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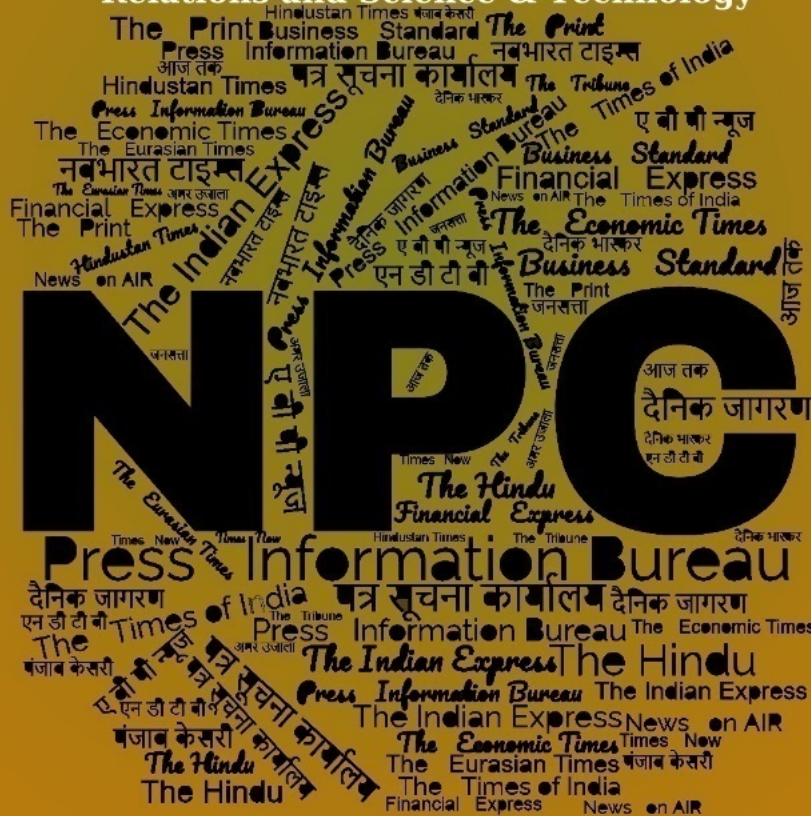
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समाचार पत्रों से चयित अंश Newspapers Clippings

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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Thu, 07 Mar 2024

DRDO Successfully Tests High Endurance Autonomous Underwater Vehicle in Kochi

The Defence Research & Development Organisation (DRDO) on Thursday conducted a successful maiden surface run of a High Endurance Autonomous Underwater Vehicle (HEAUV). The test was conducted at Cochin Shipyard, International Ship Repair Facility (ISRF) Jetty in Kochi. DRDO said that the trial has met all the mission parameters.

Sharing the video of the test on X, DRDO wrote, "Maiden Surface run of High Endurance Autonomous Underwater Vehicle (HEAUV) meeting all the mission parameters were carried out successfully at Cochin Shipyard, International Ship Repair Facility (ISRF) Jetty, Kochi." Last month, DRDO conducted two successful flight tests of the Very Short-Range Air Defence System (VSHORADS) missile. The tests were conducted from a ground-based portable launcher from the Integrated Test Range, Chandipur, off the coast of Odisha. These tests were carried out against high-speed unmanned aerial targets under different interception scenarios. During all the test flights, the targets were intercepted and destroyed by the missiles, meeting the mission objectives, reported PTI.

The Ministry of Defence informed that VSHORADS is a Man Portable Air Defence System (MANPAD) designed and developed indigenously by the Research Centre Imarat (RCI) in collaboration with other DRDO laboratories and Indian industry partners. The VSHORADAS missile incorporates many novel technologies, including miniaturised Reaction Control System (RCS) and integrated avionics, which have been successfully proven during the tests, as per PTI. The missile is propelled by a dual thrust solid motor meant for neutralising low-altitude aerial threats at short ranges. The design of the missile, including the launcher, has been highly optimised to ensure easy portability. The flight tests were witnessed by officials of the Indian Army, senior scientists from various DRDO laboratories, and industry partners, the PTI report added.

<https://news.abplive.com/news/india/drdo-successfully-tests-high-endurance-autonomous-underwater-vehicle-in-kochi-1670233>



**Press Information Bureau
Government of India**

Ministry of Science & Technology

Thu, 07 Mar 2024

CSIR-IIP hosts DRDO Scientists

As a part of the Mandatory Specialized Training on Essential Management Skills (STEMS-21.3), around 40 Scientist G rank officials from different laboratories of DRDO visited CSIR-IIP on 6th March 2024. The Institute of Technology Management, Mussoorie – DRDO organized the visit.

The objective of the visit was to provide the participants with valuable insights into the processes and innovative technologies involved in developing and refining petrochemical/chemical products.

Director CSIR-IIP, Dr H.S. Bisht, formally welcomed the participants and presented a brief overview of the Institute, covering its mandate and vision. Dr. Sanat Kumar, Head of Research Planning and Project Management, presented the past and present research initiatives undertaken by CSIR-IIP and highlighted various success stories of the Institute.

The participants then visited the Advanced Gas Separation laboratory, Domestic Combustion Laboratory, Bio-Jet fuel pilot plant, and Waste plastics to fuel pilot plants.

They interacted with the scientists and technical personnel. The participants felt overwhelmed and energized by the R&D initiatives being undertaken by CSIR-IIP in the direction of Photocatalytic pathways for developing chemicals, Hydrogen generation and storage, Vehicular emissions, and green technologies. The visit provided an idea of the Institute's progress in the energy sector.

The Science Communication and Dissemination team of CSIR-IIP conducted the programme.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2012499>



Thu, 07 Mar 2024

डिफेंस सेक्टर में भारत का बड़ा कदम, 5वीं पीढ़ी के स्टील्थ लड़ाकू विमान विकसित करने की परियोजना को दी मंजूरी

कैबिनेट समिति ने डीआरडीओ द्वारा किए जाने वाले एडवांस मीडियम लड़ाकू विमान पांचवीं पीढ़ी के स्टील्थ फाइटर जेट परियोजना को डिजाइन और विकसित करने की परियोजना को मंजूरी दे दी है। सरकारी सूत्रों ने समाचार एजेंसी एएनआई को बताया कि लगभग 15,000 करोड़ रुपये की परियोजना के तहत, रक्षा अनुसंधान और विकास संगठन की वैमानिकी विकास एजेंसी विभिन्न निजी और सार्वजनिक क्षेत्र की एजेंसियों

के साथ साझेदारी में स्टीथ फाइटर जेट और इसकी प्रौद्योगिकियों का विकास करेगी और लगभग पांच वर्षों में लगभग पांच प्रोटोटाइप बना एगी।

