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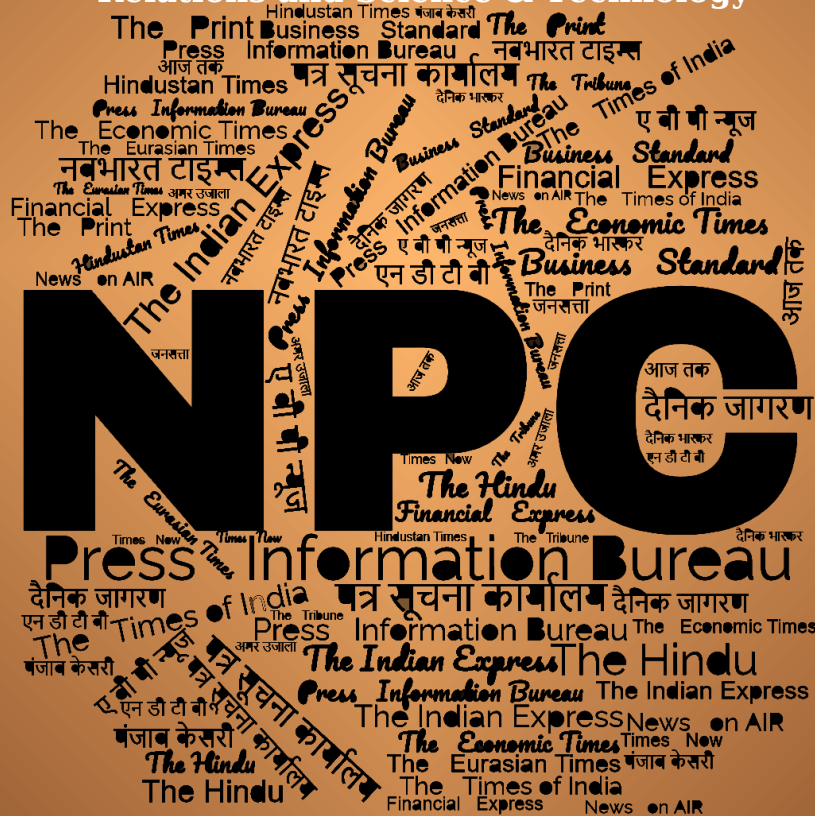
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# समाचार पत्रों से चयित अंश Newspapers Clippings

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*Tue, 02 May 2023*

### **DRDO Blew up 5000 Kg TNT Underground and Dropped 150 Kg Container off Goa Coast; Here' s why**

The Defence Research and Development Organisation (DRDO) has come up with a solution for the armed forces that are facing an acute shortage of land for setting up new explosive and ammunition storage facilities. The DRDO, on April 30, conducted a design validation trial of the underground ammunition storage structure.

DRDO's Delhi-based Centre of Fire, Explosive and Environment Safety (CFEES) designed and developed the Vertical Shaft-based Underground Ammunition Storage Facility that enables upward vertical dissipation of blast effects considerably, reducing the blast effect on surrounding utilities.

"The instrumented blast trial was carried out in the presence of the Armed Forces by detonating 5,000 kg of TNT in one of the chambers of the underground facility," the DRDO said.

The CFEES team conducted the trial with precision and utmost safety in place. All the parameters recorded during the trial matched with estimated values, it said.

The underground ammunition storage facility will ensure that an explosion within will not cause damage to the adjacent chamber and also ensure full operability of the remaining facility.

#### **How the Vertical Shaft based Underground Ammunition Storage Facility helps**

The Armed Forces often find it difficult to stock the ammunition that they need due to the non-availability of adequate land. Large safety distances are required for ammunition storage structures. The safety distances are considerably reduced when ammunition is stored underground. Based on the results of the instrumented trials, the safety distance has been established up to 120 Metric Ton (40 Metric Ton Net Explosive Content) of ammunition storage per chamber.

The unique design developed by the DRDO has the additional advantage of reducing safety distances and costs by 50 per cent as compared to current designs. The design also ensures higher safety for ammunition stored from any kind of aerial attack or sabotage.

The construction of the Vertical Shaft-based Underground Ammunition Storage Facility would require lesser cost than conventional facilities.

#### **Air-droppable container test**

With an objective to enhance naval operational logistics capabilities, the DRDO and the Indian Navy have carried out a successful trial of an air-droppable container with a 150 kg payload capability from maritime patrol aircraft and anti-submarine warfare aircraft IL 38SD off the coast of Goa.

The air-droppable container named as 'ADC-150' was indigenously designed and developed. The trial was conducted last week. "The trial was carried out to further enhance the maritime operational logistics capabilities by providing quick response to meet the requirement of critical engineering stores to ships (under distress), which are deployed over 2,000 km from the coast," the DRDO said, adding, "It reduces the requirement of ships to come close to the coast to collect spares and stores."

Three DRDO laboratories - Naval Science & Technological Laboratory (NSTL), Visakhapatnam; Aerial Delivery Research & Development Establishment (ADRDE), Agra and Aeronautical Development Establishment (ADE), Bengaluru - have been involved in the development of ADC-150 container.

The crucial flight clearance certification was given by Regional Center for Military Airworthiness (RCMA), Kanpur headed by the Centre for Military Airworthiness & Certification (CEMILAC), Bengaluru.

<https://newsable.asianetnews.com/india-defence/drdo-blew-up-5000-kg-tnt-underground-and-dropped-150-kg-container-off-go-a-coast-here-s-why-ru16ed>



*Tue, 02 May 2023*

## **DRDO Conducts Trial of Vertical Shaft-based Underground Facility for Ammunition Storage**

A vertical shaft-based underground ammunition storage facility has been devised and built by a Defence Research and Development Organisation (DRDO) lab in Delhi. This makes it possible for blast impacts to be dissipated vertically and upward, greatly decreasing the blast effect on nearby utilities. On April 30, 2023, the design validation testing for this subterranean ammo storage structure was completed successfully.

The Indian military forces were in attendance during the bombing trial. In one of the chambers, 5000 kg of TNT exploded. It was located in a subterranean building. The Centre of Fire, Explosive and Environment Safety (CFEES) team executed the study with accuracy and the highest level of safety possible.

### **About the trial of vertical shaft-based underground ammunition storage structure**

With the help of this facility, the remaining ones will be fully operational and no damage from an explosion inside will be done to the adjacent chamber. Due to the lack of suitable land, and the necessity of large safety distances for ammunition storage buildings, the armed forces would struggle to store ammunition as needed. When ammunition is stored underground, safety distances are significantly reduced.

The safety distance has been established up to 120 metric tonnes of ammunition storage per chamber based on the outcomes of instrumented trials. The innovative design created has the added benefit of cutting expenses and safety distances in half when compared to existing solutions. Additionally, this design provides greater protection for stored ammunition from aerial attack or sabotage.

The teams engaged in the productive blast trial have been commended by the secretary of the Department of Defence Research and Development and the chairman of DRDO. According to the

statement, the facility may be extensively used by the military to store various sorts of munitions, lowering the need for more acreage. This is in addition to providing enhanced safety of ammunition against aerial attacks, threats or sabotage. The ammunition stored in these shaft-based underground systems will help the armed forces in keeping spare ammunition as well as store more ammunition to face any adversaries that the country may face from the enemy. Also, these shafts will protect from all kinds of blasts and ensure the safety of the troops as well as the ammunition and resources of the armed forces and the country.

<https://www.republicworld.com/india-news/general-news/drdo-conducts-trial-of-vertical-shaft-based-underground-facility-for-ammunition-storage-articleshow.html>

## Defence News

## Defence Strategic: National/International

THE  HINDU

Tue, 02 May 2023

### **Rajnath Singh Hands Over Two Naval Vessels for Maldivian Defence Forces**

Continuing India's capacity building assistance in the Indian Ocean Region (IOR), Defence Minister Rajnath Singh, on Day 02 of his three-day visit, handed over a Fast Patrol Vessel (FPV) and a Landing Craft Assault ship to the Maldives National Defence Forces (MNDF). In Sri Lanka, Indian Air Force (IAF) Chief Air Chief Marshal V. R. Chaudhari donated AN-32 transport aircraft propellers to Commander Sri Lanka Air Force at Katunayake Air Base.

