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समाचार पत्रों से चयित 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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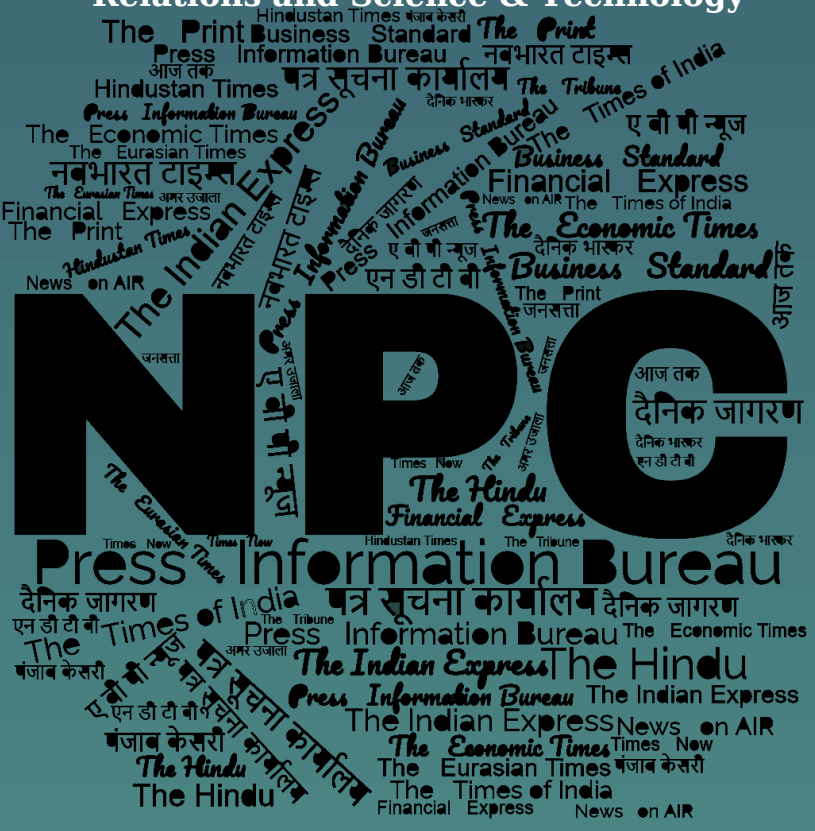

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Press Information Bureau
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Ministry of Defence

Wed, 20 Dec 2023

Ministry of Defence signs Rs 1,614.89 crore contract with Mazagon Dockyard Shipbuilders Ltd for procurement of six Next Generation Offshore Patrol Vessels for Indian Coast Guard

The Ministry of Defence signed a contract with Mazagon Dockyard Shipbuilders Ltd (MDL), Mumbai, on December 20, 2023 for the procurement of six Next Generation Offshore Patrol Vessels (NGOPVS) for the Indian Coast Guard (ICG). The contract was made under the Buy (Indian-IDDM) category at a total cost of Rs1614.89 Crore. Out of the six vessels being procured, four would replace the existing aging OPVs and the other two would augment the ICG fleet.

The acquisition of these major ICG platforms is aimed to boost the ICG's capability and reinforces the increased focus of the Government towards Maritime Security. These modern and high-tech Ships will play a critical role in enhancing surveillance, Law enforcement, Search and Rescue, Maritime Pollution Response, and other important capabilities including humanitarian assistance by the ICG. Along with several high-tech advanced features and equipment, these 115m OPVS would be equipped with Multipurpose Drones, AI capability, and Wirelessly Controlled Remote Water Rescue Craft Lifebuoy, etc. enabling greater flexibility and operational edge to the ICG to face new age multidimensional challenges.

These Multi-role State-of-the-Art vessels will be indigenously designed, developed, and manufactured by MDL, Mumbai, and will be delivered in a total period of 66 months. The contract achieves the objectives of ‘Aatmanirbhar Bharat’ to boost the nation's indigenous shipbuilding capability, bolstering maritime economic activities and fostering the growth of ancillary industries, especially the MSME sector. The project will also generate employment opportunities and expertise development in the country.

https://pib.gov.in/PressReleasePage.aspx?PRID=1988688

Press Information Bureau
Government of India

Ministry of Defence

Wed, 20 Dec 2023

IAF and USI Conduct the First Marshal of Air Force Arjan Singh Annual Lecture

Indian Air Force (IAF) and the United Services Institution of India (USI) jointly conducted the first Marshal of the Air Force Arjan Singh Annual Lecture at USI, Shankar Vihar today. The inaugural lecture was delivered by former Chief of the Air Staff (CAS) Air Chief Marshal RKS Bhadauria PVSM AVSM VM (Retd). The CAS, Air Chief Marshal VR Chaudhari PVSM AVSM VM ADC, members & faculty of USI, Senior Defence Officers (serving & retired) and Air Force personnel attended the event. The lecture was conceptualised by the IAF to honour the legend of Arjan Singh, and will give the IAF and USI an opportunity to commemorate his momentous achievements and extraordinary life story.