पांचवीं पीढ़ी की विमान परियोजना से पैदा होंगी नौकरियां उन्होंने कहा कि परियोजना में सार्वजनिक क्षेत्र की इकाई हिंदुस्तादुस्तान एयरोनॉटिक्स लिमिटेड (HAL) सहित उद्योग द्वारा निर्मित प्रोटोटाइप को देखा जाएगा।

सरकार स्वदेशी प्रौद्योगिकियों और सैन्य उद्योग के विकास की दिशा में काम कर रही है। रक्षा मंत्रालय की परि कल्पना है कि पां चवीं पी ढी की वि मा न परि यो जना ला खों नौ करि यां पैदा करेगीरे गी और भा रती य वा यु सेना के ऑर्डर भा रती य संस्था ओं के लिए लाखों करोड़ रुपये का व्यवसाय पैदा कर सकते हैं और बड़े पैमाने पर नौकरि यां भी पैदा कर सकते हैं।

200 से अधिक हल्के लड़ाकू विमानों का दिया है ऑर्डर नरेंद्रें मोदी सरकार के तहत भारतीय वायु सेना से स्वदेशी लड़ाकू विमान परियोजनाओं को बड़ा बढ़ावा मिला है क्योंकि सरकार ने एलसीए मार्क-2 परियोजना के लिए इंजनों की मंजूरी के साथ 200 से अधिक हल्के लड़ाकू विमानों का ऑर्डर दिया है।

उम्मीद है कि 2030 के बाद एएमसीए को परिचालन भूमिकाओं में शामिल किया जाना शुरू हो जाएगा और पहले दो स्क्वाड्रनों को जी ई-414 इंजनों द्वारा संचालित करने की योजना है, जबकि शेषस्क्वाड्रनों के लिए अधिक शक्तिशाली इंजनों को विकसित करने पर अभी भी चर्चा चल रही है।

<https://www.timesnowhindi.com/india/big-decision-in-defence-sector-india-clears-project-to-develop-amca-5th-generation-stealth-fighter-aircraft-article-108305440>

ThePrint

Thu, 07 Mar 2024

Proposal for 5th-gen indigenous fighter AMCA approved, nearly 2-decade-old journey formally begins

The proposal to design and manufacture India's indigenous fifth generation fighter aircraft — Advanced Medium Combat Aircraft (AMCA) — was approved Thursday by Prime Minister Narendra Modi-led Cabinet Committee on Security (CCS).

The about Rs 15,000 crore approval is for the design and prototype development of the aircraft that will eventually be powered by Make in India jet engines having a capacity of 110 kN, sources in the defence and security establishment told ThePrint.

According to the plan, the sources said, five prototypes will be built by the Aeronautical Development Agency (ADA) of the Defence Research and Development Organisation (DRDO) along with state-run Hindustan Aeronautics Limited (HAL) and private companies.

Currently, there are only four operational fifth generation fighters in the world, with the Americans having two — F-22 Raptor and F-35A Lightning II. The Chinese have the J-20 and the Russians boasting the Su-57, even though their stealth technology — a primary requirement to be termed fifth generation — is not fully recognised by the world at large.

China also has the J-31 fighters whose fifth generation credentials are questionable as well.

In 2007, even though AMCA was still being pursued as a concept note, India had tied up with the Russians for the Fifth Generation Fighter Aircraft (FGFA) programme to develop a stealth fighter — Su-57. However, the Indian Air Force's interest waned after scepticism over the stealth capabilities and the work share model between the two countries, apart from a lack of trust on the engine of the aircraft. India finally decided to pull out from the FGFA programme in 2018.

According to the plan, the first AMCA prototype powered by the GE-414 engine is earmarked for rollout by 2026

The IAF chief had told ThePrint in 2021 that the force plans to start inducting the AMCA by early years of next decade. The IAF is looking at seven squadrons of the AMCA, which includes two squadrons of the AMCA Mk1-A which will be powered by the GE-414 engines that has a thrust of 98kN.

The remaining fighters will be powered by new indigenous engines for which the contenders are Safran of France, GE of the US and Rolls Royce of the UK. The AMCA will boast of the latest avionics, indigenous AESA radar, besides having the capability to carry weapons internally as well as externally.

<https://theprint.in/defence/proposal-for-5th-gen-indigenous-fighter-amca-approved-nearly-2-decade-old-journey-formally-begins/1992405/>

THE ECONOMIC TIMES

Thu, 07 Mar 2024

12 security agencies to get indigenously developed explosive detectors

Two indigenously developed explosive detectors have been handed over to the Intelligence Bureau for field deployment by 12 identified security agencies in different parts of the country, an official spokesperson said on Thursday.

The move is expected to further strengthen the apparatus of the security forces, they said. According to the spokesperson, the Electronics Corporation of India Limited (ECIL), the Department of Atomic Energy (DAE) and the Defence Research and Development Organisation (DRDO) have developed the explosive detectors for the Indian security forces.

The devices were recently handed over to Intelligence Bureau (IB) Director Tapan Deka by Principal Scientific Adviser (PSA) to the government of India Ajay Kumar Sood, the spokesperson said.

Senior officials from security agencies such as the SPG, NSG, CISF, ITBP, SSB, BCAS, SFF and the Indian Army were present on the occasion. The detectors will be handed over by the IB to 12

identified security agencies for field deployment. Sood subbed the successful production of the detectors as a shining example of 'Atmanirbhar Bharat'.

The detectors, based on Ion Mobility Spectrometry (IMS) technique and Raman Back Scattering (RBS) principle respectively, have been customised as per specific requirements of the security agencies, as part of a development project initiated at the behest of IB in 2017.

"The government of India under the leadership of Prime Minister Narendra Modi and guidance of Union Home Minister Amit Shah is fully committed to capacity building and strengthening of the security forces," the spokesperson said.

The user agencies have been asked to provide feedback about the field deployment experience of the two detectors so that further improvements, if required, can be made.

<https://economictimes.indiatimes.com/news/defence/12-security-agencies-to-get-indigenously-developed-explosive-detectors/articleshow/108303981.cms>

Defence News

Defence Strategic: National/International



Press Information Bureau
Government of India

Ministry of Defence

Thu, 07 Mar 2024

US Coast Guard Ship Bertholf visits Port Blair for the Joint Exercise “Sea Defenders-2024” with Indian Coast Guard

Marking a significant step in bolstering bilateral cooperation between the Indian Coast Guard (ICG) and the United States Coast Guard (USCG), the USCG Ship Bertholf reached Port Blair on 07 Mar 2024, for joint exercise with Indian Coast Guard (ICG). Codenamed “Sea Defenders-2024”, the joint exercise is scheduled to take place on 09-10 Mar 2024 off the coast of Port Blair.