"India has emerged as a leading defence exporter in recent years. A defence manufacturing ecosystem has been created which has the advantage of abundant technical manpower. We produce world-class equipment to meet not only our own needs, but also for exports. India offers an enhanced defence partnership to friendly foreign countries, that is accommodative of their national priorities and capacities," Mr. Singh said at the formal handover ceremony. "We wish to create symbiotic relationships where we can learn from each other, grow together and create a win-win situation for all. India's commitment to support the Maldives will only get stronger with time."

He defined the handing of the two platforms as a symbol of the shared commitment of India and the Maldives towards peace and security in the IOR. The FPV, capable of coastal and offshore surveillance at high speeds, was commissioned as MNDF Coast Guard ship Huravee.

In recent years, India has significantly scaled up assistance towards capacity building and capability enhancement for Indian Ocean littoral states and countries in the IOR.

Mr. Singh called for collaborative efforts to deal with common challenges faced by IOR, including climate change and sustainable exploitation of maritime resources. He also called for enhanced cooperation among nations in the IOR to address the common challenges faced by the region and

identified sustainable exploitation of resources and climate change as the most important common challenges faced by the region.

“The Indian Ocean is our shared space. The primary responsibility for peace, stability and prosperity in the region rests with those who live in the region. Peace and security of a region are best secured with cooperation and collaboration of the regional players,” he said.

On climate change, Mr. Singh said that it has a huge impact on the maritime environment and its effects can pose challenges for taking forward national and regional aspirations, especially noting that Maldives is particularly exposed to the vagaries of climate change. “India has been the first responder in a large number of Humanitarian Assistance and Disaster Relief (HADR) requirements in the region in the past many years. We look forward to building upon each other’s expertise by collaborative engagement,” he said.

On Monday, Mr. Singh held talks with his Maldivian counterpart Mariya Ahmed Didi and Foreign Minister Abdulla Shahid. He later called on the President of Maldives Ibrahim Mohamed Solih and the discussions were held on ongoing projects and ways to further strengthen defence ties, the Defence Ministry said.

<https://www.thehindu.com/news/national/rajnath-singh-meets-maldivian-president-solih-in-male/article66802842.ece>



*Wed, 03 May 2023*

## **Rajnath Singh Hands over 'Made in India' Fast Patrol Vessel, Landing Craft Assault Ship to Maldives**

Defence Minister Rajnath Singh handed over a Fast Patrol Vessel and a Landing Craft Assault ship to the Maldives National Defence Forces (MNDF) on Tuesday. On the first day of his three-day official visit, Singh held talks with his Maldivian counterpart and Foreign Minister of Maldives Abdulla Shahid. He also met with Maldivian President Ibrahim Mohamed Solih and discussed the progress of various developmental projects undertaken by India in the Maldives.

As per the Ministry of Defence, the Fast Patrol Vessel, capable of coastal and offshore surveillance at high speeds, was commissioned as the MNDF Coast Guard ship Huravee.

### **'INDIA-MALDIVES' SHARED COMMITMENTS'**

Speaking on the occasion, Rajnath Singh described the handing over of the two ‘Made in India’ platforms as a symbol of the shared commitment of both nations and their objectives towards peace and security in the Indian Ocean Region (IOR).

He stated that India, through a robust defence ecosystem, has significantly enhanced its manufacturing capabilities to further support the capacity building of partner countries.

“India has emerged as a leading defence exporter in recent years. A defence manufacturing ecosystem has been created which has the advantage of abundant technical manpower. We produce world-class equipment to meet not only our own needs, but also for exports. India offers an enhanced defence partnership to friendly foreign countries, that is accommodative of their national priorities and capacities. We wish to create symbiotic relationships where we can learn from each other, grow together and create a win-win situation for all. India’s commitment to supporting the Maldives will only get stronger with time,” the Raksha Mantri said.

Rajnath Singh recalled Prime Minister Narendra Modi's visit to the Maldives in June 2019, wherein he emphasised that 'Neighbourhood First' was the priority and in the neighbourhood, 'Maldives is priority'

"The Indian Ocean is our shared space. The primary responsibility for peace, stability and prosperity in the region rests with those who live in the region. Peace and security of a region are best secured with the cooperation and collaboration of the regional players," he said.

He spoke about sustainable exploitation of resources and climate change as the most important common challenges faced by the IOR and called for collaborative efforts towards ensuring the maritime expanse of the Indian Ocean.

Sustainable exploitation of maritime resources is an important means for sustained growth and development of nations across the IOR, he said.

<https://www.indiatoday.in/amp/india/story/defence-minister-rajnath-singh-hands-over-fast-patrol-vessel-landing-craft-assault-ship-maldives-2367784-2023-05-03>



*Tue, 02 May 2023*

## **IAF Chief Meets Sri Lanka's Top Military Leaders, Exchange Views on Matters of Bilateral Importance**

Chief of Air Staff, Air Chief Marshal V.R. Chaudhari on Tuesday met Sri Lanka's top military leaders and exchanged views on several matters of bilateral importance, while recalling the longstanding friendship between the two countries, amid China's growing influence in the island nation. Air Chief Marshal Chaudhari, who arrived here on Monday on a four-day official visit to Sri Lanka, called on the Commander of the Sri Lankan Air Force (SLAF), Air Marshal Sudarshana Pathirana at Air Force Headquarters here.

As part of India's commitment towards capacity building of Sri Lanka Armed Forces, Chief of Air Staff of the Indian Air Force presented AN-32 propellers to ensure high operational readiness of the aircraft held with Sri Lanka Air Force.

"Air Chief Marshal VR Chaudhari #CAS @IAF\_MCC donated AN-32 propellers to Commander @airforcelk at Katunayake Air Base on behalf of Government of India. Highlights India's resolute commitment towards capacity building of Sri Lanka Armed Forces," the the Indian High Commission in Colombo tweeted.

The Chief of the Air Staff is visiting Sri Lanka at the invitation of Air Marshal Pathirana. He was received upon arrival by the Commanding Officer SLAF Station Colombo, Air Commodore Suresh Fernando, and was presented a Guard of Honour which was conferred by the Colour Squadron of the SLAF, Sri Lanka's News 1st channel reported. He also met with the Commander of the Sri Lanka Navy, Vice Admiral Priyantha Perera at the Navy Headquarters, Colombo.

Upon his arrival, he was welcomed at the portals of the Navy Headquarters in compliance with naval tradition. "Visit of Air Chief Marshal VR Chaudhari #CAS @IAF\_MCC to Sri Lanka: Day 2 engagements in the morning. Meeting with Air Marshal Sudarshana Pathirana, Commander @airforcelk. Meeting with Vice Admiral Priyantha Perera, Commander @srilanka\_navy," the Indian mission tweeted.

Air Chief Marshal Chaudhari also met with Maj. Gen Senarath Yapa, Commandant National Defence College, Sri Lanka and delivered a talk on the transformation of the Indian Air Force to the senior Sri Lankan Armed Forces officers attending the College, it added. He also gifted books worth 10 million Sri Lankan rupees to the prestigious college. During the discussions, the two sides exchanged views on several matters of bilateral importance, whilst recalling the longstanding friendship between the two countries. After his arrival here on Monday, Air Chief Marshal Chaudhari sought the blessings of Lord Buddha at the sacred Gangaramaya Temple in Colombo.

The visit will enhance the existing professional ties and bonds of mutual cooperation between both nations, an official statement said.

