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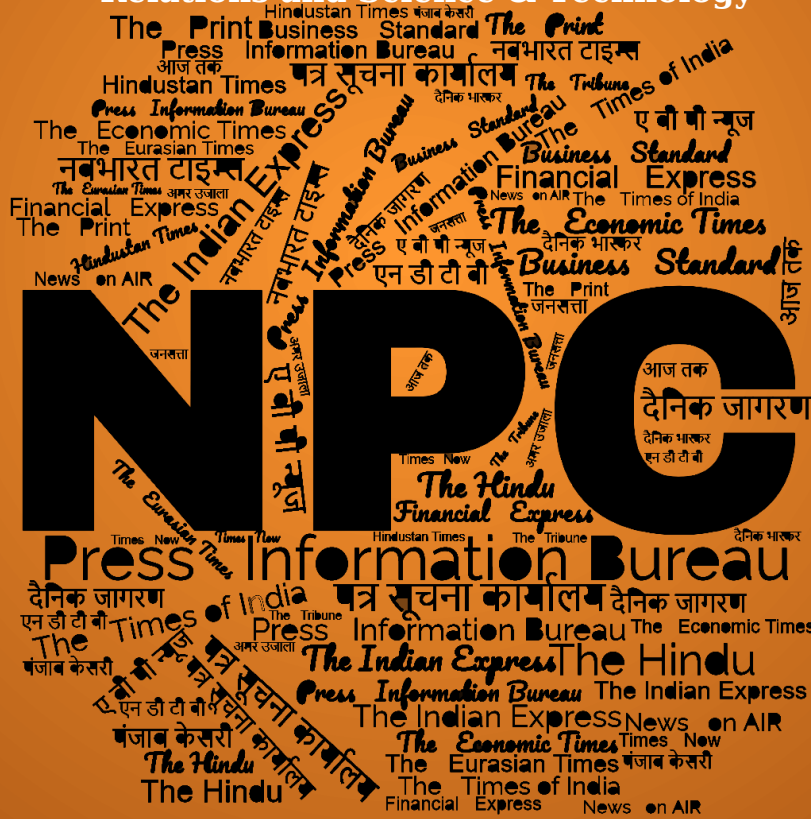
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# समाचार पत्रों से चयित अंश

## 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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Press Information Bureau  
Government of India

Ministry of Defence

Tue, 26 Sep 2023

## Defence Secretary Visits MDL, Mumbai; Urges All DPSUs to Make Efforts Towards Making India Self-reliant

**“Increasing indigenous content in warship building will ultimately contribute to India’s progress”**

As part of the ongoing ‘Swachhta Hi Seva’ celebrations, Defence Secretary Shri Giridhar Aramane visited Mazagon Dock Shipbuilders Limited (MDL), Mumbai on September 25, 2023. He inaugurated a security complex of MDL and had an interactive session with the executives addressing their concerns. In his address, the Defence Secretary highlighted the importance of cleanliness in nation-building, stating that Swachhta is not just about cleaning the surroundings, it also focuses on being free from corruption of all kinds - moral, financial and intellectual.

Shri Giridhar Aramane also emphasised the need to make India self-reliant and said that all efforts should be made by all DPSUs in this direction. Increasing the indigenous content in warship building will ultimately contribute to the progress of the country, he said.

The Defence Secretary also underscored the importance of the role of an HR and ensuring contemporary HR policies. He stressed that employees should be motivated and not just satisfied. Employees should believe that they can contribute much more, he said.

Shri Giridhar Aramane also unveiled the Customised Corporate MDL stamps released by Indian Postal Services on the occasion of the completion of 250 years of MDL since its inception in 1774. He also released a booklet on various aspects of Public Interest Disclosure and Protection of Informers (PIDPI), prepared by the Vigilance Department of MDL for the upcoming Vigilance Awareness Week.

The Defence Secretary also visited MDL’s Heritage Gallery ‘Dharohar’ showcasing the rich heritage of the shipyard. He was then shown around the yard facilities, including submarine workshops, new submarine section assembly workshop and under-construction warship & submarine.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1960808>



## **Complexities & Untapped Potential of Indo-Pacific Region Demand Concerted Efforts for a Prosperous, Secure & Inclusive Future, Says Raksha Mantri at 13th Indo-Pacific Armies Chiefs' Conference in New Delhi**

**“India stands for a free, open, inclusive & rules-based Indo-Pacific”**

**“Our efforts to build robust military partnerships with friendly countries underscore our commitment to safeguard national interests & address global challenges”**

Raksha Mantri Shri Rajnath Singh has called for collective wisdom and concerted efforts to deal with the complexities of the Indo-Pacific Region, while tapping its full potential, to ensure a future marked by prosperity, security & inclusivity, in consonance with the ancient Indian ethos of ‘Vasudhaiva Kutumbakam’ (The World is One Family) and the G-20 motto ‘One Earth, One Family, One Future’. This Raksha Mantri was delivering the inaugural address at the 13th Indo-Pacific Armies Chiefs’ Conference (IPACC) in New Delhi on September 26, 2023. Chief of Defence Staff General Anil Chauhan, Chief of the Army Staff General Manoj Pande and Chiefs of Armies and delegates of 35 countries were present on the occasion.

Shri Rajnath Singh emphasised that the Indo-Pacific is no more a maritime construct, but a full-fledged geo-strategic construct, and the region is facing a complex web of security challenges, including boundary disputes & piracy. He explained his vision through a theoretical model by American author and speaker Mr Stephen R. Covey, which is based on two circles – ‘Circle of Concern’ and ‘Circle of Influence’.

The ‘Circle of Concern’ encompasses everything one cares about, including things which can be controlled and things which cannot. It includes a wide range of external factors & issues such as global events, economic conditions, other people's opinions, weather and many other aspects of life. The ‘Circle of Influence’ comprises things over which one has direct control or can exert some degree of influence. It may involve your attitudes, behaviours, decisions, relationships and actions.