The exercise will simulate scenarios relevant to maritime piracy and asymmetric threats, including simulated drone attacks on commercial merchant traffic, joint maritime search and rescue operations, major firefighting, marine pollution response, and counter-drug interdiction exercises. Addi-

tionally, a simulated medical evacuation will be conducted to enhance readiness in emergency situations.

The Legend-class United States Coast Guard Cutter (USCGC) Bertholf is equipped with advanced technology and weaponry, including helicopter landing pad, state-of-the-art sensors and communication equipment. The ship serves the operational function for complex law enforcement, defence, and national security missions, reflecting the USCG's commitment to maritime safety and security. Its visit to India travelling more than 16000 Nautical Miles from Alameda, California reflects a shared commitment to upholding maritime norms and promoting a rules-based order in the Indo-Pacific region.

This exercise underscores the importance of international cooperation in addressing maritime challenges. It reaffirms the longstanding partnership between the Indian Coast Guard and the United States Coast Guard which is an important component of the strategic partnership between the two countries. The Indian Coast Guard has extensive interactions with United States Coast Guard, particularly in the field of training, exercises and cooperative measures. High level interaction between the two maritime agencies has been a regular feature towards maintaining professional relationship. Earlier, on 22 Sep 2022, USCG Ship Midgett visited Chennai.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2012268>



**Press Information Bureau
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Ministry of Defence

Thu, 07 Mar 2024

India's Defence stronger than ever as the Govt is bolstering it with Indianness: Raksha Mantri Shri Rajnath Singh

“Armed Forces equipped, capable & ready to give a befitting reply to anyone who casts an evil eye”

“Rs 50,000 crore defence exports expected by 2028-29”

“Govt aims to make India a technology creator than an imitator”

“India's defence apparatus is today stronger than ever as the Government, led by Prime Minister Shri Narendra Modi, is focusing on bolstering it with the sentiment of Indianness,” said Raksha Mantri Shri Rajnath Singh at a Defence Summit organised by a private media organisation in New Delhi on March 07, 2024. He termed ‘perspective’ as the major difference between the current and the previous dispensations, stating that the present government ardently believes in the capabilities of the people of India, while those in power earlier were somewhat skeptical about their potential.

Shri Rajnath Singh described promoting 'Aatmanirbharta' in defence manufacturing as the biggest change brought about by the Government, which is giving a new shape to India's defence sector.

He enumerated the reformative steps taken by the Ministry of Defence to achieve self-reliance, including setting up of Defence Industrial Corridors in Uttar Pradesh & Tamil Nadu; notification of positive indigenisation lists; reserving 75% of capital procurement budget for domestic industry; corporatisation of Ordnance Factory Board; and schemes/initiatives such as Innovations for Defence Excellence (iDEX), iDEX Prime, Acing Development of Innovative Technologies with iDEX (ADITI) & Technology Development Fund (TDF).

Highlighting the positive impact on the defence sector due to these decisions, Shri Rajnath Singh said: "The annual defence production, which was around Rs 40,000 crore in 2014, has now crossed a record Rs 1.10 lakh crore. The defence exports today have touched Rs 16,000 crore from a meagre Rs 1,000 crore nine-ten years ago. We have set a target to achieve Rs 50,000 crore of exports by 2028-29," he said.

The Raksha Mantri emphasised that the country's defence system has been induced with a new energy by the Government, as per the vision of the people of the country. This, he said, has resulted in India emerging as a powerful nation on the global stage with a strong and self-reliant military. "Today, our forces possess a strong will power due to a powerful leadership at the centre. We are working continuously towards keeping the morale of the soldiers high. They are equipped, capable and ready to give a befitting reply to anyone who casts an evil eye on India," he said.

Shri Rajnath Singh added that the Government has provided an ideal environment to the private sector while trusting the youth and promoting their innovation. "If our young ignited minds take one step forward, we will help them by taking 100 steps. If they take 100 steps, we will take 1,000 steps forward," he said.

The Raksha Mantri asserted that when it comes to technology, developing countries have two options – 'innovation' & 'imitation' – and the Government is laying special emphasis on making the country technology creator rather than a follower. "Imitating technology from developed countries is not wrong for those whose innovation capacity and human resource have not reached the level required to produce new technologies.

If a country imitates technology from other nations, it still moves ahead from old technology; however, the problem is that one becomes addicted to imitation and gets used to second class technology. This forces them to fall 20-30 years behind a developed country. Losing the national self-confidence is a bigger problem as one always remains a technology follower. This mentality comes into your culture, ideology, literature, lifestyle and philosophy. Prime Minister Shri Narendra Modi calls this follower mentality as the mindset of slavery," he said.

Shri Rajnath Singh termed it as the duty of the Government, media as well as intelligentsia to guide the nation out of the mindset of slavery. He recalled the Prime Minister's Independence Day address wherein he appealed to the people to shed the mentality of slavery and feel proud of the national heritage. "We should possess the knowledge about others, but we must be aware of our national heritage too, and feel proud of it," the Raksha Mantri said,

Shri Rajnath Singh listed out the steps taken by the Government to shed the colonial mindset, including the introduction of Bharatiya Nyaya Sanhita in place of the Indian Penal Code. “We strengthened the faith of the youth in the culture of the country. We rekindled Indianness in India. Our belief not only changed the way one sees history, but also rekindled the dreams of the youth studying in IITs, IIMs as well as other prestigious universities in India. Instead of seeking greener pastures abroad, the youth today is contributing to the Indian economy through start-ups and innovation within the country,” he said.

Highlighting the harmony between military power and spirituality prevalent in the Indian culture since centuries, the Raksha Mantri emphasised that the Government has been consistently working for the betterment of the serving & retired personnel as well as those who made the supreme sacrifice in the service of the nation, along with their families. “The Armed Forces are being modernised with latest state-of-the-art weapons/platforms. We established the National War Memorial in New Delhi to honour the sacrifices of the bravehearts. In addition, we implemented the One Rank One Pension scheme, a long-pending demand of the ex-servicemen,” he said.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2012132>



**Press Information Bureau
Government of India**

Ministry of Defence

Thu, 07 Mar 2024

Visit of Air Marshal Vibhas Pande, Air Officer Commanding-In-Chief, Maintenance Command to Base Repair Depot, Palam

Air Marshal Vibhas Pande, Air Officer Commanding-in-Chief HQ Maintenance Command, visited Base Repair Depot, Palam from 06 March 2024 to 07 March 2024. He was accompanied by Mrs. Ruchira Pande, President Air Force Family Welfare Association (Regional).

During the visit, the Air Marshal attended the seminar and inaugurated the supply chain management system fleet of the Indian Air Force on 06 March 2024. He also interacted with the personnel of the Depot as well as the representatives from supply chain management industries.

