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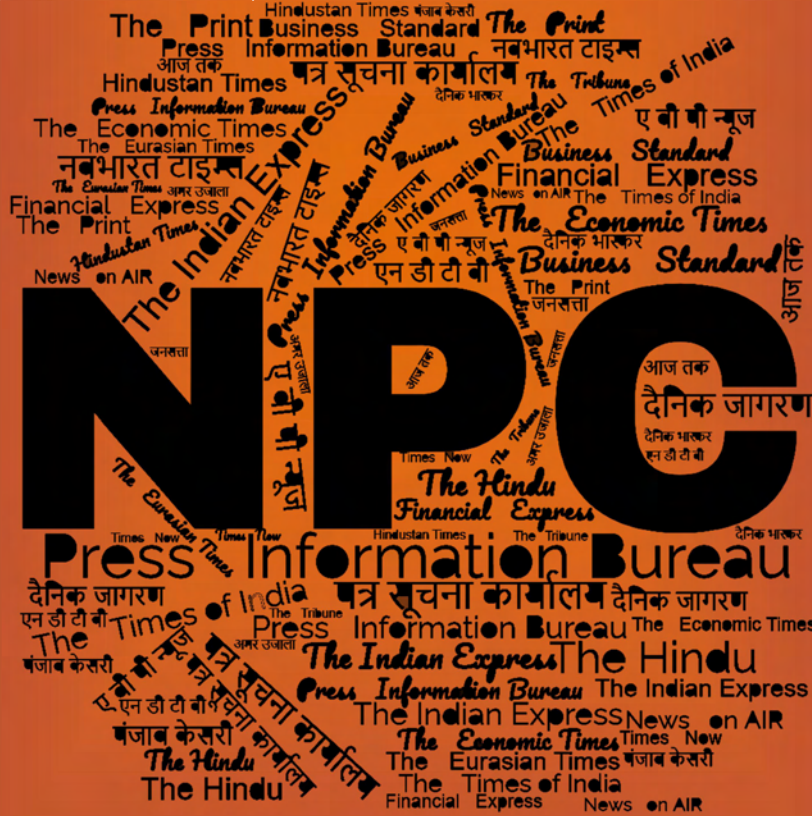
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# समाचार पत्रों से चयित अंश Newspapers Clippings

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## Defence News

# Defence Strategic : National/International



Press Information Bureau  
Government of India

Ministry of Defence

*Thu, 30 Mar 2023*

## **Secure Borders, Holistic Development & Transformed Global Image: India Rising as one of the Strongest Countries under PM Modi's Leadership, says Raksha Mantri at 'Rising India Conclave' in New Delhi**

**“National security based on self-reliance is our top priority”**

**“Defence exports nearing Rs 14,000 crore in current Financial Year; Rs 40,000 crore target by 2026”**

**“India will never harm anyone, but won't hide if threatened; Armed Forces ready to deal with all challenges”**

**From flying fighter aircraft to getting inducted in artillery, women are strengthening the Armed Forces; aim is to provide equal opportunities to all: Shri Rajnath Singh**

From secure borders & self-reliance to a strong economy & transformed global image, India is rising as one of the strongest countries under the leadership of Prime Minister Shri Narendra Modi. This was stated by Raksha Mantri Shri Rajnath Singh while addressing the 'Rising India Conclave' organised by a private media organisation in New Delhi on March 30, 2023. He pointed out that all sectors, especially defence, have been witnessing a transformative change in the last few years, which has guided India to a respectable position on the world map.

The Raksha Mantri credited the bold approach and unwavering resolve of the Government, which has ensured secured borders and a battle-ready Armed Forces backed by a self-reliant defence industry. Terming national security as Government's top priority & self-reliance as the only medium to achieve it, he asserted that relentless efforts are being made to attain 'Aatmanirbharta' in defence. He listed out some of the steps taken by Ministry of Defence, including notification of positive indigenisation lists; earmarking of record 75 per cent of defence capital procurement budget for domestic industry in Financial Year 2023-24 and efforts to provide local companies access to international market. On the success achieved due to these decisions, the Raksha Mantri stated that the domestic defence production has witnessed a significant increase in the last few years. “We are not only catering our own needs, but are also exporting weapons & equipment to other countries. From Rs 900 crore 7-8 years ago, defence