Applying this model to the domain of international relations, the Raksha Mantri said: “There may be instances when the ‘circles of concern’ of different nations overlap with each other. International maritime trade routes passing through high seas, beyond the Exclusive Economic Zones of any country, are relevant examples. This can either result in conflict between nations or they can decide to coexist by mutually deciding the rules of engagement. The concept of these circles underscores the importance of strategic thinking and prioritisation.”

Shri Rajnath Singh pointed out that states must recognise that global issues involve multiple stakeholders and no one country can address these challenges in isolation. He stressed the need to engage with the broader international community and work collaboratively through diplomacy, international organisations and treaties to tackle common concerns within the overlapping ‘Circles of Concern’. He termed the United Nations Convention on the Law of the Sea (UNCLOS), 1982 as a good example of such an international agreement that establishes the legal framework for

maritime activities and addresses the issues arising from overlapping 'circles of concern' of different nations.

The Raksha Mantri was of the view that states, at the same time, must identify and seek to expand their 'Circle of Influence' to promote national interests on the global stage. This, he said, may involve building partnerships, participating in regional organisations and employing diplomatic, economic or military tools strategically. "This conference is an exercise where we all are trying to expand our 'Circles of Influence' while harmonising the overlaps of our 'circles of concern'," he added. Shri Rajnath Singh termed the IPACC, Indo-Pacific Armies Management Seminar (IPAMS) and Senior Enlisted Leaders Forum (SELF) as one of the largest brainstorming events of land forces in the region. These events provide a unique opportunity to build common perspectives towards a shared vision and build & strengthen partnerships in the spirit of collaborative security for all, he said.

The Raksha Mantri reiterated India's stand for a free, open, inclusive and rules-based Indo-Pacific Region in the pursuit of shared security and prosperity. He defined 'Neighbourhood First' as the cornerstone of India's culture since time immemorial. India's approach to the region is defined by its 'Act East Policy', he said, reiterating Prime Minister Shri Narendra Modi's vision: "Our engagement in the Indo-Pacific is based on five 'S': Sammaan (Respect); Samvad (Dialogue); Sahyog (Co-operation); Shanti (Peace) and Samridhi (Prosperity).

Shri Rajnath Singh added that India's efforts towards building robust military partnerships with friendly countries underscore its commitment to not only safeguard national interests, but also address global challenges faced by all. On climate change, one of the gravest global challenges, he stated that the Indian Armed Forces, with their unwavering dedication and professionalism, are the first responders in disaster situations and contribute to humanitarian assistance and disaster relief (HADR) efforts.

The Raksha Mantri suggested that the three-day event discuss ways to enhance interoperability during the HADR operations. "Extreme weather events and natural disasters have become a new normal rather than being exceptions and are major challenges in our region. It is our responsibility that the climate change-related concerns of small island nations of the Indo-Pacific are given the importance that they deserve, as these bear the brunt of climate change as an existential crisis. Climate change also threatens their economic security. The economic impact of climate change and extreme weather create a demand for climate-resilient and eco-friendly infrastructure. There is a need to understand the compulsions and perspectives of all our partner nations as well as sharing expertise and resources," he said.

Shri Rajnath Singh added that while it is a difficult task to arrive at a consensus plan of action in a big grouping, however, with determination and empathy, it is not impossible. He referred to the recently concluded G-20 summit and stated that the group of countries adopted the New Delhi Leaders' Declaration with consensus on all developmental and geo-political issues, making it historic and path-breaking.

The Indian Army and the United States Army are co-hosting 13th IPACC, 47th IPAMS and 9th SELF, a three-day conference of Chiefs of Armies and delegates of 35 countries in New Delhi from September 25th to 27th, 2023. The central theme for this forum is 'Together for Peace: Sustaining Peace and Stability in the Indo-Pacific Region.' The conference will provide an opportunity for Army Chiefs and senior-level leaders from land forces, primarily of the Indo-Pacific region, to exchange ideas and views on security and contemporary issues. The core effort of the forum will be to promote peace and stability in the Indo-Pacific region through mutual understanding, dialogue and friendship amongst the littoral partners.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1960746>

## **At Indo-Pacific Armies Meet, Indian Firms Display Locally Made Drones, Howitzers**

Indian vendors on Tuesday put up a display of an array of locally produced weapons and systems before 30 countries, with a variety of drones, artillery guns, unmanned ground vehicles, surveillance gear and armoured personnel carriers underscoring advances in the defence manufacturing sector.

The drones showcased on the margins of the 13th Indo-Pacific Armies Chiefs Conference (IPACC), included loitering munitions, unmanned aerial vehicles (UAVs) for intelligence, surveillance and reconnaissance, multi-payload drones and nano UAVs.

The ALS-50 loitering munition, built by Tata Advanced Systems Limited, has been delivered to the Indian Air Force.

Each ALS-50 can carry six high explosive pre-fragmented warheads, and 100 units have been delivered to IAF with more on order, officials aware of the matter said. Two types of nano UAVs, Doot and Parush - they have been built by Greater Noida-based IDR Research and Development - have been bought by the army for its counterterrorism units deployed in Jammu and Kashmir. The palm-sized Doot weighs 350 grams.

Kalyani Group's Bharat 150 multi-mission drones and ideaForge's Switch UAVs for intelligence, surveillance and reconnaissance were also on display.

The other military hardware showcased included Kalyani Strategic Systems' MaRG 155mm/39-calibre artillery guns with shoot and scoot capability, the Bharat 155mm/52-calibre ultra-light howitzers, the Garuda 105mm/37-calibre guns, long-range observation systems, and wheeled and tracked unmanned ground vehicles.

"The hardware displayed holds export potential and some Indo-Pacific armies may be interested," said an official, who asked not to be named.

India's defence sector is characterised by a firm export push and an unprecedented cut back on imports under a multi-pronged self-reliance drive.

India is currently exporting military hardware to more than 85 countries, with around 100 domestic firms involved. Its exports include missiles, artillery guns, rockets, armoured vehicles, offshore patrol vessels, personal protective gear, a variety of radars, surveillance systems and ammunition.