"The visit symbolises strong relations and close cooperation between the two friendly neighbours, with Sri Lanka being accorded the status of 'Priority One' partner by India. Underlining the strong bonds of friendship between the two services," the Indian mission said in a statement Monday.

"The visit of Chief of Air Staff, Indian Air Force would strengthen the existing relations between the two countries and facilitate discussions on common security challenges and enhancing capacity and capability building initiatives towards ensuring Security And Growth for All in the Region (SAGAR), as propounded by Prime Minister Narendra Modi," the statement said.

In February 2021, at the invitation of the Commander, Sri Lanka Air Force, a 22 aircraft contingent of the Indian Air Force participated in the 70th anniversary celebrations of the Sri Lanka Air Force.

In addition, the Indian Air Force was the first responder by deploying its assets expeditiously for providing 12T medical supplies in May 2020 and 100T nano fertilisers in November 2021.

In August last year, Vice Chief of Indian Navy Vice Admiral S N Ghormade paid a two-day visit to Sri Lanka and handed over a Dornier maritime surveillance aircraft to the island nation's Navy to further boost bilateral defence partnership. Sri Lankan President Ranil Wickremesinghe was present at the handover ceremony which took place as India celebrated the 75th anniversary of its independence. The ceremony to hand over the aircraft also happened a day before Yuan Wang 5, a Chinese missile and satellite tracking ship docked at Sri Lanka's Hambantota port.

India's concerns come amidst China's growing influence in Sri Lanka - which is currently struggling to come out of a severe economic crisis. Beijing has loaned billions of dollars to Sri Lanka as part of its Belt and Road Initiative (BRI) to build infrastructure in Asia. However, some of the infrastructure projects under the BRI have not worked in Sri Lanka's favour.

In 2017, for example, China Merchants Port Holdings took a majority share with a 99-year lease in Hambantota port - where the Yuan Wang 5 was docked - after Colombo struggled to repay the debt incurred to build it.

<https://www.thehindu.com/news/national/iaf-chief-meets-sri-lankas-top-military-leaders-exchange-views-on-matters-of-bilateral-importance/article66803756.ece>



*Tue, 02 May 2023*

## **India, France Carry Out Joint 'Exercise Orion' Drills with Rafale Jets**

Rafale jets of India and France have been jointly carrying out aerial drills as part of a multinational air exercise at the French airbase of Mont-de-Marsan, officials said on Tuesday. Shivangi Singh, the Indian Air Force's first woman Rafale pilot is part of the Indian team that is participating in the Exercise Orion, they said.



In January, Squadron Leader Avani Chaturvedi scripted history by becoming the first IAF woman fighter pilot to take part in an aerial wargame abroad.

Ms Chaturvedi, a Su-30MKI pilot, was part of the IAF's contingent that participated in the 16-day mega air combat exercise with Japan Air Self Defence Force (JASDF) at the Japanese airbase of Hyakuri from January 12 to 26.

India deployed four Rafale jets, two C-17 aircraft and two IL-78 mid-air refuellers for the three-week multinational exercise in France that began on April 17.

It was the first overseas exercise for the Indian Air Force's Rafale jets.

"As both the French and Indian Air Forces now fly Rafale jets, it opens up new levels of interoperability!" French Ambassador to India Emmanuel Lenain tweeted.

Besides the IAF and the French Air and Space Force (FASF), air forces from several other countries including Germany, Greece, Italy and Spain are participating in the exercise.

<https://www.ndtv.com/india-news/india-france-carry-out-joint-exercise-orion-drills-with-rafale-jets-3999291>



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

**Ministry of Defence**

*Tue, 02 May 2023*

## **Visit of Admiral R Hari Kumar, CNS to Singapore Inaugural Ceremony of Maiden ASEAN India Maritime Exercise**

Admiral R Hari Kumar, Chief of the Naval Staff, Indian Navy is on an official visit to Singapore from 02 to 04 May 2023.

During the visit the CNS co-officiated the inaugural ceremony of maiden ASEAN – India Maritime Exercise (AIME) 2023, held at Changi Naval Base, Singapore on 02 May 23. The ceremony was jointly inaugurated by Adm R Hari Kumar and RAdm Sean Wat, Chief of Navy, Republic of Singapore Navy in the presence of senior dignitaries from other ASEAN nations. This inaugural edition of AIME is being co-hosted by the Republic of Singapore Navy and Indian Navy; and will witness participation of ships and personnel from other ASEAN countries.

The harbour phase of the exercise is scheduled to be held at Changi Naval Base from 02 – 04 May 2023 and the Sea Phase will be conducted from 07 to 08 May 2023 in the South China Sea.

In addition to representing India and the Indian Navy during the AIME 2023, Adm R Hari Kumar, will also be attending the opening ceremony of International Maritime Defence Exhibition (IMDEX-23) and will deliver a talk on 'Cooperation and Collaboration in the Future Maritime Environment' during a panel discussion at 8th International Maritime Security Conference (IMSC), being conducted on the side lines of IMDEX - 23.

The CNS would also be calling on Minister for Defence, Singapore and would be interacting with the Chief of Defence Force (CDF), Singapore Armed Forces (SAF), Chief of Navy, Republic of Singapore Navy (RSN), other Navy Chiefs and Heads of Delegation from countries participating in the AIME, IMDEX and IMSC. CNS would be having an engagement with Academia in Singapore to discuss ASEAN – India Maritime Connect Opportunities.

The AIME-23 is aimed at promoting maritime cooperation and enhancing trust, friendship and confidence amongst ASEAN and Indian Navies. The Harbour Phase at Singapore from 02 to 04 May 23 will witness a range of professional and social interactions between the participating navies which includes cross deck visits, Subject Matter Expert Exchanges (SMEE) and planning meetings. The Sea Phase scheduled from 07 to 08 May 23 in the South China Sea will provide an opportunity for the participating navies to develop closer links in the coordination and execution of operations in the maritime domain.

India's first indigenously-built destroyer, INS Delhi and INS Satpura, an indigenously-built guided missile stealth frigate alongwith a P8I Maritime Patrol aircraft will participate in the Inaugural ASEAN India Maritime Exercise and IMDEX. The participating ships form a part of Indian Navy's Eastern Fleet based at Visakhapatnam and operate under the command of RAdm Gurcharan Singh, the Flag Officer Commanding Eastern Fleet. Presence of the indigenously built ships of the Indian Navy at the multi-national events will be an opportunity to showcase the ship-building capabilities of Indian Shipyards.

ASEAN is at the core of India's Indo-Pacific Policy as was enunciated by the Hon'ble Prime Minister of India, Shri Narendra Modi in his speech at the Shangri La Dialogue in Singapore in 2018. AIME reinforces this belief and India's commitment to 'Act East' in its endeavour to ensure 'Security and Growth for all in the Region (SAGAR)'. The visit of the CNS further consolidates the high level of bilateral defence engagements with Singapore as well as India's recognition of 'ASEAN Centrality' to the region.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1921439>



*Tue, 02 May 2023*

## **India, ASEAN Navies set for Joint Drills in South China Sea**

The Indian and ASEAN (Association of Southeast Asian Nations) navies are set to conduct their maiden joint drills in the South China Sea where China is known for its aggressive activities that threaten to escalate tensions in the region, officials familiar with the matter said on Tuesday.

China has longstanding territorial disputes in the resource-rich South China Sea with several members of the regional bloc including Malaysia, the Philippines and Vietnam.

The opening ceremony of the inaugural ASEAN-India Maritime Exercise (AIME-23) was held at the Changi Naval Base in Singapore on Tuesday, with the drills aimed at “promoting maritime cooperation and enhancing trust, friendship and confidence amongst ASEAN and Indian Navies,” the Indian Navy said in a statement.

Navy chief Admiral R Hari Kumar and his Singaporean counterpart Rear Admiral Sean Wat, and senior dignitaries from ASEAN were present.

The regional bloc consists of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

The inaugural edition of AIME is being co-hosted by the Republic of Singapore Navy and Indian Navy.