Marshal of the Air Force Arjan Singh DFC was born on 15 April 1919, in Lyalpur (now Faisalabad) in present day Pakistan. He joined RAF Cranwell in 1938. He was awarded the Distinguished Flying Cross (DFC) in 1944 for his outstanding leadership, great skill and courage during the Burma Campaign in World War II. On 01 August 1964, he took over as the Chief of the Air Staff in the rank of Air Marshal. The Marshal successfully commanded the Air Force to a resounding victory in the 1965 Indo – Pak War. Subsequently, in recognition of the Air Force's contribution in the war, the rank of the CAS was upgraded to that of Air Chief Marshal and Arjan Singh became the first Air Chief Marshal of the Indian Air Force. He was also conferred with the Presidential Award of Padma Vibhushan in recognition of his contributions in the 1965 war. On completion of five years as the Chief of the Air Staff in two ranks, Arjan Singh retired on 16 Jul 1969. After retirement, he continued to serve of the nation as India's Ambassador to Switzerland, as the High Commissioner to Kenya, as the Chairman of IIT Delhi and as the Lt Governor of Delhi.

In recognition of his services, in January 2002 the Government of India conferred the rank of the Marshal of the Air Force onto Arjan Singh making him the first and the only 'Five Star' rank officer with the Indian Air Force. He was the Marshal of the Air Force for 15 years till his demise in 2017. The IAF intends to conduct this lecture on an annual basis to inspire service personnel and citizens of this country to follow the example of the Marshal's dedication, vision and leadership.

https://pib.gov.in/PressReleasePage.aspx?PRID=1988685

Press Information Bureau
Government of India

Ministry of Defence

Wed, 20 Dec 2023

INS Kadmatt in Bangkok, Thailand

To bolster Indo -Thai Maritime Cooperation

MPX with HTMS Rattanakosin, a corvette of the Royal Thai Navy planned

Adm R Hari Kumar, CNS would be interacting with the crew onboard the warship

As part of her Long Range Operational Deployment to the North Pacific Ocean and South China Sea, INS Kadmatt arrived at Bangkok, Thailand, on 19 Dec 23. The aim of the visit is to further bolster India - Thailand maritime cooperation and enhance interoperability between both the navies.

Harbour activities scheduled during the operational turnaround include Cross-ship visit by personnel from Royal Thai Navy (RTN) Academy and planning conference for Maritime Partnership Exercise (MPX). On departure from Bangkok, the ship will undertake MPX with HTMS Rattanakosin, a corvette of the Royal Thai Navy.

Adm R Hari Kumar, Chief of the Naval Staff, would be visiting INS Kadmatt on 21 Dec 23 to interact with crew of the ship. The CNS is heading the Indian Naval delegation at the Indian Ocean Naval Symposium (IONS) Conclave of Chiefs (CoC) being hosted by the Royal Thai Navy at Bangkok, Thailand from 19 – 22 Dec 23.

(https://pib.gov.in/PressReleasePage.aspx?PRID=1988673)

INS Kadmatt is second of the four indigenous ASW corvettes of the Indian Navy. Commissioned on 07 Jan 2016, the ship has participated in numerous joint naval exercises with friendly nations, contributing to regional security and fostering maritime ties. The ship is equipped with state-of-the-art weapon and sensor package, enabling her to carry out wide range of missions. She is part of the Indian Navy's Eastern Fleet based at Visakhapatnam and functions under the command of the Flag Officer Commanding-in-Chief, Eastern Naval Command.

https://pib.gov.in/PressReleasePage.aspx?PRID=1988795

THE TIMES OF INDIA

Wed, 20 Dec 2023

Parliamentary Panel Recommends Benchmark Percentage of GDP for Defence Allocation

The government should fix a "definite benchmark" percentage of the GDP for defence budget as military expenditure by neighbouring countries and the evolving global security scenario warrant such an outlay for the country to prepare for dealing with future security challenges, a parliamentary panel said on Wednesday.

It expressed "surprise" over the defence ministry not taking any action towards arriving at such a benchmark yet following its earlier recommendation.

In its report, the parliamentary standing committee on defence, specifically recommended putting adequate focus on developing futuristic drones and electronic warfare systems to confront future challenges.

"While appreciating the concern and the efforts made by the ministry towards preparedness of the defence forces in the country, the committee feel that the recent wars in the international arena should act as a grim reminder that the nomenclature of war has really changed and defence preparedness in terms of an electronic warfare has become an imperative need for our nation," it said.

It said for ensuring such preparedness in view of the prevailing security scenario in the world today, there is a need for constant requirement of funds at regular intervals.

"The committee, therefore, would like to reiterate their earlier recommendation for fixing a definite benchmark percentage for defence expenditure as a country's GDP, which, they feel, will help in forming a right course for defence expenditure in the country," the report said.

India's defence budget in the last few years hovered around 1.8 to 1.97 per cent of the GDP (Gross Domestic Product).

The allocation of Rs 5.93 crore in the defence budget for 2023-24 was 13.18 per cent of total Central government expenditure and 1.97 per cent of the GDP.

The committee noted the defence ministry's submission in this context that the global "ideal" estimate for defence expenditure as a percentage of GDP is three percent.

It recommended in unequivocal terms that if not the global parameter of 3 per cent, feasibility may be explored to fix a benchmark as the country's GDP that will help in forming a right trajectory for the defence expenditure for the country.

The committee also strongly called for developing drone-based systems.

