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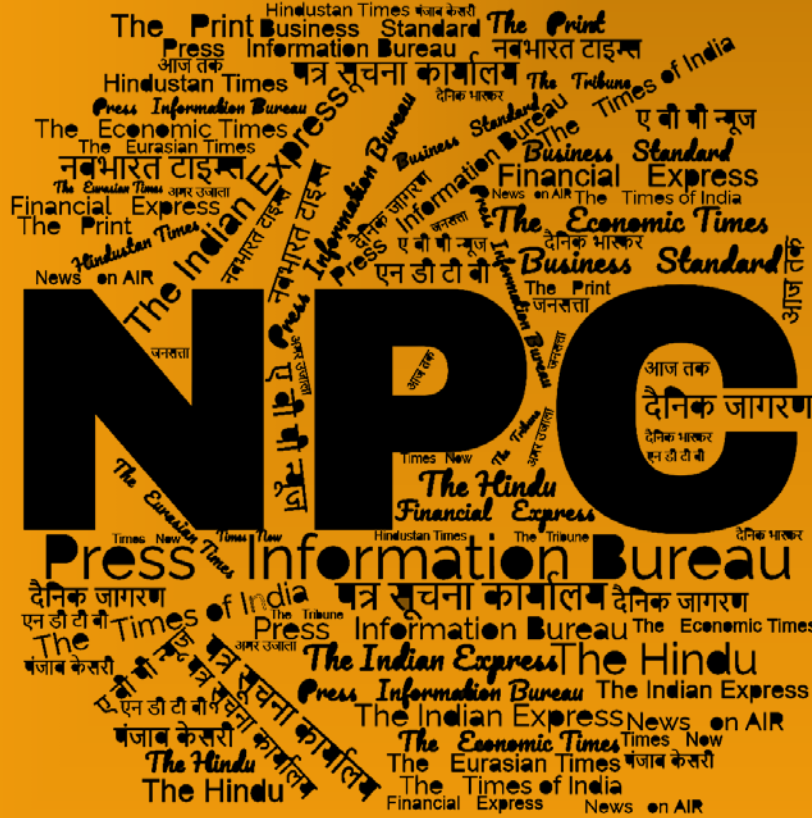
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डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

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Press Information Bureau
Government of India

Ministry of Defence

Wed, 01 Feb 2023

Air Marshal AP Singh Assumes Appointment of Vice Chief of the Air Staff



Air Marshal AP Singh PVSM AVSM took over as the Vice Chief of the Air Staff (VCAS) on 01 February 2023. On the occasion of taking over of the office of VCAS, he laid a wreath at the National War Memorial to honour those Armed Forces personnel who have made the supreme sacrifice for the nation. Following this, he was accorded a ceremonial Guard of Honour at Air Headquarters (Vayu Bhavan).

An alumnus of the National Defence Academy, Defence Services Staff College and National Defence College, the Air Marshal was commissioned into the Fighter Stream of the IAF on 21 December 1984. The Air Officer is a Qualified Flying Instructor and an Experimental Test Pilot with more than 5000 hours of flying experience on a variety of fixed and rotary wing aircraft.

During his career, the officer has commanded an operational fighter squadron and a frontline air base. As a test pilot, he led the MiG-29 Upgrade Project Management Team at Moscow, Russia. He was also the Project Director (Flight Test) at National Flight Test Centre looking after the flight testing of the Light Combat Aircraft (Tejas). He has held important staff appointments of Air Defence Commander at South Western Air Command and Senior Air Staff Officer at Eastern Air Command. Prior to assuming his current appointment, he was the Air Officer Commanding-in-Chief at Central Air Command.

The Air Marshal is a recipient of Param Vishisht Seva Medal and Ati Vishisht Seva Medal.

He has succeeded Air Marshal Sandeep Singh, who retired on 31 January 2023 after more than thirty-nine years of illustrious service.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1895380>

देश की सुरक्षा न तो 'आउटसोर्स' की जा सकती है, न दूसरों की उदारता पर निर्भर रह सकते हैं: मनोज पांडे

थल सेनाध्यक्ष जनरल मनोज पांडे ने बुधवार को कहा कि कोई भी देश नवीनतम "अत्याधुनिक" प्रौद्योगिकियों को साझा करने को तैयार नहीं है। उन्होंने कहा कि इससे स्पष्ट है कि देश की सुरक्षा न तो 'आउटसोर्स' की जा सकती है और न ही दूसरों की उदारता पर निर्भर हा जा सकता है। सेनाध्यक्ष महाराष्ट्र के पुणे शहर में आर्मी इंस्टीट्यूट ऑफ टेक्नोलॉजी के स्थापना दिवस के मौके पर बोल रहे थे। उन्होंने कहा कि रूस-यूक्रेन संघर्ष से कुछ प्रमुख तथ्य सामने आये हैं।

इनमें विषम युद्ध के प्रभाव, सूचना युद्ध की शक्ति, डिजिटल तौर पर मजबूती, आर्थिक ताकत का हथियार के तौर पर उपयोग करना कुछ ऐसे क्षेत्र हैं जो प्रद्योगिकी दक्षता होने की वजह से युद्ध में अहम भूमिका निभाते नजर आए हैं। उन्होंने कहा कि विषमताओं के बावजूद मौजूदा समय में सुरक्षा तकनीकी बढ़त पर निर्भर है। उन्होंने कहा, "कोई भी देश नवीनतम, अत्याधुनिक तकनीकों को साझा करने के लिए तैयार नहीं है, इसलिए इसका तात्पर्य है कि राष्ट्र की सुरक्षा को न तो आउटसोर्स किया जा सकता है और न ही दूसरों की उदारता पर निर्भर रहा जा सकता है।

महत्वपूर्ण प्रौद्योगिकियों में आत्मनिर्भरता और निवेश अनुसंधान और विकास एक रणनीतिक अनिवार्यता है जिसे अब नजरअंदाज नहीं किया जा सकता है।" सेनाध्यक्ष के मुताबिक, भारतीय सेना इन वास्तविकताओं से अवगत है। उन्होंने कहा, "हमने यह सुनिश्चित करने का संकल्प लिया है कि हमारी क्षमताओं का विकास आत्मनिर्भरता के सिद्धांतों और विशिष्ट तकनीकों के लाभ पर आधारित हो और भारतीय सेना इन दोनों पहलुओं पर ठोस कदम उठा रही है।" सेना प्रमुख ने कहा कि प्रधानमंत्री नरेंद्र मोदी द्वारा दिया गया नारा "जय जवान, जय किसान, जय विज्ञान, जय अनुसंधान" समकालीन वास्तविकता को बेहतर तरीके से व्यक्त करता है और अनुसंधान और नवाचार के महत्व को रेखांकित करता है।