The harbour phase of the exercise will be held at the Changi Naval Base from May 2 to May 4, and the sea phase will be conducted from May 7 to May 8 in the South China Sea.

The first phase will witness a range of professional and social interactions between the participating navies including cross deck visits, subject matter expert exchanges and planning meetings, while the second phase in the South China Sea will provide an opportunity to the participating navies to develop closer links in the coordination and execution of operations in the maritime domain, the statement added.

To be sure, the Indian Navy has exercised with regional navies in the South China Sea before.

Beijing has been increasingly belligerent in stressing its claims in the South China Sea.

India has consistently called for a free, open and inclusive order in the Indo-Pacific, pivoting on respect for sovereignty and territorial integrity of all nations, while stressing on peaceful resolution of disputes through dialogue and under the framework of international laws.

India is concerned about complicating actions and incidents that have eroded trust and confidence, and undermined peace and stability in the region, defence minister Rajnath Singh said last November, while addressing the 9th ASEAN Defence Ministers Meeting (ADMM) Plus at Siem Reap in Cambodia.

India stands for the freedom of navigation and overflight, unimpeded lawful commerce, peaceful settlement of maritime disputes and adherence to international law, he had then said.

ASEAN is at the core of India's Indo-Pacific Policy as enunciated by Prime Minister Narendra Modi in his speech at the Shangri La Dialogue in Singapore in 2018.

Indigenous warships INS Delhi and INS Satpura along with a P8I maritime patrol aircraft will participate in the India-ASEAN naval drills.

India is keeping tabs on China's moves in the South China Sea and taking steps to ensure that the Chinese navy doesn't muscle its way into the Indian Ocean where combat-ready Indian warships are carrying out round-the-clock surveillance for any unusual activity.

<https://www.hindustantimes.com/india-news/indian-and-asean-navies-conduct-inaugural-joint-drills-in-south-china-sea-amidst-china-s-territorial-disputes-and-aggressive-activities-101683038055970.html>

# The Tribune

Wed, 03 May 2023

## How Best to set up Integrated Theatre Commands

*Lt Gen Harwant Singh (Retd)*

RIGHT after Independence, the requirement of a Chief of Defence Staff (CDS) was felt. The proposal for adopting the CDS system was floated by the first Governor General of independent India, Lord Mountbatten, who had first-hand experience of a unified command. This proposal was cold-shouldered by Jawaharlal Nehru, the then Prime Minister.

Thereafter, the proposal was simply put aside. Consequent to the Kargil War, the need to adopt this system came up again. While the Subrahmanyam Committee took up a number of issues, it left out the all-important requirement for some reason. It was thanks to the Arun Singh Committee, based on my presentation to it on the imperatives of adopting the system in its full play (with integrated theatre commands or ITCs), that this issue was taken up. To start with, I had recommended two ITCs (besides one mountain corps for the Tibet border) — one for the Andaman and Nicobar Islands and the other being the northern ITC. To allay misapprehensions of the IAF, the first theatre

commander of the northern ITC should be an Air Force officer with integrated staff from the IAF and the Army. The remaining ITCs were to come up subsequently in a phased manner. However, only the Andaman and Nicobar ITC was formed.

Finally, in August 2019, the post of CDS was announced by the PM (not as an Act of Parliament) and a committee under the National Security Adviser met to formulate the role and powers of the CDS. In January 2020, Gen Bipin Rawat assumed office as CDS.

As far as constituting integrated theatre commands is concerned, no operational role has been assigned to the CDS. It is consequent to the formulation of overall strategic war plans related to a two- or even three-front war (China, Pakistan and Indian Ocean Region) that integrated theatre commands would be constituted. In determining their composition and areas of responsibility, a range of factors need to be considered. These include the terrain, enemy capabilities in each sector, where to be completely on the defensive, where to stage an offensive defence and, finally, where an all-out offensive is to be launched.

With no operational responsibility and command over ITCs, General Rawat went ahead and recommended only two ITCs for the entire land border of the country and one maritime ITC for the entire Indian Ocean Region (IOR).

Possibly, General Rawat, in recommending only one ITC for the northern border with Tibet and a part of PoK, tried to copy the PLA (People's Liberation Army of China) on the one hand and bring about a reduction in the number of commands (army and IAF) on the other.

It is both possible and convenient for the PLA to have a single command on the Tibet plateau due to the type of terrain and excellent road and rail system laterally and to various points on the LAC. On the Indian side, the terrain is of high mountains and deep valleys, with poor road connectivity, both to specific points on the LAC and laterally, making movement difficult and slow.

This one northern ITC would cover the borders with Bangladesh, Myanmar, Tibet, Nepal, Bhutan and parts of PoK. The second ITC extends from parts of PoK down to the Rann of Kutch. The third (maritime ITC) is for the entire IOR. Three ITCs for this vast land border and sea frontage would be inadequate.

The best option could be to convert the existing five Army commands (Eastern, Central, Northern, Western and South Western) into ITCs. The South Western ITC could have a commander from the IAF, with some role (deploying IAF resources) in the Arabian Sea in support of the Navy.

These ITCs would have integrated staff. As for the IOR, there should be three ITCs — first for the Arabian Sea, second for the Bay of Bengal and third for the Andaman and Nicobar Islands.

While the CDS must be the overall operational commander, the existing Integrated Defence HQ should form a part of the CDS HQ and this setup must stand independent of the Ministry of Defence (MoD).

The IAF continues to have some misgivings and reservations on the adoption of the ITC concept. It is contended that air power is highly flexible and can be applied across a wide front on a range of targets, as a whole or in smaller components. Further, the present number of squadrons is inadequate and their distribution among the ITCs would mitigate against the fuller application of air power at critical enemy targets. General Rawat further muddied the waters by equating air power with artillery on the one hand and pitching for submarines instead of aircraft carriers on the other, to the consternation of the Navy's top brass.

These observations of the IAF do not hold good, when subjected to a detailed analysis. While currently, the squadron strength is down to 32, this will soon have to be raised to 45, perhaps more. Their distribution among the ITCs would be based on a detailed examination of tasks of each ITC. Secondly, under certain requirements, the CDS can temporarily switch IAF resources from one ITC

to another for specific missions, as is being currently done by the IAF. Air Chief Marshal VR Chaudhari appears to be reconciled to the idea of integrating the efforts of all three services.

Till date, we import almost 70 per cent of defence weapons and equipment, even though we have had over four dozen DRDO establishments, an equal number of ordnance factories and over a dozen defence PSUs. These establishments need major changes in their working.

The Department of Military Affairs in the MoD, instead of being headed by the CDS, should have a three-star defence services officer with integrated staff to direct and control the working of the four establishments — the DRDO, ordnance factories, defence PSUs and DG quality assurance. It would, in practice, replace the Secretary, Defence Production. This one change will, for sure, bring about a sea change in the output of these establishments and be an appropriate step towards self-reliance in defence weaponry and equipment.

Equally, it would be premature to ban the import of such a large number of defence equipment in the hope that the same would be made in India. We have to first establish acceptable quality of such locally produced equipment before banning their import. What must not be overlooked is the importance of the quality of such equipment in war-fighting.

Technology, be it cyber, space, artificial intelligence or drones, is making deep inroads into warfare and will play a pivotal role in the times to come. Therefore, modernisation of the defence forces cannot be put on the backburner any longer. Those playing the no-war tune do not seem to hear the Dragon knocking at the country's doors.

<https://www.tribuneindia.com/news/comment/how-best-to-set-up-integrated-theatre-commands-504147>



*Tue, 02 May 2023*

## **NSA Doval Meets Iranian President Raisi, Talks of a 'New Level' in Bilateral Ties**

India and Iran Tuesday vowed to take their relationship to a “new level” under a “new global order” with greater cooperation under bilateral as well as multilateral mechanisms at a time when Tehran has become a full member of the Shanghai Cooperation Organisation (SCO) and plays crucial role in Taliban-led Afghanistan.