The committee "recommend that while designing and developing various drone based systems and anti-drone systems for modern warfare, these upcoming challenges may be taken into account to enable our forces in effectively dealing with prevailing threat perception." "They also desire that updates regarding the progress of wearable human flight platforms be intimated to the Committee at the time of submitting the action taken statement," it said.

https://timesofindia.indiatimes.com/india/parliamentary-panel-recommends-benchmark-percentage-of-gdp-for-defence-allocation/articleshow/106161065.cms

The Tribune

Thu, 21 Dec 2023

Expedite Supply of Light Combat Aircraft to Indian Air Force: Parliament Panel

A Parliamentary Standing Committee on the Ministry of Defence has expressed ‘concern’ over the existing fighting force levels of the Indian Air Force and has recommended that theaterisation of armed forces should be completed setting pragmatic targets. A report of the committee was submitted to Parliament today.

R&D fund in DRDO budget declining

A Parliamentary Standing Committee, in its report presented in Parliament on Wednesday, has highlighted a ‘continuous declining trend’ of R&D funds in the expenditure of Defence Research and Development Organisation (DRDO)

“The R&D expenditure with respect to percentage of defence budget of DRDO should be increased in subsequent years,” the report said. The committee had noted ‘with concern’ that of 55 projects of DRDO, 23 were not completed on time.

The committee was informed by the MoD that delivery of Light Combat Aircraft Tejas Mark 1A fighter aircraft will commence from February 2024 and complete by January 2029 and the case for procurement of 114 Multi-Role Fighter Aircraft (MRFA) is under progress.

Expressing their concern over the existing force level in the Air Force, the committee desired that "all-out efforts be made to expedite supply of LCA". The committee urged the MoD to make a time-bound schedule. The committee noted that plan for theaterisation of armed forces, or creation of integrated theatre commands has been considered by the forces at the highest level.

The report said "they recommend theaterisation of armed forces should be completed by setting out pragmatic targets and if required in a phased manner". This assimilation would definitely help in the optimal utilisation of resources of armed forces and would bring down the defence expenditure in future, it said.

Integration of all the wings of armed forces is not only necessary but of paramount importance. In a war-like situation such an integration would act swiftly, with precision and also in a cost saving manner by reducing the paraphernalia, the report said.

The committee report said the MoD has informed "the induction of a third carrier through indigenous construction is being actively explored". The Navy has a requirement of three operational aircraft carriers at any time. This is also important towards sustaining our maritime dominance in all three geographical expanse of the Indian Ocean Region, the report said.

https://www.tribuneindia.com/news/india/expedite-supply-of-light-combat-aircraft-to-indian-air-force-parliament-panel-573872

JANES

Wed, 20 Dec 2023

Indian Air Force Inducts SAMAR Air-defence System

The Indian Air Force (IAF) has inducted the Surface to Air Missile for Assured Retaliation (SAMAR) system, an IAF source told Janes on 20 December.

According to the source, the service also test-fired the system in mid-December at Air Force Station Suryalanka located in the southern coastal region of India.

The source did not elaborate on the number of systems the service has inducted. However, another IAF official told Janes in February that the first batch will include five SAMAR units.

SAMAR is a short-range air-defence system jointly developed by the IAF's 7 Base Repair Depot (BRD) and 11 BRD in association with Indian private-sector companies Simran Flowtech Industries and Yamazuki Denki.

The system provides air defence against low-flying aerial targets with a maximum striking range of 12 km.

SAMAR employs the IAF's shelf-life-expired Russian Vympel R-73E infrared-guided air-to-air missiles (AAMs). The AAMs are refurbished and upgraded to perform surface-to-air roles and the missiles can be launched in both single and salvo mode.

The system comprises launch beams, a fire-control unit, an electronic control unit, and auxiliary units including a self-loading knuckle crane, a power supply system, and a servo mechanism feedback unit.

SAMAR is intended to replace the IAF's Pechora systems, which have been in service since the 1970s.

https://www.janes.com/defence-news/news-detail/indian-air-force-inducts-samar-air-defence-system

THE TIMES OF INDIA

Wed, 20 Dec 2023

France Submits Bid for Selling 26 Naval Rafale Fighters to India

In another step towards an early finalization of the estimated Rs 50,000 crore deal for 26 Rafale-Marine fighter jets and associated equipment, France has now submitted its bid to the defence ministry. Sources said the French detailed letter of acceptance (LoA), with its offer, pricing and other details, was submitted on Wednesday in response to India's letter of request (LoA) issued in mid-October for the proposed acquisition of 22 single-seat jets and four twin-seat trainers, along with weapons, simulator, spares, crew training and logistics support.

The deals for the 26 fighters and three additional Scorpene submarines for around Rs 30,000 crore were granted the preliminary approval or acceptance of necessity (AoN) by the Rajnath Singh-led Defence Acquisitions Council on July 13, a day before the subsequent Modi-Macron summit in Paris. The deals, however, did not find any mention in the joint statement issued after the summit, as was then reported by TOI.

The government-to-government deal for the Rafales, which involves off-the-shelf procurement of the Dassault Aviation-manufactured jets, will only be inked after the final cost negotiations and the requisite approval from the Cabinet Committee on Security.

The Navy, of course, would want the deals for the Rafales and Scorpenes to be inked within this fiscal, grappling as it is with an inadequate number of fighters to operate from its two aircraft carriers -- the older Russian-origin INS Vikramaditya and the new indigenous INS Vikrant -- as well as a depleting underwater combat fleet.