exports have skyrocketed and are nearing Rs 14,000 crore in the current Financial Year. Our target is export defence equipment worth Rs 40,000 crore by 2026,” he said. The Raksha Mantri also touched on the start-up-based innovation ecosystem created in the country. He stated that the Government’s efforts have resulted in the creation of over 100 unicorns, which is testament to the success of this ecosystem. Shri Rajnath Singh lauded the Prime Minister’s visionary leadership which has guided India to become the fifth largest economy and transformed its global image to that of an agenda-setter. “In 2013, Investment firm Morgan Stanley had coined a phrase ‘fragile 5’ economies and named India among them. Under the Prime Minister’s leadership, we successfully dealt with the problems such as the possibility of recession & COVID-19 pandemic and today we are an inspiration to other countries. The highest ever FDI inflow of US \$83.57 billion last year is a positive sign for the economy and a proof that the world has faith in the possibilities and opportunities available in India. From ‘fragile 5’, we are now among ‘fabulous 5’. According to a report by Morgan Stanley, India will be one of the top three economies of the world by 2027. When we celebrate the 100th anniversary of our independence in 2047, I am hopeful that we will be the world’s top economy,” he said.

The Raksha Mantri described India's diplomacy as another facet of Rising India. The presidency of G-20 and Shanghai Cooperation Organisation (SCO) this year is proof that India’s stature is continuously growing on the world stage, he said, adding that many international surveys have named Shri Narendra Modi as the most popular leader, which is also the view of many world leaders. He lauded the Prime Minister, because of whom India’s image has transformed into an agenda setter and it is listened to carefully on the international fora.

Shri Rajnath Singh added that India has led the world on issues like terrorism and has been successful in garnering support to eliminate the menace. He emphasised that countries, which use terrorism as a tool, are well aware of the fact that India never harms anyone unnecessarily, nor does it spare anyone who tries to hurt its unity, integrity and sovereignty. Mentioning about the surgical strikes, he stated that the move broke the back of terrorists and sent a strong message to the world that India will eliminate terrorism on its own soil, and if need be, on foreign land as well. He added that “Whether it was the stand-off with China or ill intentions from Pakistan, our forces have been giving a befitting reply, whenever required.”

On the holistic development taking place in the country since 2014, the Raksha Mantri stated that it is a result of the strong will of the Government, led by the Prime Minister. He shed light on the social development being witnessed in the country in the last few years, stating that it is being ensured that people from all sections of society, irrespective of religion, caste and gender get equal opportunities and there is fair representation in all kinds of works. He reiterated the Government’s resolve to provide more and more opportunities to women at par with their male counterparts. “From construction of toilets for women & ‘Beti Bachao Beti Padhao’ to their growing role in the Armed Forces, women empowerment has been at the centre of Government’s planning since the beginning. Women are today flying fighter aircraft and being inducted in artillery. Through this, we are not only empowering our women, but strengthening the Armed Forces. This is another facet of Rising India,” Shri Rajnath Singh said. The Raksha Mantri termed the abrogation of Article 370 in Jammu & Kashmir as another example of the strong will of the Government. He stated that the Union Territory has ushered in a new era of peace and progress due to the decision. He added that the Government is carrying forward the vision of former Prime Minister late Atal Bihari Vajpayee, under whose leadership nuclear test was

conducted in Pokhran in 1998. “Today, we are producing big missiles, tanks, weapons and ammunition on our land. This is also a result of a strong political will,” he said.

Shri Rajnath Singh also highlighted the Government’s resolve towards the development of the North-east region. He stated that it has been ensured that the region, full of beauty and natural resources, is well connected with the heart of the country. There is unprecedented peace in the North East, which has resulted in the withdrawal of Armed Forces (Special Powers) Act {AFSPA} from most areas, he added.

The Raksha Mantri enumerated a number of decisions taken to promote ease of living such as providing free gas connections to women through Ujjwala Yojana; electrification of 99 percent of villages; water supply to eight crore households under Jal Jeevan Mission in the last 3.5 years and many reforms in health, agriculture and education sector. He also mentioned about the introduction of Yoga, Ayurveda and millets to the world, which has benefitted them in a new way, terming it as yet another achievement of a ‘Rising India’.