<https://www.punjabkesari.in/national/news/the-country-s-security-can-neither-be-outsourced-manoj-pandey-1763410>

हिन्दुस्तान

देश की सुरक्षा पर खास जोर; रक्षा बजट में 13 फीसदी की बढ़ोतरी, 5.94 लाख करोड़ रुपये का आवंटन

वित्त वर्ष 2023-24 के आम बजट में रक्षा क्षेत्र के लिए आवंटित राशि 13 प्रतिशत बढ़ाकर 5.94 लाख करोड़ रुपये कर दी गई है। पिछले साल यह राशि 5.25 लाख करोड़ रुपये थी। वित्त मंत्री निर्मला सीतारमण ने बुधवार को संसद में आम बजट पेश किया, जिसमें सशस्त्र बलों के लिहाज से पूंजीगत व्यय के लिए कुल 1.62 लाख करोड़ रुपये अलग रखे गए हैं। इनमें नए हथियार, विमान, युद्धपोत और अन्य सैन्य साजो सामान की खरीद शामिल है। वित्त वर्ष 2022-23 में, इस क्षेत्र के लिहाज से पूंजी परिव्यय के लिए

बजटीय आवंटन 1.52 लाख करोड़ रुपये था, लेकिन संशोधित अनुमान के अनुसार व्यय 1.50 लाख करोड़ रुपये था। बजट दस्तावेजों के अनुसार, राजस्व व्यय के लिए 4,22,162 करोड़ रुपये का आवंटन किया गया है जिसमें वेतन भुगतान और प्रतिष्ठानों के रख-रखाव पर खर्च शामिल है।

इस राशि में रक्षा पेंशन के लिए 1,38,205 करोड़ रुपये, रक्षा सेवाओं के लिए 2,70,120 करोड़ रुपये और रक्षा मंत्रालय (सिविल) के लिए 13,837 करोड़ रुपये शामिल हैं। रक्षा मंत्रालय ने कहा कि पूंजी परिव्यय से महत्वपूर्ण अंतर को पाटने और बलों को गोला -बारूद, हथियारों के रख -रखाव, संपत्ति और सैन्य भंडार सेलैस करने की उम्मीद है। भारतीय वायुसेना के लिए पूंजी परिव्यय सबसे अधिक 57,137.09 करोड़ रुपये था जिसमें विमान व एयरो इंजन की खरीद के लिए 15,721 करोड़ रुपये और अन्य उपकरणों के लिए 36,223.13 करोड़ रुपये शामिल हैं।

वित्त वर्ष 2022-23 में दिए गए 47,590 करोड़ रुपये के मुकाबले भारतीय नौसेना के लिए पूंजी परिव्यय के रूप में 52,804 करोड़ रुपये की राशि तय की गई है। सेना के लिए पूंजी परिव्यय 37,241 करोड़ रुपये है। सीमावर्ती बुनियादी ढांचे को बढ़ावा देने पर ध्यान देने के साथ, सीमा सड़क संगठन (बीआरओ) के लिए पूंजी परिव्यय को 2022-23 में 3,500 करोड़ रुपये की तुलना में बढ़ाकर 5,000 करोड़ रुपये कर दिया गया है, जो 43 प्रतिशत की वृद्धि दर्शाता है।

BRO का पूंजी बजट बढ़ाकर 5,000 करोड़ रुपये

रक्षा मंत्री राजनाथ सिंह ने ट्वीट किया, 'रक्षा मंत्रालय सीमावर्ती क्षेत्रों, विशेष रूप से उत्तरी सीमाओं में बुनियादी ढांचे को मजबूत करने के लिए प्रतिबद्ध है। इसके अनुसार, वित्त वर्ष 2023-24 में सीमा सड़क संगठन (बीआरओ) का पूंजी बजट 43 प्रतिशत बढ़ाकर 5,000 करोड़ रुपये कर दिया गया है, जबकि वित्त वर्ष 2022-23 में यह 3,500 करोड़ रुपये था।

'रक्षा अनुसंधान और विकास संगठन (डीआरडीओ) को 23,264 करोड़ रुपये का आवंटन किया गया है। सिंह ने ट्वीट किया, 'वित्तीय वर्ष 2023-24 के लिए केंद्रीय बजट में 45,03,097 करोड़ रुपये के कुल परिव्यय की परिकल्पना की गई है। इसमें से रक्षा मंत्रालय को कुल 5,93,537.64 करोड़ रुपये का बजट आवंटित किया गया है, जो भारत सरकार के कुल बजट का 13.18 प्रतिशत है।'

पूंजीगत बजट में 59,200 करोड़ रुपये की वृद्धि

1,62,600 करोड़ रुपये के पूंजी आवंटन में पिछले साल के परिव्यय की तुलना में 10,230 करोड़ रुपये की वृद्धि दर्ज की गई और यह 6.7 प्रतिशत की वृद्धि है। रक्षा मंत्रालय ने कहा कि 2019-20 के बाद से पूंजीगत बजट में 59,200 करोड़ रुपये की वृद्धि हुई है, जो कि 57 प्रतिशत की वृद्धि है। बजट दस्तावेजों के अनुसार, राजस्व व्यय के लिए सशस्त्र बलों को 2,70,120 करोड़ रुपये का आवंटन किया गया है जिसमें वेतन भुगतान और प्रतिष्ठानों के रखरखाव पर खर्च शामिल है।

वर्ष 2022-23 में राजस्व व्यय का बजटीय आवंटन 2,33,000 करोड़ रुपये था। 2023-24 के बजट में रक्षा मंत्रालय (सिविल) के लिए पूंजी परिव्यय 8774 करोड़ रुपये प्रस्तावित किया गया है। सेना के लिए राजस्व व्यय 1,82,649 करोड़ रुपये, भारतीय वायुसेना के लिए 44,345 करोड़ रुपये और भारतीय नौसेना के लिए 32,284 करोड़ रुपये रखा गया है।

<https://www.livehindustan.com/national/story-general-budget-financial-year-2023-24-amount-allocated-defense-sector-increased-7712414.html>

Defence Budget of India 2023: India's Defence Sector Gets Rs. 5.94 Lakh Crore for 2023-24

Finance Minister Nirmala Sitharaman on Wednesday increased allocation to defence Budget to Rs 5.94 lakh crore for 2023-24 from last year's (2022-23) allocation of Rs 5.25 lakh crore.

A total of Rs 1.62 lakh crore has been set aside for capital expenditure that includes purchasing new weapons, aircraft, warships and other military hardware, stated the Budget report.

For 2022-23, the budgetary allocation for capital outlay was Rs 1.52 lakh crore but the revised estimate showed the expenditure at Rs 1.50 lakh crore. According to 2023-24 budget documents, an allocation of Rs 2,70,120 crore has been made for revenue expenditure that includes expenses on payment of salaries and maintenance of establishments. The budgetary allocation of revenue expenditure in 2022-23 was Rs 2,39,000 crore.