The Navy is left with 40 of the 45 MiG-29K jets, inducted from Russia at a cost of $2 billion from 2009 onwards, for its two aircraft carriers, the older Russian-origin INS Vikramaditya and the new INS Vikrant. The MiG-29Ks have also been dogged by poor serviceability and other problems over the years.

The French fighter, of course, also had a head start on logistical grounds given that IAF has already inducted 36 Rafales under the Rs 59,000 crore deal inked in September 2016.

https://timesofindia.indiatimes.com/india/france-submits-bid-for-selling-26-naval-rafale-fighters-to-india/articleshow/106162598.cms

FINANCIAL EXPRESS
Read to Lead

Wed, 20 Dec 2023

Tata Boeing Aerospace Reaches Significant Milestone with 250th AH-64 Apache Fuselage Delivery for Indian Army

Tata Boeing Aerospace Limited (TBAL) has delivered the 250th fuselage for the AH-64 #Apache attack helicopter from its state-of-the-art facility in Hyderabad. These fuselages are manufactured for customers around the world, including the US Army. And will be used for the six in order for the Indian Army.

This milestone reflects TBAL's continuous dedication to bolstering India's defence capabilities and advancing the nation's indigenous manufacturing prowess.

It has been reported previously that the joint venture between Boeing and Tata Advanced Systems Limited (TASL) has generated employment for over 900 technicians and engineers, leveraging cutting-edge robotics, automation, and advanced aerospace concepts in its manufacturing processes.

TBAL's 14,000 sqm facility serves as a global sole source supplier for Apache fuselages, and over 90 percent of the parts used in the Apache aerostructure assemblies manufactured in India through more than 100 Micro, Small, and Medium Enterprises (MSME) suppliers.

Financial Express Online has reported earlier this year, the US based Boeing Company has officially kickstarted the production process for the Apaches designated for the Indian Army, from its facility in Mesa, Arizona. The slated delivery involves six AH-64E Apaches tailored to the precise specifications outlined by the Indian Army.

In August, Boeing India's President, Salil Gupte, emphasized, "The integration of advanced technology into the AH-64, coupled with its well-established track record of excellence, is positioned to enhance the operational preparedness of the Indian Army, substantially reinforcing its overall capabilities." Reflecting on 2020, Boeing not only completed the delivery of 22 E-model Apaches to the Indian Air Force (IAF) but also secured a contract to exclusively manufacture an additional six AH-64Es for the Indian Army. The projected delivery timeline for these Apaches is scheduled throughout 2024.

Christina Upah, Vice President of Attack Helicopter Programs and Senior Boeing Mesa Site Executive, expressed enthusiasm, stating, "The AH-64E remains unequivocally the world's premier attack helicopter, renowned for its exceptional offensive capabilities and notable survival attributes. We are excited to extend these remarkable capabilities to empower the Indian Army."

In a prior conversation with Financial Express Online in 2020, Michael M. Koch, the then Vice President for India, Defence, Space & Security, disclosed plans for a substantial portion of supplementary components, including the crucial fuselage, to be manufactured indigenously in India. Koch underscored the extensive involvement of over 200 Indian enterprises in the Apache Helicopter's production, emphasizing the progressive expansion of indigenous participation in crafting diverse constituents for the Apache. This transition from 160 to over 200 contributing Indian companies signifies a noteworthy evolution in indigenous collaboration within the Apache manufacturing process.

https://www.financialexpress.com/business/tata-boeing-aerospace-reaches-significant-milestone-with-250th-ah-64-apache-fuselage-delivery-for-indian-army-3343536/

The Tribune

Thu, 21 Dec 2023

Oman Seeks Closer Security Pact with India

By Col Rajeev Agarwal (Retd)

THE Sultan of Oman, Haitham bin Tarik, paid a state visit to India last week. This was his first trip to the country after taking over as the Sultan in January 2020 following the demise of his predecessor, Qaboos bin Said. The latter had visited India in 1997.

Six agreements in key areas were signed during Sultan Haitham bin Tarik's visit. Both countries also signed a joint vision document titled 'A Partnership For the Future', which acknowledges the remarkable synergy between Oman's 'Vision 2040' and India's vision of Amrit Kaal, both aimed at making their countries developed nations by the 2040s.

There was progress in the talks on the India-Oman Comprehensive Economic Partnership Agreement, which has the potential to catapult the bilateral relationship to a higher growth trajectory. The bilateral trade has risen from $9.98 billion in the 2021-22 financial year to $12.388 billion during 2022-23, a jump of 24 per cent. Mutual investment flows have been robust. There are over 6,000 India-Oman joint ventures in Oman with an estimated investment of over $7.5 billion. The third tranche of the Oman-India Joint Investment Fund, worth $300 million, was announced during the visit. There is immense interest in India's digital public infrastructure; the RuPay debit card was launched in Oman in October 2022.

However, the most important component of the partnership that Oman seeks with India is in the sphere of security. Located in a conflict-prone region in the Arabian Peninsula and faced with constant threats of sea piracy and terror, Oman looks to India for enhancing its security. It was the first country in the region with which India signed a defence cooperation agreement (in 2005). It is also the first Gulf country with which all three wings of India's defence forces have held joint exercises. India trains Omani military officers and has an agreement with its National Defence College.