Shri Rajnath Singh concluded his address by stating that there is no place of elitist mind-set in ‘New India’. “We believe in providing equal opportunities to 140 crore Indians. The dream of a strong and prosperous India will be realised only when all the people together take the nation forward with full energy and dedication,” he said.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1912192>



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

**Ministry of Defence**

*Thu, 30 Mar 2023*

## **Aatmanirbhar Bharat: MoD Inks Contract with BrahMos Aerospace Private Limited for Next Generation Maritime Mobile Coastal Batteries (Long Range) & BrahMos Missiles worth Rs 1,700 crore**

Ministry of Defence, on March 30, 2023, inked a contract with BrahMos Aerospace Private Limited (BAPL) for procurement of Next Generation Maritime Mobile Coastal Batteries (Long range) {NGMMCB (LR)} and BrahMos Missiles at an approximate cost of over Rs 1,700 crore under Buy (Indian) Category. The delivery of NGMMCBs is scheduled to commence from 2027. These systems will be equipped with supersonic BrahMos Missiles and will significantly enhance multi-directional maritime strike capability of Indian Navy. The BAPL is a Joint Venture between India and Russia making crucial contribution to augment the new generation Surface-to-Surface missile with enhanced ranges. This contract is going to give further boost to indigenous production of critical weapon system and ammunition with active participation of indigenous industries. This project will generate an employment of more than 90,000 man-days over a period of four years. With the majority of the equipment and sub-system sourced from indigenous manufacturers, these systems will be a proud flag bearer of ‘Aatmanirbhar Bharat’.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1912292>



*Fri, 31 Mar 2023*

## **Defence Ministry Inks Deal Worth over Rs 1,700 Crore to Boost Critical Weapon System Production**

Ministry of Defence (MoD) on Thursday inked a contract with BrahMos Aerospace Private Limited (BAPL) for procurement of Next Generation Maritime Mobile Coastal Batteries (Long range) (NGMMCB - LR) and BrahMos Missiles under the Buy (Indian) Category. The contract is worth over Rs 1,700 crore. The delivery of NGMMCBs is scheduled to commence from 2027. These systems will be equipped with supersonic BrahMos Missiles and will significantly enhance the multi-directional maritime strike capability of the Indian Navy.

The BAPL is a joint venture between India and Russia making a crucial contribution to augment the new generation Surface-to-Surface missile with enhanced ranges, according to the Defence Ministry. Notably, this contract is going to give further boost to indigenous production of critical weapon system and ammunition with active participation of indigenous industries.

This project will generate an employment of more than 90,000 man-days over a period of four years, added the MoD.

The MoD further stated that with the majority of the equipment and sub-system sourced from indigenous manufacturers, these systems will be a proud flag bearer of "Aatmanirbhar Bharat."

<https://www.indiatoday.in/india/story/ministry-of-defence-signs-contract-worth-rs-1700-crore-to-boost-critical-weapon-system-production-2353708-2023-03-31>



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

**Ministry of Defence**

*Thu, 30 Mar 2023*

## **Aatmanirbhar Bharat: MoD Inks over Rs 9,100 Crore Contracts for Improved Akash Weapon System & 12 Weapon Locating Radars Swathi (Plains) for Indian Army**

Providing a further boost to 'Aatmanirbharta' in defence, Ministry of Defence, on March 30, 2023, signed contracts for procurement of improved Akash Weapon System and 12 Weapon Locating Radars, WLR Swathi (Plains) for the Indian Army at an overall cost of over Rs 9,100 crore.

### **Improved Akash Weapon System**

The contract for procurement of improved Akash Weapon System (AWS) for 3rd & 4th Regiments of Army Air Defence, comprising live Missiles & Launchers with upgrades, Ground

Support Equipment, Vehicles and Infrastructure was signed with Bharat Dynamics Limited, worth over Rs 8,160 crore.

The AWS is a Short Range Surface to Air Missile (SRSAM) Air Defence System, indigenously designed and developed by Defence Research and Development Organisation (DRDO). In order to meet aerial threats, two additional Regiments of AWS with Upgradation are being procured for Indian Army for the Northern borders. Improved AWS has Seeker Technology, Reduced Foot Print, 360° Engagement Capability and improved environmental parameters.

The project will give a boost to the Indian missile manufacturing industry in particular and the indigenous defence manufacturing ecosystem as a whole. The project has overall indigenous content of 82% which will be increased to 93% by 2026-27.

The induction of the improved AWS into the Indian Army will increase India's self-reliance in Short Range Missile capability. This project will play a role in boosting the overall economy by avoiding outgo of precious foreign exchange to other countries, increasing employment avenues in India and encouraging Indian MSMEs through components manufacturing. Around 60% of the project cost will be awarded to the private industry, including MSMEs, in maintaining the supply chain of the weapon system, thereby creating large scale of direct and indirect employment.