"The allocation under this segment has doubled in two years since FY 2021-22. This will boost the Border infrastructure thereby creating strategically important assets like Sela Tunnel, Nechipu Tunnel & Sela-Chhabrela Tunnel & will also enhance border connectivity," said defence ministry. In the budget for 2023-24, the capital outlay for the Ministry of Defence (Civil) has been pegged at Rs 8,774 crore while an amount of Rs 13,837 crore has been set aside under capital outlay.

A separate amount of Rs 1,38,205 crore has been allocated for defence pensions. The total revenue expenditure including the pension outlay has been estimated at Rs 4,22,162 crore. According to the budget papers, the total size of the defence budget is Rs 5,93,537.64 crore. Capital expenditure in the defence sector is crucial for India's aim to become self-reliant in defence manufacturing and to meet a rising challenge from China and Pakistan by creating infrastructure and adopting modern technology.

The government, in the last few years, has encouraged domestic manufacturing while reducing exports under the defence ecosystem of India. The exports in the sector surged nearly eight times to Rs 12,815 crore in 2021-22 from Rs 1,521 crore in 2016-17. In September 2022, the government had introduced the PLI scheme in order to spur manufacturing of drones and drone components in India.

The defence ministry had, in December last year, approved the procurement of arms worth over Rs 84,300 crore to boost the combat capabilities of the defence forces. This amount included approval for six capital acquisitions for the Indian Army, 10 for the Indian Navy, six for Indian Air Force, and two for Indian Coast Guard, as per media reports.

https://m.economictimes.com/news/defence/budget-2023-indias-defence-sector-gets-rs-5-94-lakh-crore-for-2023-24/amp_articleshow/97511172.cms

Wed, 01 Feb 2023

Defence Budget Goes Up; Ministry of Defence Expects Allocations to Boost Modernisation, Training and Infra

With a focus on modernization and infrastructural development and for the armed forces to be battle ready the non-salary revenue outlay has been enhanced significantly. It has gone up from Rs 62,431 crore in Budget Estimates (BE) 2022-23 to Rs 90,000 crore in BE 2023-24. Thus representing almost a 44 percent jump.

According to an official statement issued by the Ministry of Defence issued on Feb 1, 2023, this allocation is expected to not only close critical gaps in the combat capabilities, but will help to equip the Forces in terms of sustenance of weapons and assets, ammunition, military reserves etc.

Out of the total outlay of Rs 45,03,097 crore of the Union Budget the Ministry of Defence has been allocated a total Budget of Rs 5,93,537.64 crore and this allocation includes an amount of Rs 1,38,205 crore for Defence Pensions. This is almost 13.18 percent of the total budget.

As has been reported earlier in Financial Express Online the total Defence Budget represents an increase of Rs 68,371.49 crore (around 13 percent) over the FY2023 budget.

Terming the Union Budget 2023-24 as growth-oriented, defence Minister Rajnath Singh has said that it will help in achieving the Government's goal of making India a \$5 trillion economy within few years.

The hike in the budget will help in hiring and procuring niche capabilities which will mitigate capability gaps wherever required. Also in strengthening forward defences, stocking of military reserves, amongst others. And enable emergency procurement of critical ammunition and spares and boost fleet serviceability; ships, aircraft and their logistics and other weapons systems.

During the Mid-term review the government had enhanced the operational allotments of the current financial year by around Rs 26,000 crore, which is around 42 percent of the present allocation. Because of an increase in the revised estimates in 2022-23 it ensured liquidation of the entire carry over liabilities during the current year. This means that there is no impact in the next FY's operational outlay of the Armed Forces.

The hike in the budget is also expected to cater to the Training Aids and Simulators for Agniveers.

Focus on Modernisation & Infrastructure Development

In the Capital Allocations related to the modernization and infrastructure development there is an increase to Rs 1,62,600 crore representing a rise of Rs 10,230 crore (6.7%) over FY 2022-23. And since 2019-20 the increase in the Capital Budget has been Rs 59,200 crore (around 57 percent).

Focus on infrastructure strengthening in the Border Areas, especially Northern borders

Accordingly, the Capital Budget of Border Roads Organisation (BRO) has gone up by 43 percent to Rs 5,000 crore compared to Rs 3,500 crore of previous fiscal. This increase, according to the ministry, will help in enhancing border connectivity and strengthening the infrastructure and create strategic assets like Sela Tunnel, Nechipu Tunnel & Sela-Chhabrela Tunnel.

R&D and Atmanirbhar Bharat

Once again the R&D allocation for Defence Research and Development Organisation has been hiked. This time it is by 9 percent with a total allocation of Rs 23,264 crore in BE 2023-24.

iDEX and DTIS have been allocated Rs 116 crore and Rs 45 crore respectively as this will help encourage technology development, further foster innovation, and further strengthen the Defence Industrial ecosystem in the country to further give a boost to the defence start-ups and iDEX scheme, National Data Governance Policy has been announced and this will unleash innovation and research by start-ups and academia.

To give a fillip to the MSMEs in the defence sector Revamped Credit Guarantee scheme has been announced. This scheme will come into effect starting April 1, 2023 through an infusion of Rs. 9,000 Crore in the corpus. And this is expected to enable additional collateral-free guaranteed credit of Rs 2 lakh crore. Also the cost of the credit has been reduced by about 1 percent.

Pensions

There is a notable jump of 15.5 percent in the Defence Pensions in FY 2023-24. This according to the MoD statement includes an amount of Rs 28,138 crore to meet the requirement on account of revision of Armed Forces Pensioners/ Family Pensioners under One Rank One Pension (OROP).

Healthcare outreach

There is a notable increase of 52 percent in the allotment for Ex-Servicemen Contributory Health Scheme (ECHS) — Rs 5431.56 crore in FY 2023-24. This enhancement is expected to ensure ‘Cashless Health Services’ and also provide improved ‘Service Delivery’ to veterans and their dependents across the country.

Agniveers

They have been provided Exempt-Exempt-Exempt (EEE) status to the Agniveer Fund.

<https://www.financialexpress.com/budget/defence-budget-goes-up-ministry-of-defence-expects-allocations-to-boost-modernisation-training-and-infra-2968443>

THE TIMES OF INDIA

Thu, 02 Feb 2023

Defence Modernisation to Stay a Slow March

The Defence Budget has only seen a modest hike, despite the continuing 33-month-long troop confrontation along the frontier with China. The allocation for military modernisation, meanwhile, was just over onefourth of the outlay due to hefty revenue expenditure and pension bill. In effect, military modernisation will proceed slowly like before. The defence has been pegged at Rs 5. 93 lakh crore, which marks a meagre 1. 5% hike over the last fiscal’s revised

estimates and 13% more than budgetary estimates. It works out to just 1.97% of the projected GDP for 2023-24 if the huge pension allocation of Rs 1.38 lakh crore for around 35 lakh exservicemen and defence civilians is considered. It drops to a mere 1.5% if the pension bill is excluded.