Both countries have signed a maritime security agreement, which facilitates intelligence-sharing as well patrolling of the sea to ensure safety of ships in the region. The first meeting of the Joint Maritime Committee was held on February 23, 2022. Since 2012-13, an Indian naval ship has remained on duty in the Gulf of Oman on anti-piracy operations. Oman has allowed overflight/transit for India's military aircraft too. During the Persian Gulf crisis in June 2019, the Indian Navy launched Operation Sankalp and deployed ships which mostly operated off the coast of Oman to facilitate the safe passage of Indian flagged ships through the Persian Gulf. The MoU on Duqm port, signed during PM Modi's visit to Oman in February 2018, provides basing facilities and Operational Turn Round (OTR) to Indian naval ships. It is developing into a major foothold for the Indian Navy in the region. The strategically located Duqm port overlooks the Gulf of Oman and the Arabian Sea and is in close proximity to the Chabahar port in Iran. It also allows India to keep a discreet watch on growing Chinese PLA naval activity in the region.

Oman is also looking to India for cooperation in defence industry and weapon systems. Oman was the first Gulf country to purchase the Indian Small Arms System (INSAS) assault rifle in 2010. Other items, such as ammunition, artillery guns and surveillance equipment, are also on the wish list. Intelligence-sharing is a key element of the security partnership, especially related to terror funding. Oman and Yemen share a long border. Yemen, which has been battling an internal conflict as well as an external war since 2011, when the 'Arab Spring' broke out, poses a grave threat to the internal security of Oman, especially in the restive Dhofar region. Oman has taken India's help in this regard; an Indian company, Engineering Projects India Ltd (EPIL), executed Phase I and II of the fencing project along the Oman-Yemen border.

Another facet that is not talked about much is the close bond that Oman's royal family has with India. Sultan Qaboos's grandfather Sultan Taimur bin Feisal spent over three decades in India after abdicating power in 1932; his mausoleum is in Mumbai. Sultan Said bin Taimur, Sultan Qaboos's father, was an alumnus of Ajmer's Mayo College. As a student, Sultan Qaboos was taught by Shankar Dayal Sharma, who later became the President of India. Similarly, many Indian families have deep roots in Oman, having migrated there centuries ago. Oman has honoured these families and accommodated them in its folds. It has permitted them to follow their customs and traditions without any restriction. Oman's Hindu community has two temples, including one over a century

old, and its own cremation grounds. Churches have been permitted and a gurdwara has been there since long. Tales of merchants' sea travels between Gujarat and Muscat, and also the Salalah port in Oman, are legendary. During the Sultan's visit, a proposal to retrace the maritime voyage of such a ship — to be recreated, from the Mandvi port in Gujarat to Muscat in 2025-26 — was welcomed.

Ties between Oman and India are special and unique in many ways. Both countries profess peaceful coexistence and thus enjoy tremendous goodwill in the global community. Oman was invited as a guest nation during India's G20 presidency this year. Both countries have similar interests and concerns and have almost no areas of conflict or divergence. Oman offers India a gateway to West Asia. For Oman, India is a very important partner and friend, especially in the security sphere. With the people on both sides having strong associations, the Sultan's visit was also an occasion to reconnect with the roots of the Omani royal family in India.

https://www.tribuneindia.com/news/comment/oman-seeks-closer-security-pact-with-india-573865

THE HINDU

Thu, 21 Dec 2023

India's Defence Budgeting and the Point of Deterrence

By Manmohan Bahadur

The Medium Multi-Role Combat Aircraft (MMRCA) programme of the Indian Air Force (IAF) earned the sobriquet of being the 'mother of all procurements' due its cost, pegged at around $10 billion in 2007. A decade later, the purchase of 36 Rafale jets was of limited value because the requirement was for 126 aircraft. Consequently, many IAF chiefs have spoken of the depleting squadron strength in the IAF, which is now an abysmal 32. It would take another 10 years before it reaches 35 squadrons, as stated by the current IAF chief. The Indian Army and the Indian Navy fare no better either with the media reporting major deficiencies with them too. With India in election mode and sops being showered on the electorate (even more certain before the general election in 2024), the allocation for defence in Budget 2024-25, which starts getting planned now, could take a hit. This could impact India's deterrence posture, which defence preparedness is all about.

Need for judicious assessment

The question is whether 'affordable defence' — due to the perennial guns versus butter dilemma — will be the driving factor. Or, will 'affordable effectiveness' drive the defence Budget allocation? This is best illustrated by the IAF going in for 97 more Tejas Mk1A fighters to overcome the deficit in squadron strength, though this was to be achieved by the 114 multi role fighter aircraft project that the IAF has been pushing for. So, to rephrase the question, should Budget (allocation) be allowed to determine defence potency (remember General V.P. Malik's quip during the Kargil conflict: "We will fight with what we have")? Or, should the required potency drive allocations for defence?

The threat on the northern borders is a live one, and it would be unprofessional to dismiss our western neighbour's present benign stance as indicative of a lessening of risk. India needs to be prepared for both. The imperativeness of a judicious assessment of how India plans to prosecute the next war could not be more pressing in these days of electoral one-upmanship.