India has set a defence export target of ₹35,000 crore by 2024-25, which experts believe is within the country's reach.

India's military exports have risen sharply, and imports have recorded a drop on the back of policy initiatives and reforms. Exports grew 23 times between 2013-14 and 2022-23 (from ₹686 crore to ₹16,000 crore), while the spending on imported weapons and systems dropped from 46% of the total expenditure in 2018-19 to 36.7% in December 2022.

<https://www.hindustantimes.com/india-news/at-indo-pacific-armies-meet-indian-firms-display-locally-made-drones-howitzers-101695740125986.html>

## Expansionist China Looms Large Over Indo-Pacific Army Chiefs' Conclave

China's aggressive expansionist behaviour in the Indo-Pacific loomed large at a conclave of top military officers from over 30 countries here on Tuesday, with defence minister Rajnath Singh, the Indian and US Army chiefs and a few others stressing the need for greater collaboration in keeping the region free, open and secure while respecting the territorial integrity of all nations.

There was no direct reference to China publicly during the opening ceremony of the two-day 13th Indo-Pacific Armies Chiefs' Conference (IPACC) being co-hosted by the Indian and US Armies. But there were enough veiled references and informal conversations to underline the grave concerns over Beijing's muscle-flexing, stretching from the South China and East China Seas to the land frontier with India in the critical Indo-Pacific region, which accounts for 65% of the global population, 63% of the GDP and 50% of the maritime trade.

Army chief General Manoj Pande, for instance, said: "While efforts by countries are converging towards effecting a free and stable Indo-Pacific, yet we are witnessing manifestations of inter-state contestations and competitions."

In another obvious reference to China, Gen Pande said that apart from challenges in the maritime domain, the Indo-Pacific also faced a wide range of security and humanitarian concerns on land as well, including "artificially expanded islands to acquire real estate and establish military bases".

This came in the backdrop of China steadily basing anti-ship and anti-aircraft missiles, fighters and other military hardware on islands it has built in the South China Sea, where it is locked in territorial disputes with its neighbours.

"Our outlook emphasizes respect for sovereignty and territorial integrity of all nations in the region, equality of all, peaceful resolution of disputes, avoidance of use of force and adherence to international laws, rules and regulations," Gen Pande said.

Defence minister Rajnath Singh, in turn, called for "collective wisdom and concerted efforts" to deal with the complexities and challenges in the Indo-Pacific to ensure a future marked by prosperity, security and inclusivity in the region.

Indo-Pacific is no more just a maritime construct, but a full-fledged geo-strategic construct now, and the region is facing a complex web of security challenges, including boundary disputes and piracy, he said.

Pointing out that countries must recognise that global issues involve multiple stakeholders and no one nation can address these challenges in isolation, he said India's efforts towards building robust military partnerships with friendly countries underscore its commitment to not only safeguard national interests, but also address global challenges faced by all.

US Army chief General Randy George also said that in a challenging global security environment, it was important than ever before to have great allies and partners. "We do face a challenging strategic environment, but this is nothing new. We have overcome challenges in the past, and we will overcome them together in the future," he said.

"The partnership between the US and Indian Armies is vital for stability in the Indo-Pacific. The relationship between our Armies is strong, and growing stronger," he added.

Gen Pande, on his part, said the IPACC initiative is not a military alliance directed against any country or group of countries. The forum's goal is to bring together top military leaders to discuss common concerns, enhance collaboration, share best practices and plan effective humanitarian assistance and disaster relief. "The aim is to build trust and strengthen partnerships," he said.

<https://timesofindia.indiatimes.com/india/expansionist-china-looms-large-over-indo-pacific-army-chiefs-conclave/articleshow/103971288.cms?from=mdr>

# अमर उजाला

Tue, 26 Sep 2023

## भारत ड्रोन शक्ति-2023: स्वार्म, स्पाइड नैनो और रेप्टर ड्रोन बढ़ाएंगे सेना की ताकत, कृषि में भी इनका होगा उपयोग

भारतीय वायुसेना के हिंडन एयरबेस में ड्रोन फेडरेशन ऑफ इंडिया के भारत ड्रोन शक्ति-2023 में निजी कंपनियों के कई ऐसे ड्रोन थे जो आने वाले समय में देश की सुरक्षा से लेकर कृषि क्षेत्र में नजर आएंगे। खास बात है कि रक्षामंत्री राजनाथ सिंह ने वायुसेना अधिकारियों के साथ नामी कंपनियों के ड्रोन को देखा। फिर उनका विभिन्न क्षेत्र में प्रयोग करने की बात कही।

एक निजी कंपनी ने देश की सुरक्षा के लिहाज से रात्रि ऑपरेशन के लिए सर्विलांस ड्रोन और दस किलोग्राम के वजन को लक्ष्य तक ले जाने के लिए स्वार्म ड्रोन बनाया है। उच्च तकनीक से बने इस ड्रोन की खासियत है कि एक व्यक्ति आठ से दस ड्रोन को एक साथ उड़ा सकता है। यह ड्रोन मिशन के दौरान सुरक्षा बलों के लिए सबसे बड़ा हथियार बन सकता है। कंपनी के एजेंट ने बताया क इस ड्रोन की रेंज पांच किलोमीटर है। यह हवा में एक घंटे तक आसानी से उड़ सकता है। विशेष बात है कि स्वार्म ड्रोन 360 डिग्री में चारों तरफ सर्विलांस ट्रेकिंग कर सेना के कंट्रोल रूम तक तस्वीरें भी भेज सकता है। यह 35 किलोमीटर प्रतिघंटा से भी ज्यादा रफ्तार से चलने वाली हवाओं का भी झेलने में सक्षम है।