The seminar focused on the maintenance aspects of the RADAR systems deployed in High altitude areas and innovative solutions towards addressing the associated supply chain challenges.

On 07 March 2024, the Air Marshal inaugurated the Centre for Advanced Printed Circuit Board (PCB) and Avionics Repairs Lab at the Depot. Air Commodore Harsh Bahl, Air Officer Commanding, Base Repair Depot, Palam briefed him on the integrated approach for avionics repair infrastructure under single roof.

The Air Marshal was also briefed about the Radar Emulator and other success stories of indigenisation under the “Atmanirbhar Bharat” Mission undertaken by the Depot.

Mrs. Ruchira Pande visited various ventures operated by Air Force Family Welfare Association (Local) being run by the Depot. She also visited Recreation Cum Therapy Centre, a unique venture of the Depot for providing therapies to the specially – abled children of the Depot and the nearby units. She also appreciated the way children are imparted with the therapies to help them overcome various barriers.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2012311>



Fri, 08 Mar 2024

Navy Rescues 21 crew members from vessel hit in Red Sea attack

In second such incident this week, a Barbados-flagged merchant vessel came under a drone/missile attack drawing a response from an Indian naval warship.

According to the Navy, the Barbados-Flagged Bulk Carrier MV True Confidence was reportedly hit by a drone/missile, approximately 55 nautical miles South West of Aden Wednesday. This led to a fire onboard and caused critical injuries to some of the crew members, prompting them to abandon the ship.

INS Kolkata, deployed for Maritime Security Operations, arrived at the scene of action at 4.45 pm and rescued 21 crew members, including one Indian national, from the life raft using its integral helicopter and boats.

Critical aid was provided to the injured crew by the ship’s medical team, the Navy said, adding that the warship evacuated the rescued crew, including the critically injured personnel, to Djibouti Wednesday evening.

Since the Israel-Hamas war began in October, a series of drone and missile attacks on commercial ships have taken place in the Red Sea, especially on those bound for Israel. The attacks have been reportedly perpetrated by Yemen’s Houthi rebels. However, this is the first incident where the crew of a merchant vessel has been critically injured.

Gulf of Aden. Last month, a Marshall Islands-flagged oil tanker Marlin Luanda came under a missile attack and another drone strike was reported on another Marshall Islands-flagged vessel, MV Genco Picardy. The Navy has rendered assistance in both the incidents.

In December, a Liberia-flagged merchant vessel, MV Chem Pluto, carrying a crew of 22, of which 21 were Indians, came under a drone attack about 220 nautical miles southwest of Porbandar, while it was on its way to New Mangalore.

The Navy has deployed around 10-12 warships at the Arabian Sea, including INS Kochi, INS Mormugao, INS Kolkata, INS Chennai, and a Talwar Class frigate. The Navy's P8I maritime patrol aircraft, MQ-9B Predator drones and Dornier aircraft are also carrying out enhanced surveillance of the region and the force is involved in active investigation of vessels in the Arabian Sea, including boarding of dhows.

<https://indianexpress.com/article/india/indian-warship-rescues-drone-hit-vessel-gulf-aden-9201336/>

THE ECONOMIC TIMES

Thu, 07 Mar 2024

Non-State Actors increasingly gaining access to Modern Technologies of Military use, says General Pande

Non-state actors are "increasingly gaining access" to modern technologies of military use, Army Chief General Manoj Pande said on Thursday. In a keynote address at an event here, he also asserted that amid a complicated military canvas, India "continues to rise".

"Today emerging technologies are no longer superpower-centric. Non-state actors are increasingly gaining access to modern technologies of military use and employing...in conflict. The fallout is an increased propensity in risktaking behaviour and low threshold for initiation of armed conflicts," General Pande said.

"Amidst all of above, the legacy challenges of unsettled borders continue. Newer threats in the conflict spectrum have added to the complexities," he said.

The Army chief said that "grey zone actions and aggression by our adversaries is manifesting across multiple domains including the military i.e. on land, air and maritime space".

"Proxy war is one such manifestation of this threat that we have been combating for years now," he added. Consequent to all these developments, the battle space has become more "complex, contested and lethal and shall remain so in the future", General Pande said.

"Amidst this complicated canvas that I just described, our nation continues to rise. As a nation, we have envisioned, and taken up the resolve to emerge as a developed nation when we celebrate our centenary milestone," he said. India has set the vision of becoming a developed a nation by 2047 when it completes 100 years since independence.

"The aspirations of rising India shall span across expanding strategic horizons. The foremost implications for us therefore is to ensure that the nation's security is not impacted in any way so that the progress continues unabated," General Pande said.

"To secure our national interests, we need to possess commensurate capabilities, which require a continuous progression and a focused approach from where we are today," he added.

<https://economictimes.indiatimes.com/news/defence/non-state-actors-increasingly-gaining-access-to-modern-technologies-of-military-use-says-general-pande/articleshow/108306186.cms>

Cabinet Committee on Security clears 34 new Dhruv Choppers for Indian Coast Guard, Army

The Indian government has approved a proposal for 34 new Advanced Light Helicopter (ALH) Dhruv choppers, marking a significant move towards indigenization in defense manufacturing.

Hindustan Aeronautics Limited (HAL) will manufacture these helicopters, with nine slated for the Indian Coast Guard and 25 for the Indian Army. The decision underscores a commitment to bolstering domestic defense capabilities and replacing older choppers.

The ALH Dhruv is a versatile helicopter known for its performance in high-altitude regions like the Siachen glacier and Ladakh. However, concerns persist regarding its mechanical reliability. In a related development, the government has also sanctioned a project to upgrade BMP infantry combat vehicles for the Indian Army's mechanized infantry directorate.

These projects are expected to be valued at over Rs 8,000 crore, further emphasizing the government's focus on indigenous defense production.

The Advanced Light Helicopter (Dhruv) is a multi-role, new-generation helicopter in the 5.5-ton weight class, indigenously designed and developed by HAL. The Dhruv Advanced Light Helicopter is a workhorse for the Indian Armed Forces. In use with the Army, it flies to extremely high altitudes to serve soldiers in the Siachen glacier and in Ladakh. In recent times, there have been concerns about mechanical defects and reliability in the forces.

<https://economictimes.indiatimes.com/news/defence/cabinet-committee-on-security-clears-34-new-dhruv-choppers-for-indian-coast-guard-army/articleshow/108306276.cms>



Thu, 07 Mar 2024

EAM Jaishankar advocates strengthening India-Japan Defence Ties at Raisina Roundtable

"As the voice of the Global South, India is conscious of its responsibility. Our development efforts today span 78 nations across different continents. Can India and Japan coordinate with regards to their developmental systems? Maritime safety and security have become particularly pressing concerns," he said.