This was decided during a meeting between Iranian President Seyyed Ebrahim Raisi and National Security Advisor Ajit Doval in Tehran Tuesday. Doval was accompanied by India's outgoing Ambassador to Iran Dharmendra Gaddam as well as the newly appointed envoy Rudra Gaurav Shresth.

“As two effective countries in the region, Iran and India can develop their cooperation to a new level to have an impact on the developments caused by the establishment of the new world order,” President Raisi told the Indian delegation according to a statement issued by the Office of the President of Iran.

“In the heart of the changes taking place in the world, regional and international organisations, especially the Shanghai and BRICS organisations, due to their power and resources, can be very

effective,” the President said, adding that the geopolitics of the world is “changing” giving shape to a different global order.

NSA Doval pushed for deepening and expansion of ties between India and Iran while he discussed issues concerning the Russia-Ukraine war and the situation in Afghanistan with the Iranian President. Doval had met his Iranian counterpart Ali Shamkhani and Foreign Minister Hossein Amirabdollahian where issues concerning resumption of Rupee-Rial trade and crude oil purchase were discussed. Iran has asked India to resume oil purchases from Tehran by skirting the American sanctions as it did in the case of Russia crude even as Moscow has come under UN-led as well as western sanctions for the Ukraine war.

India had brought oil imports from Iran to nil in May 2019 owing to sanctions imposed on them by then US President Donald Trump.

Amirabdollahian will be visiting India later this week for the SCO Foreign Ministers Meeting taking place in Goa on May 4-5. Iran will be participating in the meeting as a full-fledged member of SCO for the first time under India’s presidency.

Last year President Raisi and Prime Minister Narendra Modi met on the margins of the SCO in Samarkand, Uzbekistan.

Iranian Defence Minister Brig Gen Mohammad Reza Gharaei Ashtiani was also in India last week for the SCO Defence Ministers conference where he held a bilateral meeting with Defence Minister Rajnath Singh.

During the meeting Iran sought enhanced defence and security ties with India, exchanged views on regional security issues, including peace and stability in Afghanistan as well as development of the International North South Transport corridor to ease logistic problems to Afghanistan and other countries in Central Asia.

<https://news.abplive.com/india-at-2047/nsa-ajit-doval-meets-iranian-president-seyyed-ebrahim-raisi-talks-of-a-new-level-in-india-iran-bilateral-ties-1599476>



*Tue, 02 May 2023*

## **Chinese Foreign Minister to Visit India this Week to Attend SCO Meeting**

Chinese foreign minister Qin Gang will visit India to attend the Shanghai Cooperation Organisation’s (SCO) foreign ministers’ meeting this week, his second visit to India in two months.

“From May 2 to 5, Chinese state councillor and foreign minister Qin Gang will visit Myanmar and attend the meeting of the Council of Foreign Ministers of SCO in India,” Chinese foreign ministry spokesperson Mao Ning announced on Tuesday.

“The upcoming SCO Foreign Ministers’ Meeting will be held on May 4 and 5 in Panaji, the capital of Goa, India,” Mao said, adding that Qin “will exchange views with other SCO member states’ foreign ministers on the international and regional situation and SCO cooperation in various fields, among other topics, to make full preparation for this year’s SCO summit.”

Chinese President Xi Jinping and Russian President Vladimir Putin are expected to attend SCO summit in New Delhi on July 3 and 4.

Several key meetings in the run-up to the summit have already been held in India including the national security advisers' meeting on March 29 and the defence ministers' meeting in late April.

Chinese defence minister Li Shangfu attended the defence ministers' meeting in late April, which was the first visit to India by a Chinese defence minister since the Galwan Valley clash in June, 2020, and the subsequent chill in bilateral ties.

Qin visited India in early March to attend the G20 foreign ministers' meeting in New Delhi where he told external affairs minister S Jaishankar that India and China should put the border problem in its "appropriate" place and ease the situation to "normalised control".

"We should put the border issue in the appropriate place in bilateral relations and promote the early shift of the border situation to normalised control," Qin told Jaishankar during the meeting, their first since Qin took over as China's foreign minister, replacing Wang Yi.

"The two sides should implement the important consensus between the leaders of the two countries, maintain dialogue, settle differences, and promote the improvement of bilateral relations as soon as possible and move forward steadily," Qin said, according to a Chinese foreign ministry readout released on March 3, several hours after the bilateral meeting took place in New Delhi.

On his part, Jaishankar had described the Sino-Indian ties as "abnormal" during his talks with Qin, adding that their conversation was about the challenges in bilateral ties, especially for restoring peace and tranquillity in the border areas.

"It's our first meeting after he took over as foreign minister. We spent maybe about 45 minutes talking to each other... about the current state of our relationship, which many of you heard me describe as 'abnormal' and I think those were among the adjectives I used in that meeting," Jaishankar said, according to a report by the Press Trust of India.

<https://www.hindustantimes.com/world-news/chinese-foreign-minister-qin-gang-to-attend-sco-meeting-in-india-ahead-of-summit-with-xi-jinping-and-vladimir-putin-101683035297161.html>



*Tue, 02 May 2023*

## **Russia Lacks Sufficient Arsenals as Ukraine Prepares for Counteroffensive: UK**

As Ukrainian armed forces prepare to launch the spring counteroffensive against the Russian troops, UK's Defense Ministry claimed in its intelligence update that Russia's invading forces do not have "enough munitions to achieve success". British defence Secretary Ben Wallace and other defense officials had also reiterated previously that Moscow lacks "munitions and manoeuvre units" to be successful. Monday's intelligence came as Russia's President Vladimir Putin sacked his top logistics general last week due to what is being speculated the military setbacks in the Kremlin-held regions of eastern and southern Ukraine.

"On 27 April 2023, Russian military-linked social media claimed that Russia's Deputy Defence Minister, Colonel-General Mikhail Mizintsev, had been dismissed. Mizintsev held the military logistics portfolio and had only been in post for eight months," UK intelligence also claimed. The dismissal was speculated to be due to the logistics problems faced by Russian fighters during the struggling military campaign.

While the Ukrainian Armed Forces have been training the brigades for the critical spring counteroffensive, Russia's paramilitary company Wagner whose fighters are leading assaults on the eastern Donbass region's critical frontlines and ensuing the fierce battle of Bakhmut, have appealed to Russia's Defense Ministry to boost the supply of the weaponry ahead of the speculated May 14-15 Ukrainian counteroffensives.

US intelligence released the war casualties figures, estimating that there have been 20,000 Russian deaths and more than 80,000 injuries since December 2022. The paucity of ammunition, it noted, has also driven the internal rifts between the Russian Defense Ministry and Wagner Group. The latter has been leading the offensive in the ruined fortress city of Bakhmut.

### **Wagner threatens to pull out from Bakhmut**

Last week, the head of the Kremlin-backed shadowy paramilitary group Wagner, Yevgeny Prigozhin threatened to pull out all of his troops from the besieged city of Bakhmut, the 16-square-mile city in Western Ukrainian neighbourhood witnessing the bloodiest battles in Europe since World War II. The latter held 1 hour 26 minutes meeting with military Commander Semyon Pegov, where he discussed the "complete blocking" of the supply of ammunition for the Wagner PMC fighters.

Wagner's chief berated the unacceptable Wagner casualties on the frontlines as he demanded more weapons, adding that the losses of men "should not have happened." Prigozhin also slammed the betrayal of Russia's interests by a group of top Russian officials labelling their actions as "treason".

<https://www.republicworld.com/world-news/russia-ukraine-crisis/russia-lacks-sufficient-arsenals-as-ukraine-prepares-for-counteroffensive-uk-articleshow.html>

## **THE TIMES OF INDIA**

*Tue, 02 May 2023*

### **Denmark Pledges \$250 Million in Military Aid to Ukraine**

Denmark on Tuesday announced it was sending 1.7 billion kroner (\$250 million) worth of military aid to Ukraine "to support the forthcoming Ukrainian offensive," its defence ministry said.