Experts have been calling for an allocation of more than 2.5% of the GDP to defence expenditure to build deterrence against the threat from China and . The capital outlay for new weapons systems, platforms and sensors stood at Rs 1.63 lakh crore in the new defence budget, a 6.7% hike from budgetary estimates of 2022-2023. It was dwarfed by the Rs 2.7 lakh crore revenue expenditure for day-to-day running costs and salaries for the armed forces (14 lakh personnel). The defence ministry said 'non-salary revenue outlay' has been enhanced by 44% to touch Rs 90,000 crore to maintain a high level of operational preparedness. "This will cater to sustenance of weapons systems, warships and aircraft, and their logistics as well as emergency procurement of critical ammunition and spares," an official said. To strengthen border infrastructure along LAC, the capital budget of the Border Roads Organisation has been increased by 43% to Rs 5,000 crore.

<https://timesofindia.indiatimes.com/business/budget/defence-modernisation-to-stay-a-slow-march/articleshow/97539211.cms>



Thu, 02 Feb 2023

India, US Agree to Deepen Tech, Defence Ties

By Shubhajit Roy

IN WHAT is being perceived as the new frontier for cooperation with an eye on China, India and the US have decided to deepen cooperation on defence, artificial intelligence, quantum technologies, high performance computing, co-production of jet engines, semiconductor supply chain, human spaceflight, commercial space launches and telecom, including 6G.

These are the major takeaways after the meeting between National Security Advisor Ajit Doval and US NSA Jake Sullivan in Washington DC over the last two days. The two NSAs met for the first meeting of the US-India initiative on Critical and Emerging Technology (iCET), which was decided between Prime Minister Narendra Modi and US President Joe Biden in May 2022 on the sidelines of the Quad meeting in Tokyo.

The list of new initiatives include:

The United States has received an application from General Electric company to jointly produce jet engines that could power aircraft operated and produced by India. A White House statement said "the US and India affirm that the ways in which technology is designed, developed, governed and used should be shaped by our shared democratic values and respect for universal human rights. We are committed to fostering an open, accessible and secure technology ecosystem, based on mutual trust and confidence, that will reinforce our democratic values."

<https://indianexpress.com/article/india/india-us-agree-to-deepen-tech-defence-ties-8418799/lite/>

Eye on China, India and US to Deepen Ties on Defence, AI, Quantum Computing, Space

By Shubhajit Roy

In what is being perceived as the new frontier for cooperation with an eye on China, India and the US have decided to deepen cooperation on defence, artificial intelligence, quantum technologies, high-performance computing, co-production of jet engines, semiconductor supply chains, human spaceflight, commercial space launches, telecom technologies including 6G.

These are the major takeaways from the meeting held between National Security Advisor AjitDoval and US NSA Jake Sullivan in Washington DC over the past two days. The two NSAs met for the first meeting of the US-India initiative on Critical and Emerging Technology (iCET), which was decided between Prime Minister NarendraModi and US President Joe Biden in May 2022 on the sidelines of the Quad meeting in Tokyo.

The list of new initiatives are the following:

- A new bilateral Defence Industrial Cooperation Roadmap to accelerate technological cooperation for joint development and production of jet engines, munition related technologies.
- The US has received an application from General Electric to jointly produce jet engines that could power jet aircraft operated and produced by India. “The US committed to expeditious review of the licence application submitted by M/s General Electric to produce jet engines in India for the indigenously manufactured Light Combat Aircraft,” the Indian statement said.
- Long-term research and development cooperation, with a focus on identifying maritime security and intelligence surveillance reconnaissance operational use cases.
- A new “Innovation Bridge” that will connect US and Indian defence startups.
- Collaboration on high-performance computing (HPC), including by working with US Congress to lower barriers for US exports to India of HPC technology and source code.
- A new Implementation Arrangement for a Research Agency Partnership between the National Science Foundation and Indian science agencies to expand international collaboration in a range of areas—including artificial intelligence, quantum technologies and advanced wireless technology.
- Joint Indo-US Quantum Coordination Mechanism with participation from industry, academia and government to facilitate research and industry collaboration.
- Collaboration on resilient semiconductor supply chains; supporting the development of a semiconductor design, manufacturing and fabrication ecosystem in India.

- A task force organised by the US Semiconductor Industry Association in partnership with the India Electronics Semiconductor Association with participation from the Government of India Semiconductor Mission to develop a “readiness assessment” to identify near-term industry opportunities and facilitate longer-term strategic development of complementary semiconductor ecosystems.
- Cooperation on human spaceflight, including by establishing exchanges that will include advanced training for an Indian Space Research Organisation (ISRO) or Department of Space Astronauts at NASA Johnson Space Center.
- New STEM talent exchanges by expanding the Professional Engineer and Scientist Exchange Program (PESEP) to include space science, earth science and human spaceflight.
- Strengthen commercial space partnership, including through a new US Department of Commerce and Indian Department of Space-led initiative under the US-India Civil Space Joint Working Group. This initiative will foster US-India commercial space engagement and enable growth and partnerships between US and Indian commercial space sectors.
- Advancing cooperation on research and development in 5G and 6G, facilitating deployment and adoption of Open RAN in India, and fostering global economies of scale within the sector.
- Launching a public-private dialogue on telecommunications and regulations.
- A new joint task force of the Association of American Universities and leading Indian educational institutions, including Indian Institutes of Technology, which will make recommendations for research and university partnerships.

A White House statement said “the United States and India affirm that the ways in which technology is designed, developed, governed, and used should be shaped by our shared democratic values and respect for universal human rights. We are committed to fostering an open, accessible, and secure technology ecosystem, based on mutual trust and confidence, that will reinforce our democratic values and democratic institutions.”

It also said that the two countries looked forward to the next iCET meeting in New Delhi in 2023. The National Security Councils of both countries will coordinate with their respective ministries, departments and agencies to advance cooperation and engage with stakeholders to deliver on ambitious objectives ahead of the next meeting, it said.

Apart from his meeting with NSA Sullivan, Doval also met Chairman of the Joint Chiefs of Staff General Mark Milley, Acting Secretary of Defense Kathleen Hicks, key senators and industry leaders. He is scheduled to meet US Secretary of State Antony Blinken later during the visit. During the meetings, the NSA was accompanied by Indian ambassador Taranjit Singh Sandhu; principal scientific advisor Ajay Sood; G Satheesh Reddy, scientific advisor to the defence minister; ISRO chairman S Somanath; telecom secretary K Rajaraman; and officials from NSCS.