### भारतीय सेना का अभिन्न अंग- नेत्र ड्रोन

लद्दाख हमले के बाद देश की सुरक्षा में नेत्र ड्रोन का अहम योगदान देखा जाता है। बॉलीवुड मूवी श्री इडिएट के बाद इस निर्माता कंपनी को हर कोई जानने लगा। ड्रोन स्विच की मांग सबसे ज्यादा है। यह हवाई उड़ान भरने के बाद 15 किलोमीटर तक का क्षेत्र कवर करता है। कंपनी के एजेंट ने जानकारी दी कि भारत ड्रोन शक्ति कार्यक्रम में भारतीय सेना ने 100 से ज्यादा ये ड्रोन कैमरे मांगे हैं। कार्बन फाइबर से बना ड्रोन छह किलोग्राम का है। इसका उपयोग रात और दिन दोनों समय किया जा सकता है। इतना ही नहीं, ड्रोन की खासियत है कि यह उड़ने के दौरान रास्ते में आने वाली किसी परिस्थिति में खुद को ढाल लेता है। इसकी उड़ान क्षमता करीब 90 मिनट है।

### 75 किग्रा वजन उठाने में सक्षम है रेप्टर ड्रोन

मेक इन इंडिया रेप्टर ड्रोन का वजन 150 किग्रा है। इसमें कुल 16 मोटर और 32 पंखे हैं। इसकी बॉडी कार्बन फाइबर से युक्त है। खास बात है कि यह 75 किलोग्राम वजन उठाने में सक्षम है। यह सबसे ज्यादा पांच किलोमीटर तक जाकर उड़ सकता है। उड़ने के बाद यह हवा में 30 मिनट तक रुक सकता है। यह कृषि क्षेत्र के लिए उपयोग होता है। इससे खेतों में उर्वरक का छिड़काव भी किया जाता है।

### अभिभावकों के साथ बच्चों ने उड़ाया ड्रोन

कार्यक्रम के समापन के दौरान हिंडन एयरबेस में कुल 14 ड्रोन ने अलग-अलग तरह उड़ान भरी। इस बीच अभिभावकों के साथ आए बच्चों ने भी स्टार्टअप वाली फ्लॉई कैंप कंपनी के ट्रेनिंग ड्रोन उड़ाने का अनुभव लिया। इसमें आठ साल से अधिक उम्र के बच्चों व लोगों ने पंजीकरण कराकर ड्रोन उड़ाया। फ्लॉई कैंप बंगलुरु के छात्र-



छात्राओं का स्टार्ट अप है। 400 ग्राम के वाले ट्रेनिंग ड्रोन की कीमत सबसे कम 50 हजार रुपये है। हालांकि इसे बाजार में खरीदा या बेचा नहीं जा सकता।

### स्कूली छात्र-छात्राओं ने ली ड्रोन की जानकारी

ड्रोन फेडरेशन ऑफ इंडिया के स्मित शाह, माधवी और यश ने वायुसेना स्कूल, कैंब्रिज स्कूल नोएडा, डीपीएसजी वसुंधरा समेत अन्य स्कूल कॉलेजों के छात्र-छात्राओं को कार्यशाला में ड्रोन की जानकारी दी। फेडरेशन की मीडिया कोर्डिनेटर माधवी ने बताया कि कार्यशाला में बच्चों को ड्रोन की विशेषता, उड़ाने का तरीका, सेल ड्रोन, लाइसेंस पायलट और ड्रोन उड़ाने की अनुमति के बारे में बताया। इसके साथ ही कौन-कौन से ड्रोन आपदा के समय या देश की सेवा व सुरक्षा के लिए उपयोग होते हैं। उन सभी को स्क्रीन पर दिखाया गया।

<https://www.amarujala.com/delhi-ncr/india-drone-shakti-2023-swarm-spidey-nano-and-raptor-drones-will-increase-strength-of-army-2023-09-26>



Tue, 26 Sep 2023

## भारत में पहली बार बनाई गई ड्रोन से लॉन्च होने वाली मिसाइल, सीमा पार दुश्मनों को कर देगी ढेर

देश में पहली बार ड्रोन से लॉन्च होने वाली स्वदेशी लॉन्च प्रिसिजन गाइडेड मिसाइल (एलपीजीएम) बनाई गई है। हवा में उड़ते ड्रोन से यह दो किलोमीटर दूरी तक निशाना साध सकती है। 10 किलोग्राम की यह मिसाइल एक स्थान पर जमा 50-60 लोगों के चीथड़े उड़ा सकती है।

कंपनी द्वारा इसका ट्रायल किया जा रहा है। सीमा पार दुश्मनों को ढेर करने के लिए इस मिसाइल का प्रयोग किया जाएगा। हिंडन एयरफोर्स स्टेशन पर ड्रोन और मिसाइल की प्रदर्शनी लगाई गई है। रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) ने मिसाइल की तकनीक को भारत में विकसित किया है।

हैदराबाद में रक्षा मंत्रालय की कंपनी भारत डायनामिक्स लिमिटेड ने इसे बनाया है। अभी यह मिसाइल और ड्रोन फ्रांस और रूस से डेढ़ करोड़ रुपये से अधिक कीमत में आयात होते हैं। भारत में इसकी लागत 20 लाख रुपये है।

### 20 किलोमीटर दूर जाता है इसका ड्रोन

मिसाइल को खासतौर पर ड्रोन के लिए डिजाइन किया गया है। यह 20 किलोमीटर तक जाता है। मिसाइल लांच करने के बाद ड्रोन वापस लौट आता है। मिसाइल की लंबाई 890 मिमी और व्यास 100 मिमी है। कई बार मिसाइल में टारगेट सेट नहीं किया जाता है। इसमें सेंसर लगा होता है। यह रात और दिन में मनुष्य की पहचान कर लेता है।

मनुष्य की उपस्थिति का पता चलने पर खुद ही टारगेट सेट करने के बाद मिसाइल लॉन्च हो जाती है। मिसाइल से धमाका होने और दुश्मनों के मारने की लाइव वीडियो ड्रोन से देखी जा सकती है। इसका परीक्षण हो चुका है। इस पर मौसम के प्रभाव का परीक्षण किया जा रहा है। लद्दाख सहित अन्य दुर्गम इलाकों में इसका परीक्षण चल रहा है।