The donation package included mine clearing vehicles, ammunition and financial support for the procurement of air defence, the Danish Ministry of Defence said in a statement.

"The equipment in the donation package is essential to pave the way for Ukrainian tanks and mechanised infantry on the front line," acting Defence Minister Troels Lund Poulsen, was quoted saying in the statement.

"The new military donation package is our largest to date, bringing the total Danish support to almost 11 billion kronor," Foreign Minister Lars Lokke Rasmussen said.

In January, Denmark pledged 19 French-made Caesar howitzers to Ukraine, including some still on order, and in April it announced that it was buying -- together with the Netherlands -- 14 Leopard 2 tanks to give to Ukraine.

<https://timesofindia.indiatimes.com/world/europe/denmark-pledges-250-million-in-military-aid-to-ukraine/articleshowprint/99941832.cms>





**Press Information Bureau**  
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**Special Service and Features**

*Tue, 02 May 2023*

## **IIT Madras Hosts National Workshop on Next Generation Laser Technologies**

**Institute hosts DRDO Scientists, Industry experts, IITs and premier institutions to deliberate how India can advance in the field of Laser Systems and develop the technology indigenously**

Indian Institute of Technology Madras (IIT Madras) hosted a workshop on Next Generation Laser Technologies today (2nd May 2023) as part of the Golden Jubilee celebrations of Office of Industrial Consultancy and Sponsored Research (IC&SR), IIT Madras.

The key objective was to bring together experts from across the country and discuss how India can advance in the field of Laser Systems and develop the technology indigenously.

The workshop was organized by the DRDO Industry Academia – Ramanujan Centre of Excellence (DIA-RCoE), IIT Madras, and the Department of Electrical Engineering, IIT Madras. It provided an opportunity to the research scholars, scientists, next-generation faculty, and industry captains to know about this disruptive technology which is going to be a game changer in defence technology.

Considering the domination of drones in the sky and in the sea, lasers are being explored for weapon, communication and many more applications. In order to achieve ‘Atmanirbhar Bharat’ in this domain, the workshop intends to lay a clear approach for futuristic development after brainstorming and panel discussion among the eminent professors, industry experts, scientists and researchers for development of technology and systems for our defence services.

Addressing the workshop, Shri Haribabu Srivastava, Director General (Technology Management), Defence Research and Development Organisation (DRDO), said, “The speed with which other countries are moving forward in this technology is tremendous and we need to move fast as well and reduce the gap between India and rest of the world. We need to take current capabilities to where the world is today and marshal the resources required to achieve this. The technology should be home-grown and not imported.” Shri. Haribabu Srivastava emphasised to prepare a road map along with sharable with various Institutions who have domain expertise.

Speaking earlier, Dr. G. Satheesh Reddy, Scientific Adviser to Raksha Mantri, Ministry of Defence, Government of India, said, “We have to develop technologies on a timeline similar to the other countries. Laser is a key technology with enormous applications in areas ranging from healthcare and manufacturing, especially precision manufacturing and the defence sector. Weaponisation of laser has already begun with an example being the Iron Dome project of Israel, which has now been upgraded with lasers.”

Dr. G. Satheesh Reddy added, “We need to make not only the technology but also the critical sub-systems and components in India. We need to look at a synergistic approach between different institutions.”

Eminent Professors from various IITs across the country are participating and delivering talks on Laser technology. They include professions from IIT Mandi, IIT Kharagpur, IIT Bombay, IIT Delhi, IIT Hyderabad, IISc Bengaluru, and IIT Madras, among others. Other experts from Industry and Research Institutions are also delivered talks in this domain. The officials who took part were from various institutions including SFO Technology, BEL, DRDO – CHESS Hyderabad, NPOL Kochi and CSIR – CGCRI, Kolkata.

Speaking earlier, Prof. V. Kamakoti, Director, IIT Madras, said, “We need to establish a ‘Defence Incubator’ that will develop technologies not only for the strategic sectors but will also have civilian uses. The civilian applications will lead to commercialization, which will generate funds to ensure sustainability of the products being developed. ‘Atmanirbhar’ can be achieved only when defence sector products have a civilian component as well.”

Prof. Manu Santhanam, Dean (Industrial Consultancy and Sponsored Research), IIT Madras, Prof. Balaji Srinivasan, Department of Electrical Engineering, IIT Madras and Dr. O.R. Nandagopan, Director, DRDO Industry Academia- Ramanujan Centre of Excellence’ (DIA-RCoE), also spoke on the occasion.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1921364>



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

**Ministry of Science & Technology**

*Tue, 02 May 2023*

## **India and Israel will Enhance Partnership in Areas like Innovation and StartUps, and Usher in a New Phase of Deeper Bilateral Collaboration, says Union Minister Dr Jitendra Singh**

**India and Israel today signed a Memorandum of Understanding on Industrial Research and Development Cooperation with focus on several key technology areas**

**The Multi-Sectoral Agreement was signed between CSIR and Directorate of Defense Research and Development (DDR&D), Ministry of Defense of the State of Israel, in the August Presence of Union Minister for Science & Technology, Dr Jitendra Singh at the CSIR-Science Centre**

India and Israel will enhance partnership in areas like innovation and StartUps and usher in a new phase of deeper bilateral collaboration.

This was stated here today by Union Minister of State (Independent Charge) Science & Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh when a high-level Israel delegation led by Dr.Daniel Gold, Head of DDR&D, Israeli Ministry of Defence, called on him here today.

On the occasion, India and Israel signed a Memorandum of Understanding on Industrial Research and Development Cooperation with focus on several key technology areas, like Aerospace, Electronics Instrumentation, Civil, Infrastructure & Engineering, Ecology, Environment, Earth &

Ocean Sciences and Water, Mining, Minerals, Metals & Materials, Chemicals and Petrochemicals, Energy (Conventional & Non-Conventional) and Energy Devices, Agri, Nutrition & Biotech and Healthcare. The Multi-Sectoral Agreement was signed between CSIR and Directorate of Defense Research and Development (DDR&D), Ministry of Defense of the State of Israel, in the August Presence of Union Minister for Science & Technology, Dr Jitendra Singh at the CSIR-Science Centre, New Delhi.

Welcoming the signing of the agreement, Dr Jitendra Singh said that 2023 is a very important year for the country as India is holding the G20 presidency under the leadership of Prime Minister Shri Narendra Modi. It is also the year when India and Israel are celebrating 30 years of successful diplomatic relations.

The Minister said he is optimistic that this agreement will open a new phase in India-Israel partnership in areas like Innovation, Technology and StartUps.

The Minister said that India-Israel are not only bilateral partners, but play a larger role to address some of the greatest challenges confronting our world, through joint investments and new initiatives in Water, Energy, Transportation, space, health and food security sectors, through the grouping of India, Israel, the United Arab Emirates, and the United States of America – “I2U2” Group.

Dr Jitendra Singh said that the Government headed by Hon’ble Prime Minister Shri Narendra Modi, has been promoting S&T developments and handholding start-up innovations in our country by providing necessary policy and budgetary support enabling action at the ground level. Science and Technology have always been an integral part of Indian culture. Indian Science has come to be regarded as one of the most powerful instruments of growth and development, especially in the emerging scenario and competitive economy, he said.

The Minister said that Space, Health, Food, Agriculture, Energy, Aerospace, Smart Cities, Environment, Infrastructure, Materials etc. and Sustainable Growth are key pillars and focused areas of our present government.

Brig. Gen. (Ret) Dr.Daniel Gold, Head of DDR&D, Israeli Ministry of Defence said that it is heartening to see that, in 2022-23, India and Israel celebrated 30 years of successful diplomatic relations. India and Israel are very good friends and has lots of potential to collaborate in high technology areas, he said.