Shedding light on the ongoing tensions in the Red Sea, Jaishankar said: "We can see that in the Red Sea, we have just had the first casualties in shipping. It is also necessary to strengthen our defence capabilities for the benefit of the larger region..."

Three crew members were killed in a Houthi missile strike on a Red Sea merchant ship on Wednesday, according to US officials.

Houthis claimed responsibility for the attack that set the Greek-owned, Barbados-flagged ship True Confidence on fire, some 50 nautical miles (93 km) off the coast of Yemen's port of Aden.

The Houthis have been carrying out attacks on commercial vessels in the Red Sea since November, forcing firms to re-route to longer and more expensive journeys around southern Africa.

The Houthis initially said that they would target Israel-linked ships but have now expanded their targets to include vessels linked to the United Kingdom and the US.

Jaishankar is currently on a visit to Japan from March 6-8 for the 16th India-Japan Foreign Minister's Strategic Dialogue with his Japanese counterpart, Yoko Kamikawa.

The leaders are expected to discuss issues of bilateral, regional and global importance, and exchange views on cooperation for a free, open, inclusive, peaceful and prosperous Indo-Pacific.

<https://ddnews.gov.in/national/eam-jaishankar-advocates-strengthening-india-japan-defence-ties-raisina-roundtable>

THE ECONOMIC TIMES

Thu, 07 Mar 2024

India frees 10,000 more soldiers to guard border with China

India has freed up thousands of soldiers to strengthen its disputed border with China, adding a potential irritant to its already sour relations with Beijing. A 10,000-strong unit of soldiers previously assigned to the country's western border has now been set aside to guard a stretch of its frontier with China, said senior Indian officials who didn't want to be named because discussions are private.

In addition, an existing contingent of 9,000 soldiers, already designated to the disputed Chinese border, will be brought under the newly created fighting command. The combined force will guard a 532 km (330.57 miles) stretch of border that separates China's Tibet region with India's northern states of Uttarakhand and Himachal Pradesh.

The Indian Army and Ministry of Defense declined to comment. The unprecedented assignment of troops — backed by their own dedicated artillery and air support — to this stretch of the border highlights both the region's strategic importance and its growing sensitivity in the eyes of India's leaders.

The area, nestled in the Himalayas, is home to some of Hinduism's holiest shrines. It has seen huge infrastructure investment and development in the last decade as Prime Minister Narendra Modi's government has encouraged tourism to the area.

In 2021, India repositioned an additional 50,000 soldiers to patrol its border with China, after a deadly border clash the year before left at least 20 Indian soldiers dead, seriously straining ties.

China and India have since upgraded military-related infrastructure and moved missiles and aircraft to either side of their border, in addition to positioning more troops. "The possibility that we may face a similar situation that we faced in 2020 is keeping us active all the time," said India's Defense Secretary Giridhar Aramane, at a business event last month, referring to the border clash between the nuclear armed neighbors.

Ties between India and China sunk in the aftermath of that confrontation and haven't substantially improved since then. As many as 21 rounds of talks military-diplomatic have made incremental progress. India has since passed laws to discourage Chinese investments and enterprise in India.

<https://economictimes.indiatimes.com/news/defence/india-frees-10000-more-soldiers-to-guard-border-with-china/articleshow/108298927.cms>



Fri, 08 Mar 2024

भारत-चीन में 5 सालों में हो सकती है जंग, RUSI रिपोर्ट में दावा, काशगार प्लांट पर कब्जे से कैसे डरे शी जिनपिंग?

जियो-पॉलिटिक्स के जानकारों ने भविष्यवाणी की है, कि हिमालय में दूसरे भारत-चीन युद्ध का खतरा मंडरा रहा है और आशंका जताई गई है, कि साल 2025 से 2030 के बीच में कभी भी पूर्वी लद्दाख में भारत और चीन के बीच युद्ध छिड़ सकता है। हालांकि, पूर्व भारतीय सेना प्रमुख की राय अलग है। उनका कहना है, कि 2020 में गलवान संघर्ष के बाद चीन को पता चल गया है, कि नया भारत पीछे नहीं हटने वाला है, लिहाजा ताइवान मुद्दे को सुलझाने से पहले चीन, भारत के साथ किसी जोखिम में उलझना नहीं चाहेगा।

चीन ने रक्षा बजट को बेतहाशा बढ़ाया

चीन ने 2024 में अपने रक्षा खर्च में 7.2 प्रतिशत की भारी वृद्धि की है और ताइवान पर हमला करने और इसे चीनी मुख्य भूमि के साथ एकजुट करने के अपने लक्ष्य की ओर लगातार बढ़ रहा है। हाल ही में समाचार एजेंसी रॉयटर्स की एक एनालिसिस रिपोर्ट में इसका खुलासा किया गया है। रिपोर्ट में, चीन ने कहा कि वह "ताइवान की स्वतंत्रता" और बाहरी हस्तक्षेप की मदद से 'ताइवान के अलगाववादियों' का मजबूती से मुकाबला करेगा।

वहीं, चीन ने अब अपनी नीति से ताइवान के "शांतिपूर्ण पुनर्मिलन" शब्द को हटा दिया है और कहा है, कि ताइवान को किसी भी हालत में चीन से मिलाया जाएगा। इस बीच रॉयल यूनाइटेड सर्विसेज इंस्टीट्यूट (RUSI) ने 'वार क्लाउड्स ओवर द इंडियन होरिजोन?' की एक रिपोर्ट में इंटरनेशनल पॉलिटिकल रिस्क एनालिटिक्स के संस्थापक और अध्यक्ष, लेखक समीर टाटा ने एक खतरनाक भविष्यवाणी की है, जिसमें उन्होंने कहा है, कि "दूसरा चीन-भारत युद्ध संभवतः 2025 और 2030 के बीच भारत के सुदूर उत्तर पश्चिम क्षेत्र में पूर्वी लद्दाख में लड़ा जाएगा।" समीर टाटा का तर्क है, कि बीजिंग भारत के हिस्से पूर्वी लद्दाख को एनर्जी सिक्योरिटी के चश्मे से देखता है, जो चीन और भारत को युद्ध की तरफ धकेल देगा।