### ड्रोन से फेंके जाने वाल बम भी बनाया

भविष्य में भारत इस मिसाइल का निर्यात भी कर सकता है। कंपनी ने एक ड्रोन डेलीवर्ड बम भी बनाया है। यह बम ड्रोन से छोड़ा जाता है। यह दुश्मन के ठिकाने पर जाकर बम को फेंककर आता है। हालांकि इसकी मारक क्षमता मिसाइल से कम है।

<https://www.jagran.com/uttar-pradesh/ghaziabad-ncr-drone-shakti-exhibition-hindon-air-base-drone-launched-missile-made-for-the-first-time-in-india-23540673.html>

## दुश्मन के घर में घुसकर चीथड़े उड़ा देता है 'सुसाइड ड्रोन', 150 Km प्रति घंटे की रफ्तार; पढ़ें सभी खासियतें

सीमा में घुसकर दुश्मन के चिथड़े उड़ाने वाला सुसाइड ड्रोन सोमवार को एयरफोर्स स्टेशन, हिंडन पर लगी प्रदर्शनी में लगाया गया। 150 किलोमीटर प्रति घंटे की रफ्तार यह ड्रोन दुश्मन पर हमला करता है।

अभी तक भारत यह ड्रोन पोलैंड से आयात कर रहा है लेकिन अब इन ड्रोन का उत्पादन साहिबाबाद औद्योगिक क्षेत्र में होगा। इस ड्रोन का वजन 5.7 किलोग्राम है। दुश्मन को नष्ट करने वाला उच्च गुणवत्ता का विस्फोट होता है।

### 30 किलोमीटर दूर तक भर सकता है उड़ान

यह 30 किलोमीटर की दूरी तक उड़ान भर सकता है। यह आकाश में 80 किलोमीटर प्रति घंटा की रफ्तार से उड़ता है, लेकिन जब दुश्मन पर वार करता है तो इसकी रफ्तार दोगुना हो जाती है।

तब इसकी रफ्तार 150 किलो मीटर प्रति घंटा हो जाती है। यह दुश्मन को खोजने में सक्षम है। कंट्रोल रूम में डिजिटल प्लेटफॉर्म पर इसकी गतिविधि का पता चल जाता है।

### उड़ान भरते वक्त नहीं होती आवाज

उड़ान भरते समय इसकी आवाज नहीं होती है। जिससे दुश्मन को इसके आने की भनक नहीं लगती है। एक साथ ये पांच ड्रोन एक ही स्थान पर हमला कर सकते हैं। इसमें इस तरह की तकनीक का प्रयोग किया गया है कि रात में भी यह टारगेट को देख सकता है।

मौसम का इस पर ज्यादा असर नहीं पड़ता है। दुश्मन का पता चलने के पांच मिनट के भीतर इसे टारगेट को ओर उड़ाया जा सकता है। एक घंटे तक यह ड्रोन बिना रुके उड़ सकता है। जिस स्थान पर यह ड्रोन रखा जाता है, इससे किसी को नुकसान नहीं होता है।

### दूसरे देशों को निर्यात करेगा भारत

विश्व में इस ड्रोन की काफी मांग है। बताया जाता है कि यूक्रेन युद्ध में भी इस ड्रोन का प्रयोग किया जा रहा है। भारतीय सेना के पास भी यह ड्रोन हैं।

भारत इस ड्रोन का आयात पोलैंड से करता है। हालांकि यह ड्रोन पूर्व में भी भारत बना चुका है लेकिन उनका परीक्षण चल रहा है। डब्ल्यूबी इंडिया कंपनी के वाइस प्रेसीडेंट संदीप मलिक ने बताया कि साहिबाबाद में इस ड्रोन का उत्पाद शुरू करने की तैयारी की जा रही है।

### इस तरह दुश्मन को करता है टारगेट

इस ड्रोन का प्रयोग एक बार ही किया जा सकता है। ड्रोन दुश्मन तक जाकर खुद को उड़ा लेता है। धमाका इतनी तेज होता है कि 20 मीटर के दायरे में दुश्मन व अन्य सामान के चिथड़े उड़ जाते हैं। इस ड्रोन में कोई लाइट और आवाज नहीं होती है।

<https://www.jagran.com/uttar-pradesh/ghaziabad-ncr-what-is-suicide-drone-its-characteristics-and-features-displayed-in-drone-shakti-exhibition-hindon-air-base-23540163.html>

## **Anti-Drone System Along International Border Soon: Shah**

Union Home Minister Amit Shah on Tuesday said anti-drone system will be deployed along the international border for strengthening security.

“The Modi government is committed towards strengthening the security system along the border. Soon anti-drone system will be deployed on our country’s borders,” he said.

Smuggling of arms, ammunition and narcotics from across the international border to Punjab and Jammu and Kashmir has been a major problem confronting the border guarding forces, Shah said.

He said under the leadership of Prime Minister Narendra Modi, the government has been successful in cracking down on narcotics and terrorism.

He was addressing the 31st meeting of the Northern Zonal Council in Amritsar

Stating that in the last five years, the role of zonal councils has changed from advisory nature to action platforms, he said the Northern Zonal Council has an important place from the point of view of development and security of India, being home to 21 per cent of the country’s land and 13 per cent of the population. More than 35 per cent of the food grains are produced in the Northern region, he said. Shah said the majority of personnel in the Central Armed Police Forces (CAPFs) and Army, guarding the country’s borders, come from the states and Union Territories in the Northern Zonal Council. The Union minister asked the members — Punjab, Haryana, Himachal Pradesh, Delhi, Jammu Kashmir, Ladakh and Chandigarh — to resolve their disputes related to water sharing with an open mind and mutual discussion.

He asked all the member states to pay special attention to collective priority issues such as cooperative movement in the country, dropout rate of schoolchildren and malnutrition. The home minister said not even a single child should remain malnourished in the country. It is the responsibility of everyone to reduce the school dropout rate, he said, adding giving impetus to the cooperative movement will help in taking more than 60 crore people of the country towards prosperity.