The Minister was happy to note that India and Israel have bilateral consultation mechanisms in all cooperation fields, including water, agriculture, counter-terrorism, and defence. He said that Defense has particularly been the cooperation priority with Israel and in November 2021, Defense R&D Organization (DRDO) and DDR&D have inked a Bilateral Innovation Agreement (BIA) to promote innovation and accelerated R&D in startups and MSMEs of both countries for the development of dual use technologies.

Dr Jitendra Singh said that it is essential to strengthen bilateral ties particularly for technology development and implementation. CSIR with its strong focus on Industrial research and development, could work with its Israeli peers for strengthening each other’s domestic industrial sector as also taking their joint developments to other countries.

The Minister expressed happiness in knowing that the joint activities have already begun in Healthcare, and a way ahead has been made for other important areas like Aerospace, Quantum technologies, Lasers, Green Hydrogen, Instrumentation and water.

Dr Jitendra Singh concluded by congratulating DG, CSIR and Head DDR&D for their efforts to strengthen the relationship.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1921427>



*Tue, 02 May 2023*

## **Government is Mulling over Making Indian Patent Act more Simplified and Research Friendly for Product-Oriented Results**

**Prof Rangan Banerjee, Director, IIT, Delhi says, IIT-D will start M-tech in Robotics this year and appealed to Industry to support this mission**

Government today said that it is mulling over making Indian Patent Act more simplified and research friendly for product-oriented results.

Addressing the Global Science, Research and Innovation Summit organized by CII titled “Fostering Science, Research and Innovation Partnerships” under the aegis of the India’s G20 Presidency at IIT Delhi, Dr Akhilesh Gupta, Senior Adviser at the Department of Science and Technology (DST), Government of India said, while India grants average of 23,000 patents per annum, despite having over 1000 Universities, it is over 5 lakhs in China. He said, India lacks the culture of Patents filing and taking it to its logical conclusion.

Dr Gupta, who is also Secretary of the Science and Engineering Research Board (SERB) said that time duration of patents filing and grant of patents is 3 years in India, while the global average is two years.

According to NEP-2020, all funding agencies of Research in the country will merge into a single entity - National Research Foundation (NRF) with an objective to catalyse quality research in our country. It will have twin objectives of basic research and high-quality innovation.

Referring to around .69 percent of budget being spent on R&D in India, Dr Gupta said, private sector must pitch in with higher research allocation to match and support governed for a win-win proposition.

He said, last month the National Quantum Mission (NQM) was approved by the Union Cabinet at a total cost of Rs.6003.65 crore from 2023-24 to 2030-31, aiming to seed, nurture and scale up scientific and industrial R&D and create a vibrant & innovative ecosystem in Quantum Technology (QT). This will accelerate QT led economic growth, nurture the ecosystem in the country and make India one of the leading nations in the development of Quantum Technologies & Applications (QTA), Dr Gupta added. Similarly, Private Sector can also come in a big way to support the National Mission on Interdisciplinary Cyber Physical System.

Dr Gupta said, DST is working hard to completely re-orient and transform the R&D Infrastructure of 350 State Universities, which are in very poor condition in collaboration with State Governments.

Earlier, at the inaugural session Dr Parvinder Maini, Scientific Secretary in the Office of Principal Scientific Adviser to the Government of India said that Government, Industry, Academia and Start-Ups all should join hand to Co-Produce and Co-Develop world class products and solutions, as the era of working in silos is over now. She underlined that the main reason and the huge gap of the low R&D budget of India is due to almost non-participation of private sector to take big risks in emerging and cutting -edge technologies.

Dr Maini said, out of 90,000 start-ups in India, only 12,000 are technology-based and also only about 3,000 of them are deep tech start-ups. She said, unless industry will not lend funding support to innovative and bright ideas, India will miss the bus, which is now on its way to full bloom.

Prof K.P Sudheer, Ex-Officio Principal Secretary, S&T Department, Government of Kerala in his address said that 4 Science Parks will be established in Kerala in coming days with participation from Industry and Start-Ups. He also informed that Kerala is the only state in the country with a separate R&D budget document and this year the allocation was Rs 3500 crore.

Prof Sudheer giving the example of Partnering Academic Industrial Research (PAIR) scheme, said that it is intended to promote translational research through academia - industry linkage. The scheme envisages to identify a researcher, who works towards Ph.D. or Post-Doctoral programme with the partnering institute concerned.

Prof Rangan Banerjee, Director, IIT, Delhi in his address announced that IIT-D will start M-tech in Robotics this year and appealed to Industry to support this mission. He said, CII should work with Industry to sponsor at least 300 to 400 Ph.D. through a new model to develop market ready products. Mr Ryuhei Nishi, First Secretary, S&T, Embassy of Japan said, India and Japan are natural allies and human resources of both the countries should join hands to deliver the best STI products matching global standards. He lamented and said that there is need for increasing more people to people contact and informed that only 1000 Indian students are there in Japan, which is 8 times less than China.

Mr Vipin Sondhi, Chairman, CII National Mission on Technology, Innovation & Research and Mr Alok Nanda, Co-Chair National Mission on Technology, Innovation & Research Dr Ashish Mohan, Executive Director, CII also addressed the gathering.

Earlier, three CII Thought Leadership Reports on Advanced Materials, Women in STEM and Industry-Academia collaboration were released.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1921390>



*Tue, 02 May 2023*

## **PSLV-C55 Mission Successfully Carried PSLV Orbital Experiment Module**

Recently, the PSLV-C55 mission successfully carried PSLV Orbital Experiment Module (POEM-2). This module was exclusively made by Indian Space Research Organisation (ISRO) with an aim to provide a platform wherein non-governmental entities (NGE) and research institutes working in space technology can carry out in-orbit testing of their experiments.

PSLV-C55 was launched successfully on April 22 from Sriharikota. This is a dedicated commercial mission through NewSpace India Limited (NSIL) with TeLEOS-2 as primary satellite and Lumelite-4 as a co-passenger satellite. The satellites weigh about 741 kg and 16 kg, respectively. Both belong to Singapore.

According to the ISRO, they are intended to be launched into an Eastward low inclination orbit.

This is a dedicated commercial mission through NSIL with TeLEOS-2 as primary satellite and Lumelite-4 as a co-passenger satellite. The satellites weigh about 741 kg and 16 kg, respectively. Both belong to Singapore. They are intended to be launched into an Eastward low inclination orbit.

## **Satellite: TeLEOS-2**

The TeLEOS-2 satellite is developed under a partnership between DSTA (representing the Government of Singapore) and ST Engineering. Once deployed and operational, it will be used to support the satellite imagery requirements of various agencies within the Government of Singapore. TeLEOS-2 carries a Synthetic Aperture Radar (SAR) payload. TeLEOS-2 will be able to provide all-weather day and night coverage, and capable of imaging at 1m full-polarimetric resolution.

This is the second mission of PSLV carrying POEM, the first POEM was carried in the PSLV-C53 mission. Authorization for all seven payloads was given by IN-SPACE.

The mission has the PSLV Orbital Experimental Module (POEM), where the spent PS4 stage of the launch vehicle would be utilized as an orbital platform to carryout scientific experiments through non-separating payloads. The payloads belong to ISRO, Bellatrix, Dhruva Space, and Indian Institute of Astrophysics.

In POEM-2, a total of seven experiments were flown which include Dhruva Space Orbiter deployer (DSOD) for 3U and 6U class CubeSats by Dhruva Space. It also carried out experiments on Dhruva Space Orbital link (DSOL) using a Software-defined radio (SDR) based transceiver.

The critical experiments on the propulsion involved the ARKA-200 Electric Propulsion system indigenously which is developed by Bellatrix Aerospace, a Bengaluru-based aerospace entity.

