, focusing on attaining them and doing path breaking research. He said that research should focus on finding new solutions to existing problems. He emphasised that problems might be global in nature but their solutions must be localised in accordance with Indian needs.

Prime Minister discussed the need for upgradation and standardisation of institutions. He suggested preparing a list of domain experts on the basis of their expertise. He also talked about developing a dashboard where information related to research and development happening in the country can be easily tracked.

Prime Minister stressed upon the need for Scientific monitoring of utilisation of resources for research and innovation. Saying that this is an ambitious beginning, he said the scientific community of the country should have faith that there will be no dearth of resources for their endeavours. Discussing the positive impacts of Atal Tinkering Labs, Prime Minister suggested that grading of these labs can be done. He also discussed research in various areas like looking for new solutions to the environment change, battery ingredients for EVs, lab grown diamonds, among others.

During the meeting, the Governing Body decided to launch a programme in hub and spoke mode by pairing universities where research is at nascent stage with top tier established institutions in mentorship mode.

Governing Body also discussed several areas of strategic interventions of ANRF which include global positioning of India in key sectors, aligning R&D with national priorities, promoting inclusive growth, capacity building, driving scientific advances and innovation ecosystem, as well as bridging the gap between academic research and industrial applications through industry-aligned translational research.

The ANRF will launch programmes on solution-focussed research in mission mode in select priority areas like Electric Vehicle (EV) mobility, Advanced Materials, Solar Cells, Smart Infrastructure, Health & Medical Technology, Sustainable Agriculture and Photonics. The

Governing Body observed that these efforts would impactfully supplement our march towards Aatmanirbhar Bharat.

While underscoring the translational research with active participation from the industry, the Governing Body also emphasized on promoting fundamental research for advancement of knowledge. It was decided to set up Centers of Excellence to support interdisciplinary research in humanities and social sciences. It was also agreed that there was a need to empower our researchers with flexible and transparent funding mechanism towards achieving ease of doing research.

The Governing Body also directed that the ANRF strategies should align with the goals of Viksit Bharat 2047 and implementation should follow global best practices adopted by research and development agencies across the world.

The meeting was attended by Shri Dharmendra Pradhan, Union Minister of Education as the Vice-President of Governing Body, Principal Scientific Adviser to the Government of India as Member Secretary, Member (Science), NITI Aayog and Secretary, Department of Science & Technology, Department of Biotechnology, Department of Scientific & Industrial Research and Department of Higher Education as its ex-officio members. Other prominent participants included Prof. Manjul Bhargava (Princeton University, USA), Dr. Romesh T Wadhvani (Symphony Technology Group, USA), Prof. Subra Suresh (Brown University, USA), Dr. Raghuvendra Tanwar (Indian Council of Historical Research), Prof. Jayaram N. Chengalur (Tata Institute of Fundamental Research) and Prof. G Rangarajan (Indian Institute of Science).

About Anusandhan National Research Foundation

Anusandhan National Research Foundation (ANRF) has been established to promote research and development and foster a culture of research and innovation throughout India's Universities, Colleges, Research Institutions, and R&D laboratories. ANRF acts as an apex body to provide high-level strategic direction of scientific research in the country as per recommendations of the National Education Policy. ANRF forges collaborations among the industry, academia, and government departments and research institutions.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2053451#:~:text=Prime%20Minister%20stressed%20on%20the,new%20solutions%20to%20existing%20problems.>