उन्होंने लिखा है, कि "चीन डरता है, कि उसके सुदूर पश्चिमी प्रांत शिनजियांग में स्थिति काशगर एनर्जी प्लांट पर आक्रमण करने का एकमात्र रास्ता पूर्वी लद्दाख है, और अगर दुश्मन शक्ति काशगर प्लांट पर कब्जा करती है, तो चीन की एनर्जी व्यवस्था ही ठप हो जाएगी, क्योंकि काशगर प्लांट, ईरान के महत्वपूर्ण तेल और गैस पाइपलाइन से जुड़ा हुआ है और ये पाइपलाइन चीन-पाकिस्तान इकोनॉमिक कॉरिडोर (CPEC) प्रोजेक्ट के तहत पाकिस्तान से होकर गुजरती है।" यानि, CPEC भारत और चीन के बीच लड़ाई की एक वजह बन सकता है, क्योंकि चीन पूर्वी लद्दाख पर कब्जा कर अपने काशगर एनर्जी प्लांट को सुरक्षित करना चाहता है। भारतीय सेना के पूर्व प्रमुख जनरल एमएम नरवणे (रिटायर्ड) भी इस तर्क से सहमत हैं। वह मानते हैं, कि पूर्वी लद्दाख और काराकोरम दर्रा चीन की दीर्घकालिक रणनीति का हिस्सा हैं, क्योंकि वे उनके सीपीईसी परियोजना के लिए महत्वपूर्ण हैं।

यूरोशियन टाइम्स की एक रिपोर्ट में नरवणे ने कहा, कि "लिहजा, अगर चीनियों को लगता है, कि भारत उस स्थिति में पहुंच रहा है, जहां से CPEC रास्ते को काट सकता है और उसे अपाहिज बना सकता है, तो फिर 1962 जैसा बदलाव हो सकता है।" आपको बता दें, कि 1962 में चीन ने भारत पर आक्रमण किया था, जिसमें भारत ने अपने क्षेत्र का एक बड़ा हिस्सा गंवा दिया था। हालांकि, 1962 और आज के भारत में बहुत अंतर आ गया है। जनरल नरवणे 'फोर स्टार्स ऑफ डेस्टिनी' नाम से एक किताब लिखी है, जिसकी रिलीज रोक दी गई है। जिसमें उन्होंने दावा किया है, कि गलवान संघर्ष, दोनों देशों के बीच एक ऐतिहासिक घटना साबित हुई, जिनके बीच सीमा निर्धारण न होने के कारण लंबे समय से संबंध तनावपूर्ण रहे हैं। उन्होंने इस बात पर जोर दिया है, कि गलवान झड़पों के साथ, भारत ने अपना संदेह दूर कर दिया है, और पहले जहां चीन का इशारों में नाम लिया जाता था, वहीं अब भारत के नीति निर्माताओं ने खुलकर चीन का नाम लेना शुरू कर दिया है।

पूर्वी लद्दाख में भारी आक्रामक भारत भारत ने पूर्वी लद्दाख में भारी संख्या में सैनिकों को तैनात कर रखा है और भारत ने पूर्वी लद्दाख में चीन के किसी भी पैतरे को भारी जवाब देने के लिए भारी संख्या में हथियारों को भी तैनात किया है। 2020 में चीनियों ने अपनी चीनी सीमा पर 80 से ज्यादा तंबू लगाए थे। और भारतीय सशस्त्र बलों ने भी कोई समय नहीं गंवाया और कार्रवाई में जुट गए। सी-130 और सी-17 ट्रांसपोर्ट प्लेन से लगातार भारी हथियार पूर्वी लद्दाख की ऊंची पहाड़ियों पर पहुंचाए गये। भारतीय सेना के 68 हजार सैनिक, 330 पैदल सेना वाहन, 90 से ज्यादा टैंक, तोपखाने और दूसरे हथियारों को पूर्वी लद्दाख में तैनात किया गया है।

चीन की भविष्य की प्लानिंग क्या है? चीन की सैन्य रणनीतियों को समझने के लिए उसके भविष्य के लक्ष्यों को समझना काफी महत्वपूर्ण है। चीन की कम्युनिस्ट पार्टी (CCP) ने 2049 तक "चीनी राष्ट्र का महान कायाकल्प" हासिल करने का लक्ष्य रखा है। इसमें अपनी राष्ट्रीय शक्ति का विस्तार करना, अपनी शासन प्रणालियों में सुधार करना और अंतर्राष्ट्रीय व्यवस्था को संशोधित करना शामिल है। लिहाजा, विशेषज्ञों का मानना है, कि 2049 तक राष्ट्रीय कायाकल्प की चीन की योजनाएं शांतिपूर्वक पूरा करना संभव नहीं है। कम्युनिस्ट चीन को इस दौरान ताइवान, हांगकांग और मकाऊ पर भी पूरी तरह से कब्जा करना है। वहीं, भारत, नेपाल और भूटान के रणनीतिक क्षेत्रों पर भी कब्जा करना है और दक्षिण चीन सागर से भी अपने विरोधियों का नामो निशान मिटाना है। जाहिर तौर पर, ये रास्ता युद्ध का है और पूरा भारत-चीन प्रायद्वीप भी चीन के लिए अत्यंत महत्वपूर्ण है, क्योंकि इसका सिरा महत्वपूर्ण मलक्का जलडमरूमध्य और संभावित थाई नहर की तरफ भी जाता है, जहां से भारत, किसी भी वक्त चीनी व्यापार को ठप कर सकता है, लिहाजा चीन

भारत की उस नाकाबंदी के खिलाफ भी विकल्प तलाश रहा है, लिहाजा एक्सपर्ट्स का कहना है, कि चीन की ये महत्वकांक्षा, निश्चित तौर पर युद्ध का दरवाजा खोलती है।

<https://hindi.oneindia.com/news/international/cpec-causes-2nd-india-china-war-in-eastern-ladakh-claims-rusi-report-conflict-possible-by-2025-30-895551.html?story=5>

ThePrint

Thu, 07 Mar 2024

China strikes aggressive tone on South China Sea & Taiwan; chides US for not honouring commitments

China's foreign minister Wang Yi on Thursday took a belligerent stance on the disputed South China Sea, warning of "justified actions" to defend its sovereignty claims and chided the US for not implementing its commitments to improve bilateral ties.

Wang, in his customary annual press conference on the sidelines of the Parliament session, took officially vetted questions from the national and international media on varied topics of global significance.

Wang 70, a veteran diplomat and member of the Politburo of the ruling Communist Party of China (CPC) abruptly took over as Foreign Minister last year after his junior Qin Gang was dismissed. The fate of Qin is not known yet.

There was speculation about Wang being succeeded by Liu Jianchao, the Chinese diplomat currently heading the international department of the CPC, but there was no announcement about it.

Wang, in his nationally televised press meet that lasted nearly 90 minutes, spoke sternly on the South China Sea disputes as he warned that "China will take justified actions to defend its rights in accordance with the law, and respond to unwarranted provocations with prompt and legitimate countermeasures in the South China Sea." His comments came as the South China Sea dispute returned to haunt Beijing with the Philippines, backed by the US, began asserting its claims confronting the Chinese coast guard ships with its naval assets.