#### **Weapon Locating Radars Swathi (Plains)**

The contract for WLR Swathi (Plains) was signed with Bharat Electronic Limited (BEL) at a cost of over Rs 990 crore. It is an indigenously designed WLR which is capable of locating guns, mortars and rockets firing own troops, thereby facilitating their destruction through Counter Bombardment by own firepower resources. This will enable troops to carry out their operational tasks without any interference from the enemy and also provide them safety against enemy fire. Induction is planned to be completed in 24 months.

This project is a big opportunity for the defence industry to showcase its capability and will be a step in the direction of achieving the goal of 'Aatmanirbharta' in defence.

<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1912309>



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

**Ministry of Defence**

*Thu, 30 Mar 2023*

## **Aatmanirbhar Bharat: MoD Signs Rs 19,600 Crore Contracts with Indian Shipyards for Acquisition of 11 Next Generation Offshore Patrol Vessels & Six Next Generation Missile Vessels for Indian Navy**

In a huge boost to achieve 'Aatmanirbharta' in defence, Ministry of Defence, on March 30, 2023, signed contracts with Indian shipyards for acquisition of 11 Next Generation Offshore



Patrol Vessels and six Next Generation Missile Vessels at an overall cost of approx. Rs 19,600 crore.

### **Next Generation Offshore Patrol Vessels**

The contract for acquisition of 11 Next Generation Offshore Patrol Vessels under Buy (Indian-IDDMM) category was signed with Goa Shipyard Ltd (GSL) and Garden Reach Shipbuilders and Engineers (GRSE), Kolkata at a total cost of Rs 9,781 crore. Of the 11 ships, seven will be indigenously designed, developed & manufactured by GSL and four by GRSE. The delivery of the ships is scheduled to commence from September 2026.

The acquisition of these ships will enable the Indian Navy to maintain its combat capability and meet various operational requirements such as Anti-Piracy, Counter-Infiltration, Anti-Poaching, Anti-Trafficking, Non-Combatant Evacuation Operations, Search and Rescue (SAR), Protection of Offshore Assets etc. The construction of these ships will generate an employment of 110 lakh man-days over a period of seven and half years.

### **Next Generation Missile Vessels**

The contract for acquisition of six Next Generation Missile Vessels (NGMV) was signed with Cochin Shipyard Limited (CSL) at a cost of Rs 9,805 crore. The delivery of ships is scheduled to commence from March 2027. The NGMVs would be heavily armed war vessels incorporating stealth, high speed and offensive capability. The primary role of the ships would be to provide offensive capability against enemy warship, merchantmen and land targets.

These ships will be capable of conducting Maritime Strike Operations, Anti Surface Warfare Operations and would be a potent instrument of sea denial for enemy ships especially at choke points. In defensive role, these ships would be employed for Local Naval Defence operations and seaward defence of Offshore Development Area. The construction of these ships will generate an employment of 45 lakh man-days over a period of nine years.

The indigenous manufacturing of these vessels will encourage the active participation of Indian shipbuilding and associated industries, including MSMEs. With the majority of the equipment and systems sourced from indigenous manufacturers, these vessels will be a proud flag bearer of 'Aatmanirbhar Bharat'.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1912286>

## **Business Standard**

*Thu, 30 Mar 2023*

### **Govt Signs Rs 19,600-Crore Deal to Buy Patrol, Missile Vessels**

In a boost to Aatmanirbharta (self-reliance) in shipbuilding, the defence ministry signed contracts with Indian shipyards on Thursday for building 17 state-of-the-art warships for the Indian Navy for a total cost of approximately Rs 19,600 crore.

The warships on order include 11 next-generation offshore patrol vessels (NG-OPVs) and six next-generation missile vessels (NG-MVs).

### **Next-gen offshore patrol vessels**

The contract for building 11 NG-OPVs under the Buy Indian — Indian designed, developed and manufactured (Buy Indian – IDDM) category was signed with Goa Shipyard (GSL) and Kolkata-based Garden Reach Shipbuilders and Engineers (GRSE) for a total cost of Rs 9,781 crore.

Of the 11 NG-OPVs, seven will be indigenously designed, developed and manufactured by GSL and four by GRSE. The delivery of these urgently needed warships is scheduled to commence from September 2026.

This acquisition will enable the Indian Navy to maintain its combat capability, specially by discharging various operational missions such as anti-piracy, counter-infiltration, anti-poaching, anti-trafficking, non-combatant evacuation operations, search and rescue and protection of offshore assets, etc., said the defence ministry.