<https://indianexpress.com/article/india/india-us-defence-ai-ties-ajit-doval-biden-modi-8418480/lite/>

The Tribune

Wed, 01 Feb 2023

India, US to Elevate Ties with Several Initiatives in Critical, Emerging Technologies

India and the US have agreed to foster greater cooperation in critical and emerging technologies from space to semiconductors besides co-development and co-production of hi-tech items, including jet engines, following the inaugural meeting of the US-India initiative on Critical and Emerging Technology (iCET) led by NSAs Ajit Doval and Jake Sullivan in Washington. The announcement by both sides comes amidst reports that US President Joe Biden is understood to have invited Prime Minister Narendra Modi for a state visit this summer and the invitation has been accepted in principle.

Officials on both sides are now working on mutually convenient dates, according to multiple sources, who noted that it is currently in the early stages of logistical planning, reported PTI. Comprising civilian and defence scientists, and bureaucrats, the iCET is being led by the NSAs to cut through bureaucratic layers and translate the oft-repeated intention between the two sides into action to deepen ties in frontier areas. PM Narendra Modi and US President Joe Biden had agreed on this initiative during their meeting in Tokyo in May 2022, said an MEA release.

The roadmap to make both countries “trusted technology partners” will span quantum technology, artificial intelligence, human flights in space, 5G/6G, talent exchanges and semiconductor fabrication ecosystems. They also identified the fields of biotechnology, advanced materials, and rare earth processing technology as areas for future cooperation, said a White House Factsheet.

The intention to get moving on more intensive collaboration in an area that is usually closely guarded was reflected from the presence of the ISRO chief, DG DRDO chiefs, the Principal Scientific Advisor to PM and his Defence counterpart, the Telecom Secretary and representatives from MEiT and Doval-led National Security Council Secretariat. They were joined on the US side by the NASA Administrator, the National Science Foundation chief and senior officials from the Departments of State, Commerce and Defence, and the National Security Council.

The two sides announced several joint panels that will achieve closure on regulatory restrictions, export controls and mobility barriers that have been hindering more active US-India cooperation in high-technology areas spanning several strategic domains. The aim is to position the two countries as building technology value chains and support the co-development and co-production of items, said the MEA release.

The US administration assured that it would ease export barriers to India in a few critical areas, including through efforts towards legislative changes. These include a quick review of General Electric’s request to produce jet engines in India for the Light Combat Aircraft (LCA) and lobbying the Congress to allow exports of High Performance Computing (HPC) technology and source code. This iCET was preceded by the US-India Business Council with US Secretary of

Commerce Gina Raimondo, Sullivan, Doval and other senior US and Indian officials besides over 40 CEOs, university presidents to foster increased technology cooperation.

The US supported the development of a fabrication ecosystem in India and agreed to plan human space flight opportunities, NASA's Commercial Lunar Payload Services (CLPS) project and STEM talent exchanges. They also resolved to launch a new "Innovation Bridge" that will connect the US and Indian defence startups, focus on research in maritime security and intelligence surveillance reconnaissance (ISR), and develop a new bilateral Defence Industrial Cooperation Roadmap.

<https://www.tribuneindia.com/news/nation/india-us-launch-icet-elevate-strategic-partnership-white-house-475581>

THE ECONOMIC TIMES

Wed, 01 Feb 2023

NSA Doval, US Defence Official Discuss Military Coordination over China Threat

India's National Security Adviser (NSA) Ajit Doval and US Deputy Defence Secretary Kathleen Hicks discussed strengthening coordination between the militaries of the two countries in the face of the threat from China. US Defence Department spokesperson Eric Pahon said after the meeting in Washington on Tuesday that they "discussed avenues to deepen coordination between the US and Indian militaries to address the region's increasingly contested strategic environment".

Pahon's readout of the meeting diplomatically avoided directly mentioning China, but it is Beijing through recent border conflicts with India and threats in the Indo-Pacific region to US ally Taiwan and to other nations in the South China Sea with maritime and island claims that has heightened strategic tensions. He said that Hicks "thanked NSA Doval for India's leadership in the region". Hicks, he added, "reiterated that building alliances and partnerships are a top priority for the department, and integral to the ongoing implementation of the US National Defense Strategy".

The two also discussed increasing defence industrial cooperation through "innovative joint endeavours between US and Indian firms that support India's unique operational requirements", Pahon said. Separately at a meeting of the India-US initiative on Critical and Emerging Technology (iCET) led by Doval and US NSA Jake Sullivan, Washington committed to expeditiously review a GE proposal to jointly produce jet engines for power jet aircraft manufactured indigenously by India, according to the White House.

At the meeting they decided to develop a new bilateral Defense Industrial Cooperation Roadmap to accelerate the exploration of joint development and production projects related to jet engines and munitions technologies, the White House said. Another initiative from the iCET meeting was on long-term cooperation focused on maritime security and intelligence surveillance reconnaissance.

Doval's meeting with Hicks took place on the same day the foreign office consultations of the two countries were held in New Delhi. Foreign Secretary Vinay Mohan Kwatra and the US

Under Secretary of State Victoria Nuland co-chaired the meeting at which they reviewed the India-US Comprehensive Global Strategic Partnership and discussed the situation in the Indo-Pacific and South Asia, according to the ministry.

https://m.economictimes.com/industry/banking/finance/banking/step-up-your-financial-journey-with-these-to-dos-in-2023/amp_articleshow/97318959.cms

THE ECONOMIC TIMES

Wed, 01 Feb 2023

China Plans to Use Water as a Weapon: Report

China is constructing a massive dam on the Mabuja Zambo River, just a few kilometers north of the India-Nepal border in order to use it as a weapon of war, reported The Geneva Daily.

Water wars are conflicts that occur between countries, states, or groups over water resources, where water can be a trigger of conflict or even used as a weapon of war.

Moreover, China is also planning to build an airport near this dam to assist the Chinese Air force movement alongside. With the occupation of Tibet, China has become the country to acquire and utilize the maximum amount of the river. However, from polluting the river to building dams and environmental degradation Beijing can create tensions in the near future and establish complete control over the water in the area, reported The Geneva Daily. Notably, the Brahmaputra River, which is also known as the "Yarlung Tsangpo," has its source in the Chemayungdung glacier in Tibet and it flows into three densely populated nations -- China, India, and Bangladesh.

According to government sources, China is planning to construct 20 dams to generate 60,000 MW at Yarlung Zambo (Brahmaputra) in Medog, on the border with Arunachal Pradesh, ostensibly to attain China's carbon neutrality goal by 2060, reported The Geneva Daily. The China Yangtze Power Company (CYPC) had proposed building a vast tunnel under the ridge that separates the two arms of the Big Bend and diverts 50 billion cubic meters of water a year to the south-eastern slope, where it will fall over nine cascading hydropower dams to generate 40,000 MW of peak power.