He urged all member states and UTs to adopt natural and organic farming, as it will be hugely beneficial for the farmers of the country. He also assured help to the Himachal Pradesh government in dealing with the situation arising out of the recent floods.

<https://indianexpress.com/article/india/anti-drone-system-along-international-border-soon-shah-8957815/>

## **Ukraine War Teaches us Importance of Long-range Firepower and Allies, Says Visiting US Army Chief**

The biggest lesson from the Russia-Ukraine war for the US military is the importance of partners and allies in order to share lessons, build friendships and exercise interoperability, its army chief

said Tuesday. Both US Army chief General Randy George and his Indian counterpart General Manoj Pande also spoke extensively on the importance of the Indo-Pacific region.

At the Indo-Pacific Army Chiefs' Conclave (IPACC) hosted by India and the US in New Delhi, General George said that there were lessons in command and control to take from the ongoing war.

"We are looking at being leaner, more mobile and lower signature," he told the press in an interaction along with General Pande.

In recent times, the US Army has been looking at signature management, which is the process through which electromagnetic signature of military assets is studied and then modified to reduce the risk of detection from sensors.

"We are focusing on four areas — warfighting, delivering ready combat formations, continuous transformation and strengthening our profession, meaning that strengthening the trust between leaders and the led, our standards and discipline and our warrior ethos," General George said about the US Army's preparations for the future.

Apart from the "importance of long-range fire", General George highlighted that logistics and transformation also played a major role in the Ukraine war.

Recognising one point as common between India and the US, he said that it was important to take into consideration how we can partner with the commercial industry. "There's a lot we can do there to make ourselves better on a more rapid scale."

The US Army chief spoke extensively on the importance of the Indo-Pacific region. "This region is critically important to us, and I think you have seen that with our national defence strategy," General George said, adding that the region remains a priority for the US Army.

It is because of this fact, he said, that the US concentrates military exercises more in the Pacific as compared to anywhere else.

On India's role and the army-to-army relations, he said it's appropriate that India is hosting this event because of its leadership in this region. "The relationship between our militaries is strong and is growing stronger," he added.

From 25 September to 8 October, Indian and American armies will take part in the 19th edition of Exercise Yudh Abhyas in Alaska. In November last year, the two armies had held the exercise near the border with China in Uttarakhand's Auli.

He stressed that all the participating countries were at IPACC to talk about land power. "Land power not only contributes to shared security, it's decisive. It is the unity and collective commitment across the region and that unity and commitment are the best deterrent."

In his interaction, General Pande also elaborated on the importance of the Indo-Pacific region.

"The region is not only a cauldron of cultures, histories, resources and opportunities, but is also a theatre of complexities and challenges. The percentage of global population residing in the region, its share in the world's GDP, the proportion of merchandise and mercantile to the region, the magnitude of maritime trade, the transit to this area lends this region a pivotal stature in charting the world's course in the 21st century," he said

The Indian Army chief added that it was therefore necessary to have a periodic ideation, discussion and collaborative congregation of all coastal partners with core efforts focused on shared responsibility towards achieving and sustaining peace and stability.

The entire initiative was not directed at one country or group of countries, he said, without naming China.

“The Indo-Pacific construct has come to occupy central space in the contemporary geo-strategic canvas in recent years. Its significance is a reflection of the evolving dynamics in the political, security, economic and environmental domains of today’s world,” General Pande said.

<https://theprint.in/defence/ukraine-war-teaches-us-importance-of-long-range-firepower-and-allies-says-visiting-us-army-chief/1778823/>

## Science & Technology News



**Press Information Bureau**  
**Government of India**

**Ministry of Science & Technology**

*Tue, 26 Sep 2023*

### **Shanti Swaroop Bhatnagar National Awards Presented**

#### **82nd CSIR Foundation Day, PM sends written message**

Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today presented the Shanti Swaroop Bhatnagar National Awards to eminent Scientists below the age of 45, at a largely attended function at Bharat Mandapam in New Delhi.

Prime Minister Shri Narendra Modi has, in a written message, extended his heartiest congratulations to all the winners of Shanti Swarup Bhatnagar Prize and extended his greetings and best wishes to everyone associated with CSIR for the success of the 82nd CSIR Foundation Day.

Dr Jitendra Singh read out the written message sent by the Prime Minister, who could not be physically present because of preoccupations.

The Prime Minister's message hailed CSIR for playing a prominent part in serving the society, industry and the nation. The message, in particular, mentioned the Aroma Mission, strides in floriculture, the Purple Revolution ushered in through Lavender cultivation in Jammu and Kashmir, laying of Steel Slag roads along border areas of the country are just some instances of CSIR's contribution in meeting national aspirations.

Dr Jitendra Singh said, under the visionary leadership of Prime Minister, the CSIR could become the mainstay of STI journey in Amrit kaal to make India a Global Tech-Hub and the 100th year of CSIR in 2042 could trigger the glory of 100th year of Independent India in 2047.

PM, who is also the President of CSIR, in his message said, said that the period till 2047 when we will celebrate the centenary of our independence, is an opportunity to fulfil the vision of building a strong, inclusive and self-reliant India and it is in this context that the role of institutions such as CSIR assumes greater relevance.

The Prime Minister said, the 82nd Foundation Day holds a special relevance for CSIR, following the success of Chandrayaan-3, since CSIR was among the many different organisations that made significant contributions to the mission. He added that the indefatigable efforts of our space and science ecosystem have showcased to the world that even the sky is not the limit for us. We are

making every effort to complement the efforts of scientists by providing all the resources and also fostering a dynamic and favorable research ecosystem, the Prime Minister noted.

The Prime Minister said, our nation and its people have always been blessed with a scientific temper and an inquiring mind. He said, the speed as well as the scale of research and innovation by our scientists and technologists, particularly during the pandemic, has convinced the world of our unlimited potential to work for global good.

The Prime Minister said, for centuries, science has played a crucial role in finding solutions to seemingly intractable problems and unlocking new potential. He said, Science and Technology have helped transform every sphere of activity, be it medicine, communication, space, transportation, infrastructure, agriculture or knowledge. He also added that the mega-exhibition of CSIR showcasing the technological achievements of the last ten years will inspire one and all.