This warship construction order will generate employment of 11 million man-days over a period of seven and half years.

Each NG-OPV will displace an estimated 2,500 tonnes, making this class of vessel significantly larger and more potent than current OPVs in the navy and Coast Guard.

OPVs are large craft that carry a crew of up to 80-90 sailors, but are much more lightly armed — and therefore much cheaper — than capital warships like corvettes, frigates, or destroyers. For performing tasks that do not require heavy fighting, OPVs offer a far more economical option than using heavily armed capital warships.

### **Next-generation missile vessels**

The contract for constructing six NG-MVs was signed with Cochin Shipyard (CSL) at a cost of Rs 9,805 crore. The delivery of these warships is scheduled to commence from March 2027.

“The NGMVs would be heavily armed war vessels incorporating stealth, high speed and offensive capability. The primary role of the ships would be to provide offensive capability against enemy warships, merchantmen and land targets,” said the defence ministry.

These warships will be capable of conducting maritime strike operations, anti-surface warfare operations and would be a potent instrument of sea denial for enemy ships, especially at choke points.

In the defensive role, these ships would be employed for local naval defence operations and seaward defence of the “Offshore Development Area.”

The construction of these ships will generate employment of 4.5 million man-days over a period of nine years.

The indigenous manufacturing of these vessels will encourage the active participation of Indian shipbuilding and associated industries, including micro, small, and medium enterprises.

“With the majority of the equipment and systems sourced from indigenous manufacturers, these vessels will be a proud flag-bearer of ‘Aatmanirbhar Bharat’.

[https://www.business-standard.com/economy/news/indian-shipyards-sign-rs-19-600-cr-contracts-for-patrol-missile-vessels-123033000915\\_1.html](https://www.business-standard.com/economy/news/indian-shipyards-sign-rs-19-600-cr-contracts-for-patrol-missile-vessels-123033000915_1.html)

## **Boost to Make in India: Defence Ministry Signs Multiple Deals worth over Rs 36,400 Crore**

In a major boost to 'Aatmanirbharta' in Defence, the government on Thursday signed multiple deals worth over Rs 36, 400 crore, giving more firepower to the Army, the Navy and the Indian Air Force.

Bharat Dynamics Limited signed a deal for supplying two regiments of upgraded version of the Akash air defence missile systems to the Indian Army.

The deal for the third and fourth regiments of the missile system has been signed with BDL and would cost over Rs 6000 crore, new agency ANI reported on Thursday.

"This would be the upgraded versions of the missile system with seekers and give more accuracy to Indian Army while taking out any offensive enemy aircraft or drone on the border," ANI quoted sources as saying. The upgraded Akash missile systems have been enabled to be effective on high altitude frontiers and is equipped with an indigenous active Radio Frequency (RF) seeker for improved accuracy.

Meanwhile, the Defence Ministry also signed a deal with Indian shipyards for acquisition of 11 Next Generation Offshore Patrol Vessels and six Next Generation Missile Vessels at a Rs 19,600 crore, an official statement said.

The contract for acquisition of 11 OPVs under Buy (Indian-IDDMM) category was signed with Goa Shipyard Ltd (GSL) and Garden Reach Shipbuilders and Engineers (GRSE), Kolkata at a total cost of Rs 9,781 crore. Of the 11 ships, seven will be indigenously designed, developed and manufactured by GSL and four by GRSE. The delivery of the ships is scheduled to commence from September 2026.

Officials said that the acquisition of these ships will enable the Indian Navy to maintain its combat capability and meet various operational requirements such as anti-piracy, counter-infiltration, anti-poaching, anti-trafficking, non-combatant evacuation operations, search and rescue (SAR), protection of offshore assets etc.

The contract for acquisition of six next generation missile vessels (NGMVs) was signed with Cochin Shipyard Ltd (CSL) at a cost of Rs 9,805 crore. The delivery of ships is scheduled to commence from March 2027.

The NGMVs would be heavily armed war vessels incorporating stealth, high speed and offensive capability. The primary role of the ships would be to provide offensive capability against enemy warships, merchantmen, and land targets.

Besides, the Defence Ministry also signed a contract with Bharat Electronics Limited for procurement of 13 Lynx-U2 Fire Control Systems for Indian Navy at a total cost of over Rs 1,700 crore under Buy {Indian – IDMM (Indigenously Designed Developed and Manufactured)} category.