This has adversely affected the converging belts underground and as a result, could lead to earthquakes. Experts predict that it will have a negative impact on the lower riparian states, particularly India, including environmental consequences and the creation of artificial floods, reported The Geneva Daily. Water diversion again could put a strain on India's agricultural needs in the northeast and mismanagement could lead to overflows and floods in India. It may also negatively impact the food security and livelihood of people residing across the river. Experts have pointed out that dam construction could cause the river to lose its silt and lead to a reduction in agricultural productivity.

A Memorandum of Understanding (MoU) regarding the sharing of hydrological data from three upstream monitoring stations of the Brahmaputra River in Tibet during every monsoon season from May 15 to October 15 with India and Bangladesh was agreed by China. While China sells its hydrological data, India provides it for free to its neighbors, reported The Geneva Daily. Beijing however, has stopped providing hydrological data to India since the 2017- China-India

border standoff, also known as the Doklam issue, over the Chinese construction of a route in Doklam, next to the Donglang tri-junction boundary.

This hydrological data is of great importance to the Indian side in order to predict or prepare for floods and mitigate flood damage, reported The Geneva Daily.

Although Beijing claimed the alleged paucity in data sharing with India was due to renovation, however, they have consistently provided the same data to Bangladesh at no cost. It is clear that Beijing is weaponizing the Brahmaputra River by damaging the Indian state's overall establishment. Military experts in New Delhi have stressed what they see as the significant security implications of a disputed giant dam near the Indian border, as the Chinese attempt to link water issues with broader border disputes in order to put pressure on India, reported The Geneva Daily.

https://m.economictimes.com/news/defence/china-plans-to-use-water-as-a-weapon-report/amp_articleshow/97516402.cms



Thu, 02 Feb 2023

Austin in Philippines to Discuss Larger US Military Presence

Defence Secretary Lloyd Austin was in the Philippines on Wednesday for talks about deploying US forces and weapons in more Philippine military camps to ramp up deterrence against China's increasingly aggressive actions toward Taiwan and in the disputed South China Sea. Austin flew from South Korea, where he said the U.S. would increase its deployment of advanced weapons such as fighter jets and bombers to the Korean Peninsula to bolster joint training with South Korean forces in response to North Korea's growing nuclear threat.

In the Philippines, Washington's oldest treaty ally in Asia and a key front in the U.S. battle against terrorism, Austin visited southern Zamboanga city and met Filipino generals and a small contingent of U.S. counterterrorism forces based in a local military camp, regional Philippine military commander Lt. Gen. Roy Galido said. The more than 100 U.S. military personnel have provided intelligence and combat advice for years to Filipino troops battling a decades-long Muslim insurgency, which has considerably eased but remains a key threat.

More recently, U.S. forces have intensified and broadened joint training focusing on combat readiness and disaster response with Filipino troops in the Southeast Asian nation's western coast, which faces the South China Sea, and in its northern Luzon region across the sea from the Taiwan Strait. American forces have been granted access to five Philippine military camps, where they could rotate indefinitely under a 2014 defence pact called the Enhanced Defence Cooperation Agreement.

In October, the U.S. sought access for a larger number of its forces and weapons in an additional five military camps, mostly in the north. That request would be high on the agenda in Austin's meetings, according to Philippine officials. "The visit of Secretary Austin definitely, obviously will have to do with many of the ongoing discussions on the EDCA sites," Philippine

Ambassador to Washington Jose Romualdez said at a news briefing. Austin was scheduled to hold talks Thursday with his Philippine counterpart, Carlito Galvez Jr., and National Security Adviser Eduardo Ano, Romualdez said.

Austin will separately call on President Ferdinand Marcos Jr., who took office in June and has since taken steps to boost relations with Washington. The U.S. Defence chief is the latest senior official to visit the Philippines after Vice President Kamala Harris in November in a sign of warming ties after a strained period under Marcos's predecessor, Rodrigo Duterte. Duterte had nurtured cozy ties with China and Russia and at one point threatened to sever ties with Washington, kick visiting American forces out and abrogate a major defense pact.

<https://www.dailypioneer.com/2023/world/austin-in-philippines-to-discuss-larger-us-military-presence.html>



Thu, 02 Feb 2023

Sending Jets to Ukraine Not Right Approach 'For Now', Says UK Defence Minister

On Tuesday, British Prime Minister Rishi Sunak's spokesperson said it would not be practical to send jets to Ukraine because it would take months to learn to fly them. Britain has not made a "solid decision" not to send its fighter jets to Ukraine but does not think it is the right approach at the moment, Defence Secretary Ben Wallace said on Wednesday.

"I've been involved with this for a pretty long time. And I've learned two things; never rule anything in and never rule anything out," he told reporters when asked why Britain would not send Ukraine jets.

"This is not a solid decision," he added. "For now, I don't think that's the right approach. ... What's going to move on this conflict this year is going to be the ability for Ukrainians to deploy Western armour against Russia."

On Tuesday, British Prime Minister Rishi Sunak's spokesperson said it would not be practical to send jets to Ukraine because it would take months to learn to fly them.

Wallace said Britain's jets were very complex and might not be applicable in Ukraine.

"What they need right now is armour and tanks," he said. "I think we'd have to be pretty sure that (jets) is going to be the next battle winning requirement. But for now, I think we're focused on the tanks, the land battle."

<https://www.hindustantimes.com/world-news/sending-jets-to-ukraine-not-right-approach-for-now-says-uk-defence-minister-101675286484931-amp.html>

ईरान का शहीद-136 ड्रोन Vs इजरायल का लानियस क्राडकॉप्टर, जानें कौन-कितना ताकतवर

इजरायल और ईरान के बीच दुश्मनी जगजाहिर है। हाल में ही ईरान ने दावा किया कि उसके इस्फ़हान मिलिट्री फैसिलिटी पर इजरायल के ड्रोन ने हमला किया था। इस हमले में फैसिलिटी की छत को मामूली नुकसान पहुंचा लेकिन दोनों देशों के संबंध में तनाव जरूर ज्यादा बढ़ गया। ईरान पर हमले के पीछे इजरायली मोसाद का हाथ!