Another key experiment on microsensors was conducted on tarBerrySense(SBS) which was developed by the Indian Institute of Astrophysics, Bengaluru

For the PSLV-C55 mission, an advanced retarding studies was required. The crucial experiment involved ARIS (Advanced Retarding Potential Analyzer for Ionospheric Studies) and PILOT (Pslv In orbital Obs and Thermals) which was realized by the Indian Institute of Space Science & Technology (IIST), Thiruvananthapuram.

IN-SPACE was mandated to support, promote and enable NGEs for space activities, and as per that the technical and operational support for the experiments from Dhruva Space, Bellatrix, and the Indian Institute of Astrophysics was provided by IN-SPACE ably assisted by ISRO.

Rajeev Jyoti, Director Technical Directorate of IN-SPACE informed that each of these experiments is unique and the valuable on-orbit data received offer scope for further development and new opportunities. He also added that IN-SPACE has encouraged NGEs in identifying potential experiments on POEM and enabling them to demonstrate their system at the next available opportunity.

<https://www.financialexpress.com/business/defence-pslv-c55-mission-successfully-carried-pslv-orbital-experiment-module-3071757/>



*Tue, 02 May 2023*

## **Greed, Curiosity, Fear: Uttarakhand DGP And Ex-DRDO Scientist Explain How People Fall Victim To Cybercrime**

Emotions and psychology play a big role in cybercrimes. Criminals do a lot of social engineering. The first-ever cybercrime in India was a lottery scam. There are three reasons people fall for cyber crimes — greed, curiosity and fear. Uttarakhand DGP Ashok Kumar and former DRDO scientist

OP Manocha shared these nuggets on cybercrime as they talked about their book, 'Cyber Encounters', which highlights the dark world of cybercrime and chronicles their experiences in dealing with cybercrime in 12 thrilling episodes.

In an exclusive interview to ABP Live, the authors explained how unsuspecting users stand a chance to fall victim to bad actors on the world wide web. From the five-second rule of online safety to simple precautions that one can take to protect themselves and their devices, Kumar and Manocha shared some precious pieces of advice.

### **Edited excerpts from the interview:**

#### **Over the years, which instance of cybercrime remained stuck in your mind for its unique nature?**

Manocha: In each incident, it was hard to believe how so much money was spent. But one particular instance, which took place during the covid lockdown, took the cake.

A widow's daughter asked for a puppy. She searched online and got stuck on a fake website. The ad told her she will get the puppy for Rs 15,000. Gingerly, they kept extracting money from the lady, stringing her along.

First, with a refundable security deposit of Rs 1 lakh, then Rs 2 lakh for cargo transport.

Then, they told her the puppy is stuck in customs, and so after its supposed retrieval they charged her to embed a tracking chip in his neck.

She was so attached to her daughter that she was ready to do anything to make her happy. They kept showing her videos and pictures to pacify her and keep her fooled. The lady was already going through a rough patch — a tragedy occurred in her home, she wanted to make her daughter happy, and people were dying of covid. She kept on doing what they said.

Emotions and psychology play a big role in cybercrimes. She was already emotionally weak and broken. Criminals do a lot of social engineering — they study your social media profiles and then psychoanalyse.

The police faced tough challenges trying to catch these criminals. Many times, we'd have the criminal nearly in our [digital] grasp but they'd still manage to escape. It's not like a physical chase with footprints to track.

We've had to counsel and convince victims that they haven't won the lottery. We tend to go into a mental space which we can't come back from.

#### **Could you tell us about the first cybercrime in India?**

Kumar: The first-ever cybercrime in India was a lottery scam. You would receive an email from the British government saying you've won 'X' amount. But several people didn't bother to ask, "If I didn't buy lottery tickets, how did I win?"

Then came card cloning. Since money has now become plastic, we pay through credit cards. At these places of business, it can easily be cloned behind the counter.

These two crimes, to begin with, were called the "Nigerian Crimes". It started in Africa but now Indian cities like Jamtara and similar places are way ahead of them.

**Your book has a foreword by Bollywood star Amitabh Bachchan.** What was the thought process behind that?

Kumar: We want to make people aware of cybercrimes and how to safeguard themselves from them. Mr Bachchan's following will definitely help us reach a larger audience. He has also been a victim of cybercrime himself!

In 2019, hours after Mr Bachchan's Twitter account was hacked, all hell broke loose. Our cybercrime agencies spotted chatter on the dark Web, amongst hackers, claiming victory. The hackers went on to share his personal details and replaced his profile picture with that of former Pakistan Prime Minister Imran Khan.

### **How do the agencies deal with artificial intelligence (AI)-related crimes?**

Kumar: Technology is constantly evolving. First, we had fake news, and now we have deep fakes. It is hard to discern what is fake and real but the police force is constantly being trained. It will take time for people who have only completed their education till 10th or 12th grade.

Online crimes have a larger volume, they can be committed faster and planned even faster. It is hard to locate a criminal sitting miles away. These are the challenges that we face. Thus, we need help from you — all you need to do is be aware. Our book helps you do just that.

### **How can users prevent themselves from falling victims to cybercrimes?**

Manocha: Cybercriminals attack human emotions. We must tackle them.

There are three reasons we fall for cyber crimes:

Greed. Since, the need can be met, but greed cannot.

Curiosity. A person often wonders, “Where will clicking on a link lead me to?”, “What will we get from it?” and so on. That link in question can be a malicious one that can leave malware on your systems.

Fear. You might get a call from someone sitting on a tree in Jamtara, asking you to complete the KYC process or your card will be blocked, and that you won't be able to withdraw money. Malware and threats become fear-inducing, causing the person to act further out of emotions.

One can combat this by being aware, practising self-control, and by not getting impulsive or excited.

There is one such story in the book where a lady lures a man online into investing in precious metals on her website. He doesn't bother to check the website, inquire about the lady, or read reviews. If we do a simple background check, we can avoid such scams.

Users should be aware that one cannot get rich overnight, it takes time and effort. Things don't come for free.

Kumar: In the cyber world, before making any decision you must give yourself five seconds. Call it the five-second rule.

Ask yourself: Why are they asking ME? Why, what, when, where, what for? Ask these questions.

Why did I get a friend request? Why me in the whole world? Who are his friends online? Do we have mutuals? What kind of posts are on his/her page? You must inquire and check all these things.

Everything is online now, so it is inevitable that a criminal will be online as well. Since everything is now shifting online — from education to banking — users become a natural bait for criminals.

One should not be in a hurry, so that decisions aren't taken in haste. If I give myself these five seconds and ask the right questions, I am more likely to make an informed decision.

In the case of sextortion, users receive a video call from an unknown number. Firstly, why pick it up? In these video calls, bad actors use morphed images to blackmail you.

If you haven't committed a crime, why are you getting scared? Come out clean, and say “I haven't done anything.”



If you are lonely and fraudulent accounts add you on social media, chances are that they have scanned your profile first and psychoanalysed it.

So, always check how many posts they have. See if you have any common friends. Control the urge to accept the request immediately.

Whether the decision is financial or social, digital decisions need to be thought over.

**Is there any trend among the users who are targeted the most online?**

Manocha: A 13-year-old boy sitting in Jamtara has the skills to cheat even major scientists. The target, thus, can be anyone. And we tend to not take proper precautions.

Do update your device software regularly. Apply the five-second rule. Use antivirus on your devices and keep updating it.

Criminals usually want to commit crimes online because it's easier than moving out from the comfort of their homes and scouting locations or accessing blueprints. Sometimes, they do it for the mere reason of outsmarting the target and the police.

In conclusion, cybercrime is a serious threat to individuals, organisations, and even nations. It is necessary to have protocols in place to respond quickly and effectively to any cyber-attacks.

By working together, we can create a safer and more secure digital world for everyone.

<https://news.abplive.com/crime/cyber-encounters-book-online-crime-cybercrime-ashok-kumar-op-manocha-interview-amitabh-bachchan-1599439>