The Lynx-U2 System is a Naval Gun Fire Control System designed and developed indigenously. It is capable of accurately tracking and engaging targets amidst sea clutter as well as air/surface targets.

The 4th generation, completely indigenous systems, will be installed on New Generation Offshore Patrol Vessels to be built indigenously at Garden Reach Shipbuilders & Engineers and Goa Shipyard Limited.

Another over Rs 9,100 crore deal for procurement of improved Akash Weapon System and 12 Weapon Locating Radars, WLR Swathi (Plains) for the Indian Army was also signed by the ministry.

"The contract for procurement of improved Akash Weapon System (AWS) for 3rd & 4th Regiments of Army Air Defence, comprising live Missiles & Launchers with upgrades, Ground Support Equipment, Vehicles and Infrastructure was signed with Bharat Dynamics Limited, worth over Rs 8,160 crore," a release by the Defence Ministry said.

The contract for WLR Swathi (Plains) was signed with Bharat Electronic Limited (BEL) at a cost of over Rs 990 crore. It is an indigenously designed WLR which is capable of locating guns, mortars and rockets firing own troops, thereby facilitating their destruction through Counter Bombardment by own firepower resources.

"This will enable troops to carry out their operational tasks without any interference from the enemy and also provide them safety against enemy fire. Induction is planned to be completed in 24 months," the statement added.

<https://economictimes.indiatimes.com/news/defence/army-inks-deal-for-akash-missile-systems-contracts-for-11-next-gen-opvs-signed-by-defence-ministry/articleshow/99121715.cms>



*Thu, 30 Mar 2023*

## **MoD Signs Contract with BEL for 13 Lynx-U2 Fire Control Systems for Navy**

The defence ministry on Thursday signed a contract with Bharat Electronics Limited for the procurement of 13 Lynx-U2 fire control systems for the Navy at a cost of over Rs 1,700 crore, officials said.

The Lynx-U2 system is a naval gun fire control system designed and developed indigenously. It is capable of accurately tracking and engaging targets amid sea clutter as well as air or surface targets, the government said in a statement. The ministry signed a contract with BEL, Bengaluru for "procurement of 13 Lynx-U2 fire control systems for the Indian Navy at a total cost of over Rs 1,700 crore under Buy Indian – IDMM (Indigenously Designed Developed and Manufactured) category," it said.

The fourth generation, completely indigenous systems, will be installed on New Generation Offshore Patrol Vessels to be built indigenously at Garden Reach Shipbuilders and Engineers and Goa Shipyard Limited.

“This move will generate an employment of two lakh man-days over a period of four years and encourage active participation of various Indian industries, including MSMEs, thus significantly contributing to the government’s efforts to achieve ‘Aatmanirbharta’ in defence,” it said.

In line with its vision for self-reliance, the defence ministry on Wednesday signed three contracts — two with Bharat Electronics Limited and one with NewSpace India Limited — worth nearly Rs 5,400 crore to bolster the defence capabilities of the country.

<https://indianexpress.com/article/india/mod-signs-contract-with-bel-for-13-lynx-u2-fire-control-systems-for-navy-8528832/>

## THE ECONOMIC TIMES

*Thu, 30 Mar 2023*

### **India's Defence Ministry Signs 10 Contracts worth Rs 5,498 with Bharat Electronics**

The Ministry of Defence (MoD) has signed 10 contracts totalling Rs 5,498 crore with state-owned aerospace and defence electronics company Bharat Electronics Limited (BEL) for Indian armed forces, the PSU said in a regulatory filing to the stock exchanges on Thursday.

For Indian Air Force, a contract was signed to supply 90 units of Electronic Warfare (EW) Suite Equipment for Medium Lift Helicopter.

Another contract for Akash Missile System was signed for the maintenance of two squadrons. It is a medium-range surface-to-air missile (SAM) system, developed by DRDO and manufactured by Bharat Electronics. The Akash Missile system can target aircraft upto 30 km away and has the capabilities to neutralise aerial threats like fighter jets, cruise missiles and Air-to-Surface Missiles.

For the Indian Army, contracts for Automated Air Defence Control and Reporting System (Project Akashteer) and Instant Fire Detection and Suppressing System IFDSS for T 72 were signed. Further, for Indian Navy, contracts for Software Defined Radio (1,265 units), HD VLF HF Receiver (1,178 units), and Sarang (12 units), were signed.

Sarangs will be installed on Kamov 31 helicopters of the Indian Navy which intercept, detects and identifies the radar emitters comprising state-of-the-art technologies. The project has been indigenously designed and developed by DLRL and the combat assets have been manufactured by BEL Hyderabad.