इस बीच अमेरिकी मीडिया न्यूयॉर्क टाइम्स ने इजरायल और अमेरिका के बीच बातचीत से परिचित वरिष्ठ खुफिया अधिकारियों ने कहा कि हमले के पीछे इजरायल की राष्ट्रीय खुफिया एजेंसी मोसाद का हाथ था। वाल स्ट्रीट जर्नल ने ऑपरेशन के बारे में चर्चा से परिचित अनाम लोगों का हवाला देते हुए यह भी बताया कि मोसाद ने हमले को अंजाम दिया।

इजरायल ने नहीं ली हमले की जिम्मेदारी

हालांकि, इजरायल ने इस घटना की जिम्मेदारी नहीं ली है। इजरायली रक्षा मंत्रालय ने भी ईरान के मिलिट्री फैसिलिटी पर हुए हमले को लेकर कोई प्रतिक्रिया नहीं दी है। ईरान ने इससे पहले भी इजरायल पर अपनी न्यूक्लियर फैसिलिटी और मिलिट्री बेस पर हमले के आरोप लगाए हैं।

हमले के बाद ईरानी रक्षा मंत्रालय ने एक बयान जारी कर कहा कि यह हमला असफल रहा। बयान में कहा गया है कि एक ड्रोन को मार गिराया गया और अन्य दो डिफेंस नेट में फंस गए और उड़ा दिए गए। उन्होंने बताया कि इस हमले में कोई हताहत नहीं हुआ और फैसिलिटी के इमारत की छत को केवल मामूली क्षति हुई। क्राडकॉप्टर ड्रोन से ईरान पर हुआ हमला

ईरानी न्यूज एजेंसी आईआरएनए ने हमले के पीछे क्राडकॉप्टर ड्रोन को जिम्मेदार ठहराया। ऐसे ड्रोन को क्राडकॉप्टर नाम उनके अलग-अलग रोटार ब्लेड के कारण मिला है। द न्यूयॉर्क टाइम्स के अनुसार, हाल के वर्षों में इजरायल ने कथित तौर पर ईरान और अन्य देशों के अंदर कई हमलों के लिए क्राडकॉप्टर का इस्तेमाल किया है।

हमले में इजरायली एलबिट सिस्टम्स के ड्रोन होने का शक

ईरानी फैसिलिटी पर हमले में इस्तेमाल किए गए क्राडकॉप्टर का प्रकार तुरंत स्पष्ट नहीं था, लेकिन नवंबर में, इजरायल की डिफेंस कंपनी एलबिट सिस्टम्स ने लानियस ड्रोन लॉडरिंग मूनशन नामक एक माइक्रो - ड्रोन को दुनिया के सामने पेश किया था। इसे अत्यधिक मनुवरेबल और वर्सेटाइल बताया गया है।

इजरायल का लानियस छोटा और घातक ड्रोन

लानियस को शहरी वातावरण में शॉर्ट रेंज ऑपरेशन के लिए डिजाइन किया गया है। इसका उपयोग घातक या गैर-घातक पेलोड ले जाने के लिए किया जा सकता है। इसका इस्तेमाल स्पेशल फोर्स, मिलिट्री और दूसरी कानून प्रवर्तक एजेंसिया अलग-अलग तरह के मिशन में कर सकती हैं।

ऑटोनोमस काम कर सकता है इजरायली लानियस ड्रोन

इस ड्रोन को बनाने वाली कंपनी एलबिट सिस्टम्स ने कहा कि यह ड्रोन संभावित खतरों के लिए ऑटोनोमस तरीके से अपने रास्ते को खोज सकता है। यह इमारतों और दूसरी जरूरत के पाइंट का नक्शा भी बना सकता है।

ईरान के शहीद-136 को यूक्रेन में इस्तेमाल कर रहा रूस

इजरायल का लानियस ड्रोन ईरान के शहीद -136 ड्रोन से काफी अलग है। शहीद -136 ड्रोन का इस्तेमाल रूस ने यूक्रेन युद्ध में किया है। यूक्रेन और पश्चिमी देशों के अधिकारियों का दावा है कि ईरान ने युद्ध में इस्तेमाल के लिए रूस को शहीद -136 ड्रोन की बड़ी खेप सौंपी है। लेकिन ईरान ने इससे इनकार किया है।

1600 पाउंड का बम ले जा सकता है शहीद-136 ड्रोन

शहीद-136 ड्रोन इजरायल के लानियस की अपेक्षा काफी बड़ा और डेल्फिंग का ड्रोन है। शहीद -136 ड्रोन की लंबाई 11 फीट है। इसका वजन 440 पाउंड और विंग स्पैन 8.2 फीट है। शहीद-136 ड्रोन में 66 और 110 पाउंड के वजन वाले हथियारों को तैनात किया जा सकता है। इस ड्रोन की अधिकतम रेंज 1000 से 1600 मील के बीच होने का अनुमान है।

इजरायली ड्रोन से फॉस्ट है ईरानी शहीद-136

फोर्ब्स की रिपोर्ट के अनुसार, शहीद-136 ड्रोन की तेज गति सबसे बड़ा हथियार है। शहीद-136 ड्रोन की स्पीड 115 मील प्रति घंटा है। वहीं लानियस की टॉप स्पीड सिर्फ 45 मील प्रति घंटा की ही है। लानियस ड्रोन सिर्फ सात मिनट तक ही उड़ान भर सकता है , जबकि शहीद-136 ड्रोन के साथ ऐसी कोई समस्या नहीं है।

https://navbharattimes.indiatimes.com/photomazza/world-photogallery/drone-war-news-iran-shahed-136-drone-compared-to-israel-lanius-quadcopter-elbit-systems/amp_photoshow/97513744.cms



Wed, 01 Feb 2022

Germany Plans to buy Eight IRIS-T Air Defence Systems for its Military - Document

Germany aims to purchase eight IRIS-T air defence units for its military, according to a document seen by Reuters, referring to a medium-range surface-to-air system that Berlin has bought to donate to Kyiv but not yet purchased for its own forces. The defence ministry paper, dated Jan. 25 and seen by Reuters on Wednesday, lists the defence deal as one of several planned purchases expected to be submitted for approval to parliament in the second quarter of 2023.

A spokesperson for the defence ministry said it intended to submit a deal on the purchase of the IRIS-T system to parliament this year but declined to comment on the number of units and the exact timing. In October, Ukraine received the first of four IRIS-T air defence systems pledged

by Germany to help Kyiv protect its cities from missile and drone attacks. The systems are estimated to cost 150 million euros (\$163 million) apiece. The German armed forces themselves do not currently own the system built by privately held German arms maker Diehl and considered among the world's most advanced.

The fire units can launch missiles over a distance of 40 kilometres (25 miles) to take down fighter jets, helicopters, drones, missiles and cruise missiles. Also in the second quarter, the defence ministry aims to submit to parliament deals to replace the howitzers and corresponding 155mm rounds that were supplied to Ukraine out of German military stocks, the document says. The paper notes that some of the purchases listed for the second quarter may also be dealt with by parliament in its session in July, before deputies head off into their summer break.