Enough has been written on the inescapable necessity of accretion in sea power to deter China in the environs of the Malacca Strait and further east, as also in the Indian Ocean. The Army needs to modernise too and, considering its size, the Budget requirement would be considerable. The

planning and budgeting in the Indian military before the Russia-Ukraine war was for a short sharp conflict. The logistics design was to stock up on 10i (10 days intense) war, and build up to a 40i scenario. The refrain has changed, with the leadership of the armed forces now visualising an extended war scenario, as seen in Ukraine. It is here that a recent prescient article in the authoritative website, War on the Rocks, titled 'You go to war with the industrial base you have, not the industrial base you want', weighs-in on the debate with its clairvoyant deductions, and needs to be studied given the publicity around the Atmanirbhar Bharat drive.

The indigenous drive, R&D

It needs no reiteration that the armed forces should be technologically modern at any given time. However, developing a local defence industry takes decades, necessitating a smart balance to be maintained between imports and indigenous accretions to ensure the required potency. The Atmanirbhar Bharat public relations drive notwithstanding, a hard clinical view is required on the realities of the armament supply chain that would be in place in the near to mid-term.

India's defence Budget, in real terms, has been more or less stagnant. Defence expenditure (revenue and capital), as a percentage of central government expenditure, has been declining — from around 16.4% in 2012-13 to 13.3% in 2022-23. The Ministry of Defence had asked for ₹1,76,346 crore in 2023–24 for capital acquisitions but only ₹1,62,600 crore was allotted, creating a deficit of ₹13,746 crore.

In the sphere of research and development, the picture is not rosy either. The Global Innovation Index 2022 pegs India's research and development expenditure at just 0.7% of its GDP which places it 53rd globally. China, incidentally, spent $421 billion in 2022, which is 2.54% of its GDP. Though the research and development allocation needs a substantial jump, it is good that 25% of the allocation was for the private sector

The government's emphasis on indigenisation through the Innovations For Defence Excellence (iDEX) scheme and service-specific projects such as the Baba Mehar Singh competition for unmanned aerial vehicles by the IAF, and similar ones in the other two services, are laudable.

Similarly, the restructuring of the Ordnance Factory Board and promulgation of negative lists for imports instil confidence in the private sector for assured contracts. While all these are welcome, and the increase in defence exports heartening, it must be accepted that this drive still has a long gestation period. The momentum should be sustained with a continuum in policy making and adequate defence budgeting by making them election-proof in our boisterous democracy — bipartisan statesmanship would be key in this endeavour.

Costs are important and one must not spend scarce monies to face a 10 feet tall adversary when a pygmy exists on the other side. But what if there are two of them, both militarily adept, and not pygmies? And, India is not 10 ft tall either. China's belligerence has resulted in the doubling of Japan's defence budget, the increased arming of Taiwan by the United States, a reshaping of regional alliances and a historic U.S.-South Korea-Japan summit. It would be naive, nay unprofessional, if our defence Budget is not given its due and national security imperatives overridden by electoral imperatives.

https://www.thehindu.com/opinion/op-ed/indias-defence-budgeting-and-the-point-of-deterrence/article67659048.ece

Thu, 21 Dec 2023

US, S.Korea, Japan Condemn N.Korea's Ballistic Missile Launches; Urge Dialogue

The top diplomats of the United States, South Korea and Japan on Wednesday condemned North Korea's recent ballistic missile launches and urged Pyongyang to engage in "substantive dialogue without preconditions," they said in a joint statement.

THE TAKE

North Korea fired an intercontinental ballistic missile on Monday that has a range to hit anywhere in the United States, said South Korea and Japan, marking its second launch in hours as Pyongyang condemned a U.S.-led show of force. The missile has a potential to travel more than 15,000 km (9,300 miles), meaning it can reach anywhere in Japan and the mainland United States, Japan's Parliamentary Vice Minister of Defence Shingo Miyake said on Monday.

KEY QUOTES

"The United States, Japan, and the ROK (South Korea) stand together in opposition to the DPRK's (North Korea's) continued development of its unlawful weapons of mass destruction (WMD) and ballistic missile programs," U.S. Secretary of State Antony Blinken, Japanese Foreign Minister Yoko Kamikawa and South Korea's Foreign Minister Park Jin said.

"The unannounced launches also threatened the safety of civil aviation and maritime traffic in the region," the top diplomats added. They urged North Korea to "stop conducting further provocations and accept our call for engaging in substantive dialogue without preconditions."

CONTEXT

The United States and South Korea have increased the intensity of joint military drills against rising threats from the North, which had tested a range of ballistic missiles and in November launched its first military spy satellite.

North Korea says it has a sovereign right to operate a ballistic missile programme for self defence and rejects a United Nations Security Council ban, which it says is a product of hostile U.S. policy.

North Korean leader Kim Jong Un has said Pyongyang would not hesitate to launch a nuclear attack if an enemy provokes it with nuclear weapons, according to state media.

https://www.reuters.com/world/us-skorea-japan-condemn-nkoreas-ballistic-missile-launches-urge-dialogue-2023-12-21/

Wed, 20 Dec 2023

Enduring Shield Completes Tests for US Missile Defence

Leidos announced on 19 December 2023, the completion of the Risk Reduction Flight Demonstration (RRFD) for its Enduring Shield Weapon System. Following the successful

completion the system is progressing to the next stage of its development, including an initial shipment of launchers as part of the Department of Defence's multi-layered defence strategy.

The Enduring Shield system is a ground-based, mobile defence system designed to counter cruise missiles and unmanned aircraft systems and safeguard key civilian and military infrastructure. The system also serves as a link between tactical short-range air defence systems and strategic defence mechanisms, such as the Terminal High Altitude Area Defense (THAAD) and Patriot forces.