Three more projects were signed with Indian Navy -- INS-SA, CMS for P17 and P28, Varuna EW. "All these are flagship projects showcasing the indigenous design and manufacturing capabilities of Indian Defence industry led by BEL, involving other Public Sectors, Private Sectors and MSMEs. These projects will add another milestone to the 'Atmanirbhar Bharat Abhiyaan' and 'Make in India' initiatives of the Government of India," the exchange filing stated on Thursday.

<https://economictimes.indiatimes.com/news/defence/indias-defence-ministry-signs-10-contracts-worth-rs-5498-with-bharat-electronics/articleshow/99118233.cms>

## Time Ripe for Manufacturing Hi-tech Naval Equipment: President

President Droupadi Murmu on Wednesday asked officers of the Indian Navy to whole-heartedly contribute towards achieving self-reliance in the field of naval armament and realising the vision of 'Atmanirbhar Bharat'.

"While much has been achieved in the pursuit of indigenisation over past decades, the time is now ripe for launching a new phase of self-reliance by manufacturing technologically advanced equipment within India, in line with the vision of Make in India," Droupadi Murmu said while talking to probationers of the Indian Naval Armament Service who called on her at the Rashtrapati Bhavan.

The president said that the naval officers have to play a significant role in providing an efficient and safe armament logistics delivery system to both the Indian Navy and Indian Coast Guard. She said that with advancements in technology and the introduction of state-of-the-art weapons, they must strive for innovation to achieve the goals of indigenisation.

She advised the officers to always remember that their positions were of great responsibility and accountability. She said that every decision and action that they take would impact the lives of citizens either directly or indirectly. So, their goals should be aligned with the development goals of the country and the well-being of fellow citizens.

Addressing the officers of the Indian Information Service who also met her at the Rashtrapati Bhavan, the president noted that communication was a crucial factor in making citizens aware of government policies, programmes and their functioning. Through effective communication and with correct information, IIS officers could be instrumental in making citizens informed partners in the progress of the country.

She said that today, with the wide and instant spread of information, a challenge of fake information travelling equally fast has also emerged. IIS officers have to take responsibility for combating fake news. She urged them to harness technology and work with dedication to check the trend of misusing media, especially social media, to build false narratives.

The president said that IIS officers have a key role in enhancing the image of India on the global stage. India has always given the message of peace and brotherhood to the world. Spreading India's soft power through cultural messages for the entire humanity was an important area where they could make a big difference.

<https://www.thestatesman.com/india/time-ripe-for-manufacturing-hi-tech-naval-equipment-president-1503167370.html>



## **Army set to get its Own Satellite worth ₹3,000 Crore by 2026**

In a major boost for the Indian Army's communication capability, the defence ministry on Wednesday signed a ₹3,000-crore contract with NewSpace India Limited (NSIL), the commercial arm of Indian Space Research Organisation (ISRO), for an advanced communication satellite, GSAT 7B, for the army to fulfill a long-standing need, officials familiar with the matter said.

Unlike the Indian Air Force and the navy, the army currently does not have a dedicated satellite.

“The satellite will considerably enhance the communication capability of the army by providing mission critical beyond line-of-sight communication to troops and formations as well as weapon and airborne platforms,” the defence ministry said.

The five-tonne geostationary satellite will be developed indigenously by ISRO.

The army is likely to get the satellite in 2026, the officials said.

The satellite with advanced security features will support tactical communication requirements of not only troops deployed on the ground, but also remotely piloted aircraft, air defence weapons and other mission critical and fire support platforms, the officials said.

“The dedicated satellite for the army is a long-standing need and will enhance the network centric warfare capabilities of the army, making them more secure and jam-proof. The army was so far dependent on the air force's GSAT-7A satellite,” said Air Marshal Anil Chopra (retd), director general, Centre for Air Power Studies. The army has also carried out a detailed study of cyber and electromagnetic warfare in the Russia-Ukraine war, and established the efficacy of a reliable satellite communication system that can provide high-speed internet services to remote areas, as previously reported by HT.

India's defence acquisition council (DAC), the government's top weapons procurement body, had cleared the army proposal for a GSAT-7B satellite in March 2022 to sharpen its operational capabilities. The GSAT-7 series of advanced satellites built by ISRO are designed to provide communication capabilities to users over vast expanses including oceans.