China claims most of the South China Sea. The Philippines, Vietnam, Malaysia, Brunei and Taiwan have counterclaims.

"The Chinese people have lived and worked in the South China Sea for generations," Wang said about China's claims.

"For unreasonable provocations, we will take just countermeasures," Wang asserted. "We also advise certain countries outside the region not to stir up trouble, choose sides, and not to become disruptors and troublemakers in the South China Sea." On Taiwan, which China claims as part of its mainland, he struck an aggressive note, warning that those who still connive at and support "Taiwan's independence" are challenging China's sovereignty.

“Our bottom line is also quite clear: We will never allow Taiwan to be separated from the motherland,” he said and sought to dismiss the recent Presidential election in Taiwan, in which a pro-independence leader Lai Ching-te won, as a “local election.” He said more countries are backing Beijing’s one-China policy. China views Taiwan as a rebel province that must be reunified with the mainland, even by force. China had staged several provocative military drills around Taiwan following some high-profile visits by American lawmakers.

“There will be a family photo of the whole international community in which all members uphold the one-China principle. It is only a matter of time,” he said.

On the China-US ties, Wang said Washington should honour commitments on bilateral ties.

Peaceful coexistence is the baseline, Wang said. Conflict and confrontation between two major countries like China and the United States would have unimaginable consequences.

The US side’s wrong perception of China still persists, and the commitments it made have not been truly fulfilled. Its list of unilateral sanctions continues to lengthen, he said, adding: “If the US says one thing and does another, where is its credibility as a major country? If it gets jittery whenever it hears the word ‘China,’ where is its confidence as a major country?” he said.

“If it only wants itself to prosper, but denies other countries legitimate development, where is international fairness? If it persistently monopolises the high end of the value chain and keeps China at the low end, where is fairness and competition?” he asked.

Wang’s comments on the US come as the Biden administration steps up controls to narrow the kinds of high-end technology that can be accessed by China.

Wang also accused the US, without mentioning it by name, of stirring up trouble in Taiwan and the South China Sea.

On the North Korean issue, he said anyone undermining peace and stability in the Korean Peninsula region will pay a heavy price.

He also made a strong pitch for a bigger role for BRICS, (Brazil, Russia, India, China, South Africa), saying that it is a growing force for global peace and justice.

The five-member BRICS bloc is set to double its membership with the inclusion of Egypt, Ethiopia, Iran, Saudi Arabia and the United Arab Emirates.

“BRICS should not be seen as a challenge. In the broader sense, BRICS expansion reflects the collective rise of the Global South and the world evolving faster to the multi-polarity consisting of emerging markets and developing countries,” Wang said.

He reiterated China’s support for the UN reforms, including the UN Security Council but remained vague about Beijing’s proposals.

India and several emerging economies accuse China of blocking the UNSC reforms to retain its power.

China supports the UN in holding the Summit of the Future and reaching a Pact for the Future that benefits all parties, he said.

He also called for ending the Ukraine conflict saying that Beijing backs holding, in due course, an international peace conference.

On the Israel-Hamas conflict, he said there should be a broad-based and authoritative international peace conference to come up with a road map to end the crisis and the international community should promote an immediate ceasefire and work for a two-state solution to resolve the Palestine issue.

He defended the close China-Russia ties, saying that both have forged a new paradigm of major-country relations that differs entirely from the obsolete Cold War approach.

Based on non-alliance, non-confrontation and not targeting any third party, China and Russia strive for lasting good-neighbourliness and friendship and seek to deepen their comprehensive strategic coordination, he said.

Wang also announced a visa-free policy for Switzerland, Ireland, Hungary, Austria, Belgium and Luxembourg on a trial basis, starting March 14.

<https://theprint.in/world/china-strikes-aggressive-tone-on-south-china-sea-taiwan-chides-us-for-not-honouring-commitments-3/1992073/>

Science & Technology News



Press Information Bureau
Government of India

Ministry of Science & Technology

Thu, 07 Mar 2024

CSIR-NIScPR organised "Phenome India" - A Unique Health Check-up Camp

The Council of Scientific and Industrial Research (CSIR) has initiated a unique health check –up camp called ‘Phenome India’ (PI-CHeCK) for the CSIR family. The key objectives of this initiative of CSIR are to ensure “Swasthya Bharat Viksir Bharat” through health and wellness check. CSIR is one of the largest research and development organisations of India and this is a network of 37 laboratories situated across the whole country.

National Institute of Science Communication and Policy Research (NIScPR) is one of the constituent laboratories of CSIR which organized the PI-CHeCK health check-up camp from 3 to 5 March 2024 at its Pusa Campus, New Delhi.

A few glimpses of the Phenome India inauguration and Health Check-up Camp at CSIR-NIScPR

The health check-up camp was inaugurated by Prof. Ranjana Aggarwal, Director of CSIR-NIScPR and Dr. Shantanu Sengupta, Chief Scientist of CSIR-IGIB. This pioneering initiative is dedicated to fostering holistic health within the CSIR family. The event was efficiently coordinated by Dr. Kanika Malik, Dr. Narendra Kumar Sahoo, Dr. Arvind Meena, Shri Narendra Pal and Shri Kailash Chandr Parewa. Notably, the PI-CHeCK health check-up camp witnessed enthusiastic participation from around 98 individuals within the institute.

Phenome India is not just a health check-up camp; it's a pioneering step towards understanding the unique health landscape of our nation. By gathering diverse data through PI-CHeCK, CSIR aspires to pave the way for tailored healthcare solutions and contribute significantly to the advancement of medical knowledge. Phenome India-CSIR Health Cohort Knowledgebase (PI-CHeCK) is the flagship project designed by CSIR to identify India-specific risk factors for cardio metabolic diseases. This ground-breaking study, conducted in collaboration with experts and participants from various CSIR labs across the nation, seeks to provide valuable scientific insights, marking a significant stride toward personalized and precision medicine.

PI-CHeCK is a long-term cohort study initiated by CSIR, aiming to encompass the diverse Indian population. With representation from labs across the country, this health cohort study will collect comprehensive data, including clinical questionnaires, lifestyle and dietary habits, body composition measurements, scanning-based assessments, blood biochemistry, and molecular assay-based data. CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR) is dedicated to advancing science communication, evidence-based Science Technology and Innovation policy research and promoting scientific awareness among the public. Through innovative initiatives and collaborative efforts, CSIR-NIScPR strives to bridge the gap between the scientific community and the general public.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2012125>



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CSIR-NIScPR Organized Workshops on how to communicate Science by using right S&T Terminology through Electronic and social media

The CSIR-National Institute of Science Communication and Policy Research (NIScPR) hosted an Orientation Workshops on 6 March 2024, empowering its Science Media Communication Cell (SMCC) with valuable insights from renowned experts. The workshops, held at CSIR-NIScPR,

Pusa, New Delhi, aimed to nurture the SMCC with effective strategies to communicate science and technology (S&T) information of Indian science to society and public at large.