The Prime Minister extended his heartiest congratulations to all the winners of Shanti Swarup Bhatnagar Prize and extended his greetings and best wishes to everyone associated with CSIR for the success of the 82nd CSIR Foundation Day.

Dr Jitendra Singh, who is also Vice-President of CSIR, said India is seeing sea changes in the way S&T is being spearheaded and organized to address not only national aspirations towards socioeconomic growth but also global positioning.

Referring to some of the magnificent achievements and initiatives of CSIR, Dr Jitendra Singh said, Carbon Capture, Utilisation and Storage (CCUS) Mission is a pioneering initiative undertaken by the CSIR to address the pressing global challenge of reducing carbon emissions and mitigating climate change. He said, the Mission focuses on developing innovative technologies and solutions related to CO<sub>2</sub> capture, utilisation, and storage. "I am given to understand that the key stakeholders with whom CSIR has been discussing this Mission include Adani, Reliance, Tata Steel, Ultratech Cement, NTPC, JSW Steel, among others," the Minister added.

Dr Jitendra Singh said, the CSIR Hydrogen Technology Mission launched last year targets Hydrogen generation, storage, and utilisation, in consultation with industry experts. CSIR aims to unlock the full potential of hydrogen as a green energy carrier, reducing carbon emissions and contributing to a cleaner and more sustainable future.

The Minister said, another important initiative of the CSIR has been the Mission mode project on Sickle Cell Anaemia and it has a far-reaching objective of comprehensive disease management, with an overarching aim to alleviate the future disease burden and enhance the quality of life of patients.

Dr Jitendra Singh also noted that the newer initiatives are laudable, like the Phytopharmaceutical Mission, the Antiviral Mission, Mission for recycling Li-Ion batteries and recovering vital chemicals and metals, Artificial Intelligence, Advance Materials are the ones with high promise from the S&T. "I wish the CSIR the very best in these endeavours. I am confident that the CSIR shall ensure that all challenges are seen as wonderful opportunities for delivery during the Amrit Kaal, " he said.

Dr Jitendra Singh emphasised that the contributions of CSIR laboratories have been many and diverse, but only very few are aware of this and it is for this reason that during the last CSIR Foundation Day, he urged the CSIR leadership to implement the "One Week One Lab" initiative across the constituents. "Led by our very own and energetic first woman DG, Dr Kalaiselvi has given a new dimension to the OWOL program over the last one year," he said.

The Minister said, for the very first time, the people at large besides the stakeholders of the CSIR, have witnessed the splendour and capabilities of the CSIR labs. He also added that it helped in creating awareness of technological breakthroughs and the innovations of the CSIR labs, which

imparted to various stakeholders, the industry, line Ministries, MSMEs, start-ups, artisans, researchers, college, and school children, among others.

Dr Jitendra Singh urged the CSIR Leadership to devise a “One Week-One Theme” scheme on the lines of OWOL, combining all the institutions dealing with the theme or the subject in a true integrated fashion.

In her address, Secretary, DSIR and DG, CSIR, Dr N. Kalaiselvi said, in coming days, CSIR will enlarge its canvas and after the announcement of CSIR Vision-2030, it will also soon launch in a big way CSIR Vision -2042 to celebrate the Centenary Year of CSIR. She said, that both the Visions of CSIR will be in perfect alignment with Prime Minister’s Vision of a Developed India in 2047.

Dr Kalaiselvi also announced that today, we are seeing the culmination of the dedicated efforts of the CSIR Directors and S&T staff of the laboratories towards making the OWOL initiative a huge success.

Secretary, Department of Space and Charman, ISRO, Dr S. Somanath, in his Foundation Day address, said that India’s Space program is now increasingly used for societal benefits. He also outlined the Vision of India’s Space Missions through a brief presentation.

Principal Scientific Advisor to the Government of India, Professor Ajay Kumar Sood, in his address, talked about the rationalisation of Shanti Swarup Bhatnagar Awards and other Science Awards. He informed that the Awards will be announced on May 11, the National Technology Day and the same will be presented on 23rd August, the day Vikram landed on South Pole of the Moon.

The prestigious Shanti Swarup Bhatnagar Awards were also presented to the winners by the Union Minister.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1961041>



*Tue, 26 Sep 2023*

## **95% of Space-Components in Indian Rockets are Indigenous: Somanath**

Nearly 95% of the components used in the rockets, including those used in Chandrayaan 3 mission, were made in India and were a result of several years of development involving the Indian Space Research Organisation and Indian industries, S Somanath, Chairman, Indian Space Research Organisation said at the Foundation Day celebrations of the Council of Scientific and Industrial Research (CSIR) in New Delhi.

“These have not come about just like that and have come over several years...and is a result of collaborations with various agencies, including Indian laboratories, national labs, defence labs, and CSIR labs, focusing on material indigenisation, technology capabilities, and research,” he said.

ISRO built its own lithium-ion batteries for space applications and was now in the process of transferring it to industry, he added. Such batteries are at the heart of several applications ranging from electric cars to powering small portable devices.

Several key components, such as the microprocessor chip in the launch vehicle, were made at Chandigarh’s Semi Conductor Laboratory (SCL) and only about “five percent of high-end electronics” were imported for the space mission.

“It is not a supercomputer but enough to run a rocket and take it safely into space. The battery systems, storage, solar cells... we’ve been doing this over a long time and have created an industry capable of doing all of this,” he said in his address prior to a ceremony to felicitate the winners of the CSIR-Shanti Swaroop Bhatnagar prizes, awarded annually to recognise scientists under 45 who have done exceptional work in previous years.

Ministry of Science and Technology, and Vice-President, CSIR, Jitendra Singh said that India was seeing sea changes in the way the organisation was being led and geared to address not only national aspirations but also to contribute to India’s socio-economic growth.