<https://www.reuters.com/world/europe/germany-plans-buy-eight-iris-t-air-defence-systems-its-military-document-2023-02-01/>

Science & Technology News

THE TIMES OF INDIA

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Anomaly in Stage II Separation Failed SSLV in Aug 2022: ISRO Report

ISRO on Wednesday said that the first developmental flight of the small satellite launch vehicle (SSLV-D1) mission could not be achieved on August 7, 2022, “due to an anomaly during the second stage (SS2) separation, which triggered a mission salvage mode — a procedure adopted to attempt minimum stabilised orbital conditions for the spacecraft in case of an anomaly in the vehicle system”.

“A detailed analysis of the flight events and observations ranging from countdown, lift-off, propulsion performance, stage separations and satellite injection of SSLV-D1 revealed that there was a vibration disturbance for a short duration on the equipment bay (EB) deck during SS2 separation, that affected the inertial navigation system (INS), resulting in declaring the sensors faulty by the logic in fault detection & isolation (FDI) software,” the summary of the failure analysis committee (FAC) read.

The SSLV uses a newly developed INS — the MEMS (Micro-electromechanical systems) INS or MINS-6S — which consists of six MEMS gyros for measuring rotation rates and six ceramic servo accelerometers for measuring accelerations. The system is also designed with an in-built NavIC receiver and also acts as the MINS navigation computer processor for running inertial navigation and aided navigation software. “A novel algorithm estimates the error in the orientation introduced due to the MEMS gyros, position and velocity of MEMS INS, using NavIC data and corrects them, so that mission accuracy is achieved. Knowing the health of accelerometers is paramount for the functioning of MINS, as it is used for orientation aiding. The failure detection logic identifies

degraded accelerometers (one or all 6) and isolates the same for improved mission performance,” the summary read.

<https://timesofindia.indiatimes.com/city/bengaluru/anomaly-in-stage-ii-separation-failed-sslv-in-aug-2022-ISRO-report/articleshow/97539463.cms>



Wed, 01 Feb 2023

Vibration Disturbance Led to SSLV Mission Failure: ISRO Report

The Indian Space Research Organisation (ISRO) on Wednesday released the failure analysis report of the Small Satellite Launch Vehicle (SSLV-D1), which failed during its maiden launch in August last year. According to the ISRO, the cause of the anomaly was due to a vibration disturbance for a short duration on the Equipment Bay (EB) deck during the second stage separation.

“Detailed analysis of the flight events and observations ranging from countdown, lift-off, propulsion performance, stage separations and satellite injection revealed that there was a vibration disturbance for a short duration on the Equipment Bay deck during the second stage separation, that affected the Inertial Navigation System, resulting in declaring the sensors faulty by the logic in Fault Detection & Isolation software,” states the summary of the failure analysis.

The first developmental flight of the SSLV lifted off from the Satish Dhawan Space Centre on August 7, 2022 to inject EOS-02 satellite of the ISRO into a circular orbit of 356.2 km. Azaadisat, a student satellite, was part of the mission.

Corrective actions

The report further stated that though the salvage mode was initiated with the purpose of saving the mission, it could not inject the satellites into a safe orbit. The failure analysis report has recommended a few corrective actions which include change of separation system, dynamic characterisation and design modification of structures, usage of NavIC data, also considering Velocity Trimming Module (VTM) in loop for salvage mode among others.

“Considering the clear identification of the cause of the flight anomaly and suggested corrective actions, the next development flight [SSLV-D2] is planned to be executed complying to the recommendations, its satisfactory implementation, review and approval by the authorised committees,” the report added. The second developmental flight of SSLV (SSLV-D2/EOS-07 Mission) is scheduled in the first quarter of 2023 and will launch a total payload mass of about 334 kg, including EOS-07 satellite and two co-passenger satellites, the ISRO said.

<https://www.thehindu.com/sci-tech/science/vibration-disturbance-led-to-sslv-mission-failure-ISRO-report/article66459989.ece/amp/>

US Looks to Include Indian Firms in NASA Lunar Project; NISAR in 2024, ISRO Astronaut may Visit NASA Centre

The White House, in a fresh statement issued on Indo-US strategic partnership said the countries would strengthen co-operation on human spaceflight, including establishing exchanges that will include advanced training for an ISRO astronaut at NASA Johnson Space Center. Another key aspect identified was innovative approaches for the commercial sectors of the two countries to collaborate, especially with respect to activities related to NASA's commercial lunar payload services (CLPS) project.

“Within the next year, NASA, with ISRO, will convene US CLPS companies and Indian aerospace companies to advance this initiative,” the statement read. It added that the two countries would initiate new STEM talent exchanges by expanding the professional engineer and scientist exchange programme (PESEP) to include space science, Earth science, and human spaceflight and extending a standing invitation to ISRO to participate in NASA's biennial international programme management course. There will be strengthening of bilateral commercial space partnership, including through a new US department of commerce and Indian Department of Space-led initiative under the civil space joint (Indo-US CSJ) working group.

“This initiative will foster commercial space engagement and enable growth and partnerships between US and Indian commercial space sectors,” the statement read, welcoming S Somanath's (ISRO chairman) visit to the US. While Somanath was in the US as of February 1, NASA administrator is scheduled to visit India later in 2023. The countries will also expand the agenda of the Indo-US CSJ working group to include planetary defence.

The announcement comes in the backdrop of President Biden and PM Narendra Modi announcing the US-India initiative on Critical and Emerging Technology (iCET) in May 2022 to elevate and expand strategic technology partnership and defence industrial co-operation between governments, businesses, and academia. “The US and India affirm that the ways in which technology is designed, developed, governed, and used should be shaped by our shared democratic values and respect for universal human rights. We are committed to fostering an open, accessible, and secure technology ecosystem, based on mutual trust and confidence, that will reinforce our democratic values and democratic institutions,” the White House said.

NISAR In 2024

In a separate statement, the US State Department, said officials from US and India gathered on January 30-31 for the eighth meeting of the Indo-US CSJ working group (CSJWG) co-chaired by principal deputy assistant secretary Jennifer R Littlejohn and the NASA associate administrator for international and interagency relations Karen Feldstein, ISRO scientific secretary Shantanu Bhatawdekar.

The group discussions covered collaboration in Earth and space science as well as human space exploration, global navigation satellite systems, spaceflight safety and space situational awareness, and policies for commercial space. Participants also considered implementation of guidelines and

best practices developed by the United Nations Committee on the Peaceful Use of Outer Space (COPUOS) to ensure the long-term sustainability of outer space activities.

“The NASA-ISRO Synthetic Aperture Radar (NISAR) mission, planned to launch in 2024, is expected to systematically map Earth, using two different radar frequencies to monitor resources such as water, forests and agriculture. The mission will provide important Earth science data related to ecosystems, Earth’s surface, natural hazards, sea level rise and the cryosphere,” It read.

<https://timesofindia.indiatimes.com/home/science/us-looks-to-include-indian-firms-in-nasa-lunar-project-nisar-in-2024-ISRO-astronaut-may-visit-nasa-centre/articleshow/97530923.cms>

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