Dr. Ashok Selwatkar, Assistant Director at the Commission of Scientific and Technical Terminology (CSTT), shared his knowledge on the role of technical terminology in S&T dissemination. He also trained the workshop participants in the usage of the latest scientific and technical terminology of various scientific domains. Attendees gained an in-depth understanding of the importance of using technical terms in S&T communication to enhance the public awareness about the complex scientific concepts.

Ms. Priyanka Tiwari, Program Executive from the Science Cell, All India Radio (Delhi Station), shared her thoughts on how to effectively broadcast S&T achievements of Indian laboratories through Akashvani. Ms. Tiwari provided valuable insights into the techniques and methods involved in effectively communicating science on radio.

Shri Bharat Bhushan, Consultant at Doordarshan, delivered a presentation on innovative ways to disseminate science through social media. Shri Bhushan addressed the importance of using AI for audio, visual, and content creation to increase social media engagement. Participants attained a clear understanding of the latest trends in social media and learnt how to effectively use them to promote S&T content.

Dr. Suman Ray, Principal Scientist, CSIR-NIScPR felicitated the experts. Dr. Manish Mohan Gore, Scientist, CSIR-NIScPR and Principal Investigator, SMCC provided a brief outline about the objectives of SMCC, its key activities and purpose of the orientation workshop.

The workshop was attended by SMCC project staff and Ph.D. students seeking to enhance their knowledge of S&T dissemination. The government's focus has been on increasing public awareness and understanding of science and technology, and workshops like these play an important role in bridging the gap between science and society.

Shri Bharat Bhushan while delivering his talk at the Orientation workshop

The CSIR-NIScPR workshop provided a unique opportunity for experts from various media fields to come together and share their insights on disseminating S&T to the public. Participants are getting valuable insights and learning innovative techniques that can be used to communicate complex scientific concepts effectively.

The Council of Scientific and Industrial Research-National Institute of Science Communication and Policy Research (CSIR-NIScPR) is dedicated to advancing science communication, evidence-based S&T policy research and promoting scientific awareness among the public. Through innovative initiatives and collaborative efforts, CSIR-NIScPR strives to bridge the gap between the scientific community and the general public. Science Media Communication Cell (SMCC) is a recent initiative of CSIR-NIScPR to disseminate S&T achievements of Indian laboratories through various mass media and formats.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2012111>

After Chandrayaan-3, ISRO eyes Return Moon Missions

The Indian Space Research Organisation (ISRO) is gearing up for a return lunar mission, where samples from the Moon will be brought back for the first time, officials from the agency said, setting the stage for the next leap in the country's space programme after the success of the Chandrayaan-3 mission last year.

The mission is expected to take flight by 2027 or 2028, the officials said.

“We are currently focusing on return lunar missions, which might take shape by 2027 or 2028,” ISRO chairman S Somanath said.

The technology for such missions was tested during the Chandrayaan-3 mission including the hop experiment where the lander Vikram was powered again and landed at a spot different from its initial location of landing.

The propulsion module of the spacecraft also returned to the Earth's orbit to test its capabilities for a return mission, the ISRO chief said.

On August 23 last year, the Indian space agency created history by successfully landing the Chandrayaan-3 spacecraft near the lunar south pole, a feat that had not been achieved by any other country.

The fourth lunar mission aims to collect samples from the lunar surface, demonstrate docking and undocking capabilities in the lunar orbit, demonstrate transfer of samples from one module to another, and to ensure that the module safely re-enters Earth and deliver the collected samples, senior ISRO officials said.

ISRO officials also said that unlike the previous Chandrayaan missions, the fourth mission will likely be launched in two phases, and on board two launch vehicles — Polar Satellite Launch Vehicle (PSLV) and the Launch Vehicle Mark-3, which was formerly known as the Geosynchronous Satellite Launch Vehicle Mk-3.

The mission will also have five modules this time — the propulsion module, descender module, ascender module, transfer module and re-entry module.

Like previous missions, the propulsion module will guide the craft till the lunar orbit; the descender module will help the craft make a controlled landing on the lunar surface just like the lander module did for Chandrayaan-3; after the mission experiments and sample collection, the ascender module will be relaunched and begin its journey back to Earth; the transfer module will eject the ascender module from the lunar orbit and detach itself before the module enters the Earth orbit from where the re-entry orbit will take over and guide the samples to Earth.

The Chandrayaan-3 spacecraft had only three modules — the propulsion module, the lander module and the rover module. While the propulsion module ejected itself in the lunar orbit, the lander and rover module conducted a slew of experiments on the lunar surface.

ISRO's heavier launch vehicle, LVM-3, is likely to carry three modules, while PSLV, which launched Chandrayaan-3, will launch two modules in the upcoming mission, the space agency said in its mission documents.

<https://www.hindustantimes.com/india-news/after-chandrayaan-3-isro-eyes-return-moon-missions-101709838282340.html>



Fri, 08 Mar 2024

Voyager 1, farthest Spacecraft from Earth, sending 'incoherent' data back to NASA

NASA's Voyager 1 is the most-distant man-made object in space and is more than 24 billion kilometres away from us. But the first spacecraft to cross into interstellar space is not doing well and its days seem numbered as it is sending back incoherent messages to mission controllers at the space agency.

"It basically stopped talking to us in a coherent manner," said Suzanne Dodd of NASA's Jet Propulsion Laboratory to *NPR*. Dodd has been the project manager for the Voyager interstellar mission since 2010.

Voyager 1 and its sibling Voyager 2 have been on their journey for more than 40 years since they launched in 1977. They are both more than 130 times farther away from Earth than our planet is from the Sun. The two spacecraft were initially on a four-year mission to study Jupiter, Saturn and the larger moons of the two planets over a period of five years. This means that they outlasted their original mission lifespan by more than 35 years.

The twin spacecraft made a string of discoveries on and around Jupiter and Saturn, like the intricacies of Saturn's rings and the presence of active volcanoes on Jupiter's moon Io. Voyager 2 went on to explore Uranus and Neptune and is still the only spacecraft to have visited those planets.

But Voyager 1 has not sent any coherent data to Earth since November, and the space agency is still working on what Dodd is calling the "most serious issue" that it has faced since she took over the job in 2010, according to *The New York Times*.

Apart from its scientific impact, Voyager 1 also clicked the famous "Pale Blue Dot" image of Earth, which Carl Sagan interpreted as a representation of how small humanity is in the grand scale of the cosmos.

<https://indianexpress.com/article/technology/science/voyager-1-spacecraft-incoherent-data-nasa-9201528/>