Leidos subsidiary Dynetics received a contract for $237m in September 2021 to manufacture the Enduring Shield mobile ground-based weapon system, beating out competition from Rafael's Iron Dome during US Army testing according to a Congressional Research Service report. The 2.5-year contract was awarded for the Enduring Indirect Fires Protection Capability (IFPC) by the US Army Program Executive Office Missiles and Space, to provide 16 field-able launcher prototypes, 60 interceptors and related all-up round magazines (AUR-M).

The RRFD was conducted to demonstrate the capability of the Enduring Shield system to launch an AIM-9X interceptor missile from a simulated Integrated Battle Command System (IBCS) interface. This test successfully validated the system's full launch process, from initiating the interceptor to targeting a specified location.The integration of Enduring Shield with the IBCS was successfully demonstrated earlier in the summer of 2023.

Following the successful completion of the RRFD, the Enduring Shield system is progressing to the next stage of its development. This includes the initial shipment of launchers as part of the Department of Defence's multi-layered defence strategy.

The US Army IFPC Inc 2 program is scheduled to start its developmental test in January 2024, with an operational assessment planned later in the year. The data obtained from the RRFD and the tests in 2024 will be utilised to enhance the next batch of launchers produced by Leidos.

Larry Barisciano, Weapon Systems Operations Manager for the Leidos Dynetics team, commended the development, and emphasised the readiness of the prototypes for government testing, expressing confidence in the project's next phase in collaboration with the US Army.

https://www.army-technology.com/news/enduring-shield-completes-tests-for-us-missile-defence/

Science & Technology News

THE TIMES OF INDIA

Wed, 20 Dec 2023

Leif Erikson Lunar Prize Awarded to ISRO for Chandrayaan-3 Advancements

In a momentous recognition of India's space prowess, the Indian Space Research Organisation (ISRO) has been feted with the prestigious Leif Erikson Lunar Prize by the Husavik Museum here.

The award acknowledges ISRO's unwavering dedication and indomitable spirit in propelling lunar exploration forward and contributing significantly to unravelling celestial mysteries, particularly through the successful Chandrayaan-3 mission.

"Leif Erikson Lunar Prize has been awarded by Husavik Museum for @ISRO's indomitable spirit in advancing lunar exploration & contributing to understanding celestial mysteries #Chandrayaan3," the Indian Embassy in Iceland posted on X.

Indian Ambassador Balasubramanian Shyam received the prestigious prize on behalf of ISRO.

"ISRO Chairman Mr S Somanath sent a message; Amb Mr Shyam received the prize on ISRO's behalf," the embassy's post added.

The triumph of Chandrayaan-3 marked a historic milestone on August 23 when the lander module successfully touched down on the moon's South Pole. India became the fourth nation, following the United States, China, and Russia, to achieve a successful lunar landing. The mission not only showcased technological prowess but also signalled redemption after the disappointment of the Chandrayaan-2 crash landing four years earlier.

Post-landing, the Vikram lander and the Pragyan rover conducted various tasks on the lunar surface, including detecting the presence of sulfur and other elements, recording relative temperature, and monitoring lunar activities. The success of Chandrayaan-3 further solidified India's standing in lunar exploration.

Following the lunar triumph, India swiftly moved ahead with its maiden solar mission, Aditya-L1, launched on September 2. The spacecraft has successfully undergone multiple maneuvers, including four earth-bound maneuvers and a crucial Trans-Lagrangean Point 1 Insertion (TL1I) maneuver, enabling it to escape Earth's sphere of influence.

In the most recent development, the Propulsion Module (PM) of Chandrayaan-3 achieved another feat by transitioning from lunar orbit to Earth's orbit.

The Indian Space Research Organisation shared the achievement on X, stating, "Chandrayaan-3 Mission: Ch-3's Propulsion Module (PM) takes a successful detour! In another unique experiment, the PM is brought from Lunar orbit to Earth's orbit. An orbit-raising manoeuvre and a Trans-Earth injection manoeuvre placed PM in an Earth-bound orbit."

https://timesofindia.indiatimes.com/home/science/leif-erikson-lunar-prize-awarded-to-isro-for-chandrayaan-3-advancements/articleshow/106150966.cms

bt | Business Today

Wed, 20 Dec 2023

India's Solar Mission Aditya-L1 Nears Destination, to Reach Lagrange Point 1 in First Week of January

The much-anticipated Aditya-L1, India's inaugural solar observatory mission, is poised to reach its destination at Lagrange Point 1 (L1) during the first week of January 2024. Dr Jitendra Singh, Union Minister, revealed this exciting development, marking a significant milestone for the mission launched in February 2023.

After an arduous journey spanning approximately 1.5 million km from Earth, Aditya-L1 is set to revolutionise solar research from its strategically advantageous L1 position, ideal for peering into the Sun.

Aditya-L1 recently accomplished a historic feat by capturing comprehensive images of the Sun. Leveraging the Solar Ultraviolet Imaging Telescope (SUIT) integrated into the mission, these

images were obtained within the 200-400 nm wavelength range. SUIT employs an array of scientific filters to capture the Sun's photosphere and chromosphere intricately within this specific wavelength spectrum. The Indian Space Research Organisation (ISRO) affirmed that these observations will enable scientists to delve deeper into the dynamic interactions within the magnetised solar atmosphere, offering invaluable insights and precise constraints on solar radiation's influence on Earth's climate.