<https://www.thehindu.com/sci-tech/science/95-of-space-components-in-indian-rockets-are-indigenous-s-somanath/article67349761.ece>

## THE TIMES OF INDIA

Wed, 27 Sep 2023

### **ISRO All Geared up for First Test Flight of Gaganyaan Crew Capsule in October: Chairman S Somanath**

Isro chairman S Somanath said on Tuesday that the space agency is all geared up to launch the first test flight of the Gaganyaan crew module next month.

Speaking on the sidelines of the CSIR’s 82nd Foundation Day, Somanath said, “Everything is progressing very well. We will have the launch of the first test flight of the Gaganyaan crew module to demonstrate its capability soon in early October. We will then repeat the same mission in the coming months. And by early next year, we will launch the first unmanned Gaganyaan mission (with a humanoid called Vyommitra).”

On the Aditya L1 mission, the Isro chief said the spacecraft “still has to travel for another 90+ days to reach the L1 point. Once it reaches there, it will try to capture the halo orbit and after it reaches its designated orbit, Aditya L1 will have a constant observation of the Sun.

The Isro chairman refused to comment on queries about whether Vikram lander and Pragyan rover will wake up again after spending the freezing lunar night (14 Earth days), where its electronic circuits were exposed to -200 to -250 degrees celsius temperature. Though Vikram and Pragyan have completed their mission tasks in the 14 earth days during the Moon day, Isro is hoping that if the lander and rover wake up again it can do more experiments on the Moon.

Isro will conduct the Gaganyaan test in October to validate the crew escape system early next month. It will be the first of the four abort missions of the Gaganyaan programme. The Indian Navy's elite marine commando unit, Marcos, will be part of the recovery operations of India’s first human spaceflight mission after it lands into the sea from space. Isro has already handed over the crew module recovery model to the Navy for training the crew.

The Isro team is aiming to test its crew escape system, which can be used to eject astronauts in emergencies, before undertaking a battery of other tests before the final launch phase. “Safety is the most important thing we need to ensure,” Gaganyaan project director R Hutton said.

The first test vehicle mission, Test Vehicle TV-D1, will be followed by the second test vehicle TV-D2 mission and first uncrewed mission of Gaganyaan (LVM3-G1). Thereafter, Isro will conduct the second series of test vehicle missions (TV-D3& D4) and LVM3-G2 mission with a humanoid called ‘Vyommitra’.



The Gaganyaan mission or India's first human spaceflight programme is aimed at demonstrating India's capability of taking a crew of two-three astronauts to an orbit of 400 km around the Earth for a three-day mission and bring them back safely to Earth, by landing in a designated location in the Indian waters, either in the Bay of Bengal or the Arabian Sea.

### **CSIR made key contributions to Chandrayaan-3 mission: PM**

PM Modi, in his message to CSIR scientists, said the CSIR Foundation Day holds a special relevance for the council, following the success of Chandrayaan-3, since the council was among many different organisations that made significant contributions to the (Moon) mission. "The indefatigable efforts of our space and science ecosystem has showcased to the world that the sky is not the limit for us. We are making every effort to complement the efforts of scientists by providing all the resources and also fostering a dynamic and favourable research ecosystem," the PM said.

The main launch vehicle of LVM3 that carried Chandrayaan-3 spacecraft was extensively tested and characterized in the CSIR's National Aerospace Laboratories in Bengaluru. More than 3000 wind tunnel tests were carried out to characterise the LVM3 vehicle, which included force measurements, steady and unsteady pressure measurements and nozzle load studies. In fact, all the major high-speed flight vehicles developed by DRDO, Isro, HAL and ADA have graduated out of this Bengaluru facility.

<https://timesofindia.indiatimes.com/home/science/isro-all-g geared-up-for-first-test-flight-of-gaganyaan-crew-capsule-in-october-somanath/articleshow/103970849.cms>

## **THE TIMES OF INDIA**

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### **ISRO Working to Expand Navigation System NaVIC Coverage to 3,000 Km from 1,500 Km Beyond India**

Isro is working on increasing the coverage of its Indian Regional Navigation Satellite System or NaVIC to 3,000 km from the existing 1,500 km (from beyond the Indian boundary), Isro chairman S Somanath informed on Tuesday.

During the CSIR Foundation Day event at Bharat Mandapam, Somanath gave a presentation of the space agency's activities where he informed that Isro is trying to increase the navigation coverage of NaVIC. Once the coverage is widened, NaVIC will not only work in India but its signals will also be present in neighbouring states or Saarc nations.

NavIC is designed with a constellation of seven satellites and a network of ground stations operating 24x7. Three satellites of the constellation are placed in geostationary orbit, at 32.5°E, 83°E and 129.5°E respectively, and four satellites are placed in inclined geosynchronous orbit with equatorial crossing of 55°E and 111.75°E respectively, with inclination of 29°. The ground network consists of a control centre, precise timing facility, range and integrity monitoring stations and two-way ranging stations.

To widen the coverage, the Isro will have to launch a slew of new navigation satellites to expand the coverage of NaVIC to the 3,000 km range beyond the Indian boundary.

Currently, the use of the NaVIC system is classified under two categories: Standard Position Service (SPS) for civilian users and restricted service (RS) for strategic users like security agencies and armed forces.

NavIC supports the needs of long-term security and economic growth of India that involve power grid synchronisation, public vehicle safety, real-time train information system, fishermen safety, geofencing, missile navigation. Isro is proposing to increase the civil applications of NavIC for navigation of unmanned aerial vehicles (UAVs), Aadhaar enrolment, geodetic network, Indian Standard Time dissemination, emergency warning system and GNSS-based e-tolling system.

NavIC signals are designed to provide user position accuracy better than 20m and timing accuracy better than 50ns. Also, NavIC SPS signals are interoperable with the other global navigation satellite system (GNSS) signals namely GPS (US), Glonass (Russia), Galileo (Europe) and BeiDou (China).

<https://timesofindia.indiatimes.com/home/science/isro-working-to-expand-navigation-system-navic-coverage-to-3000-km-from-1500-km-beyond-india/articleshow/103970279.cms>