The disclosed images revealed distinctive features like sunspots, plage, and serene Sun regions, prominently showcased in the Mg II h image. This revelation unfolds groundbreaking insights into the intricate details of the Sun's photosphere and chromosphere. SUIT's continuous observations play a pivotal role in enhancing our comprehension of the dynamic interplay within the magnetized solar atmosphere, aiding in the establishment of accurate boundaries concerning solar radiation's impact on Earth's climate.

Meanwhile, the Indian Space Research Organisation (ISRO) is gearing up for critical tests linked to the Gaganyaan human spaceflight programme. These tests encompass evaluations of the crew module and abort system, crucial steps preceding the planned 2024 orbital test flight. The Gaganyaan mission aims to propel Indian astronauts into space in 2025, contingent on the successful completion of milestones in the foreseeable future.

https://www.businesstoday.in/technology/news/story/indias-solar-mission-aditya-l1-nears-destination-to-reach-lagrange-point-1-in-first-week-of-january-410180-2023-12-20

THE HINDU

Thu, 21 Dec 2023

Simulations and Checks on Ground and Space Key to Chandrayaan-3 Success: Mission Director Srikanth

Indian Space Research Organisation (ISRO) scientists did a simulation on the ground before the launch and later did another round of checks of the systems in space before going ahead with the successful deployment of the lander on the dark side of the moon during the Chandrayaan-3 Mission, said its Director M. Srikanth.

Addressing the delegates, researchers and students at the inaugural session of the 16th International Conference of Sensor Technology (ICST) 2023 held at BITS-Pilani’s Hyderabad campus between December 18 and 20, Mr. Srikanth, who is also the Director of the Aditya-L1 mission, gave a presentation on the mission, explaining how the scientists went about their task after the Chandrayaan-2 setback when the lander crashed on the lunar surface.

“We were taken aback when the lander failed then. But it did not deter us from our next mission. We did some real-time processing and assessment of the censors and cameras to ensure the lander gets down at the green zone and not at other places,” he explained.

After the payload got separated from the launch vehicle, the scientists did calculations of the inertial systems, engines, imaging sensors and other systems before going ahead with the landing, he told the appreciative audience.

DRDO’s Director of Centre for High Energy System and Sciences (CHESS) Jagannath Nayak talked about the indigenously developed fibreoptic gyroscope-based sensors while Group Vice Chancellor, BITS Pilani V. Ramgopal Rao shared insights into sensor systems development for commercialisation.

University of Waterloo’s (Canada) Shushanta Mitra and RMIT University’s (Australia) Madhu Bhaskaran shared their group’s research on bacterial monitoring using point-of-care systems, and sensor technologies in aged care from academia to industry. University of Hyderabad, India, along with Macquarie University, Sydney, Australia, and IEEE Hyderabad Section were also associated with the event.

The conference with a dozen specialised invited lectures and 100 oral/poster presentations, saw participation of over 200 delegates from leading institutions worldwide, according to BITS Pilani Hyderabad’s Sanket Goel.

https://www.thehindu.com/news/national/telangana/simulations-and-checks-on-ground-and-space-key-to-chandrayaan-3-success-mission-director-srikanth/article67659063.ece

Wed, 20 Dec 2023

What is "Mouse Fever"? The New Threat Russia's Military is Grappling with

A recent report from Ukraine's Defence Intelligence brings alarming news of an outbreak of "mouse fever" among many units of the Russian army on the Kupyansk Front. The Defence Intelligence points out that commanders are turning a blind eye to the soldiers' complaints, making the situation worse.

The Origin of Mouse Fever

The name "mouse fever" comes from its transmission through rodents, posing significant challenges for the troops.

Ways of Contracting Mouse Fever

Mouse fever can be contracted through direct contact with germs, inhaling dust from mouse droppings, or consuming contaminated food.

Symptoms of Mouse Fever

The symptoms of mouse fever include severe headaches, high fever, rashes, redness, low blood pressure, bleeding in the eyes, nausea, and frequent vomiting. The disease affects the kidneys, and those infected also experience intense lower back pain and difficulties in urination.

The heart of the matter lies in the dissatisfaction brewing among the ranks of the Russian occupying army, primarily stemming from the inadequate provision of winter clothing and an absolute lack of medical care. This has led to a surge in cases of "mouse fever" in the Kupyansk direction. (Kupyansk is a vital logistical centre that played a critical role in facilitating the supply of provisions and ammunition to the enemy army during the previous occupation.)

The Defence Intelligence team is stressing that Russian army personnel's complaints about the fever have been dismissed by the command, labelling them as attempts to avoid participating in hostilities. Compounding the issue is the fact that, in its early stages, mouse fever resembles a common flu, leading to delayed recognition. The fallout from this outbreak is big. The Defence Intelligence press centre is saying that the illness has seriously brought down the fighting ability of the Russian forces and are calling them "Russian rats."

This comes after a cholera outbreak in June when Russian troops in the Kherson region and Crimea got sick because of a blast at the Kakhovka hydroelectric power plant. Sadly, some Russian soldiers lost their lives, showing just how tough things are for the military in the area.

https://www.ndtv.com/world-news/what-is-mouse-fever-the-new-threat-russias-military-is-grappling-with-4709202