Many parts and sub-assemblies and systems of the satellite will be sourced from indigenous manufacturers, including micro, small and medium enterprises (MSMEs) and start-ups, the ministry said, adding that the project will generate an employment of around 300,000 man-days over the next three-and-a-half years.

The ministry also signed two other contracts worth around ₹2,400 crore with Bharat Electronics Limited (BEL) to sharpen the air defence capabilities of the armed forces.

The first of these, worth ₹1,982 crore, is to implement Project Akashteer, an automated air defence control and reporting system that will allow the army's air defence units to operate in an integrated manner.

Akashteer will enable the monitoring of low-level airspace over the battle areas of the Indian Army and effectively control the ground-based air defence weapon systems, the defence ministry said.

The second contract worth ₹412 crore with BEL is for Sarang electronic support measure systems for Indian Navy helicopters.

All the three projects will provide a boost to the self-reliance campaign as they are under the most important category of acquisition for indigenisation under the defence procurement policy, or the Indian-IDDM category. IDDM stands for indigenously designed, developed and manufactured.

<https://www.hindustantimes.com/india-news/army-set-to-get-its-own-satellite-worth-rs-3-000-crore-by-2026-101680100260858.html>



*Thu, 30 Mar 2023*

## **Theaterisation, Data Digitisation, Agniveer Absorption among Topics up for Discussion in Combined Commanders Conference**

Aside from a review on the creation of integrated theatre commands by the military and the implementation of the Agnipath scheme, the Combined Commanders Conference this year is likely to see discussions on a range of topics such as digitization of data, challenges, and opportunities of social media and defence exports, The Indian Express has learnt.

The Combined Commanders Conference (CCC)—a biennial event which sees the country’s top military brass coming together to brainstorm on military matters and national security—starts Thursday in Bhopal. An exhibition titled “Fauji Mela” which is part of the event was, however, formally inaugurated Wednesday.

Chief of Defence Staff Gen Anil Chauhan, the three service chiefs and military commanders of the three services will attend the event which is based on the theme “Ready, Resurgent, Relevant.” Prime Minister Narendra Modi is scheduled to attend the event on the last day of the conference and address the military commanders.

Senior government officials told The Indian Express that the discussions would feature discussions on three years of the establishment of the Department of Military Affairs (DMA) under the Defence Ministry, its achievements and way forward. Additionally, there is also likely to be a review on the progress on the creation of theatre commands—a military reform that is under progress and is being led by Gen Chauhan.

Other topics to feature in the conference include reforms in Defence Research and Development Organisation in enhancing capability development of the Armed Forces, review on Defence PSU reforms and recommendations for future and role of the Armed Forces in nation building. This also featured in the last CCC held at Kevadia in Gujarat in March 2021.

Additionally, a key focus of the conference will be Atmanirbhar Bharat and business process reengineering in capital acquisition and growth in defence exports. The government has set an ambitious target to achieve maximum self-reliance in defence and reach a defence export target of \$5 billion. At the conference, a stall showcasing indigenous equipment will be set up.

The CCC this year comes amid an ongoing military standoff with China at the Line of Actual Control (LAC) in eastern Ladakh and an array of geopolitical challenges thrown by the war between Russia and Ukraine which has been underway for over a year now. There would be likely discussions on the operational aspects related to these.

The last CCC in 2021 also saw discussions on a range of contemporary topics such as challenges in the new domain of cyber, space and unmanned systems. PM Modi in his speech during the last CCC had mentioned increasing indigenisation in India's military equipment and in doctrines, procedures, and customs of the Indian military.

Subsequently, there has been a major push on not only giving preference to indigenous military equipment in defence acquisitions but also doing away with several British-era symbols and traditions in the Indian military.

<https://indianexpress.com/article/india/combined-commanders-conference-modi-agniveer-data-digitisation-8527396/>



*Fri, 31 Mar 2023*

## **PM Modi to Join Top Military Meet, Focus on Theaterisation**

A top military conference, which began in Bhopal on Thursday and will be addressed by Prime Minister Narendra Modi on April 1, will bring into sharp focus India's renewed push for theaterisation for the best use of its military's resources to fight future wars, the operational readiness of the armed forces in the backdrop of the lingering border row with China, and the progress in achieving self-reliance in the defence manufacturing sector, officials familiar with the matter said. The three-day Combined Commanders' Conference is based on the theme Ready, Resurgent, Relevant.

“During the conference, deliberations will be held over a varied spectrum of issues pertaining to national security, including jointness and theaterisation in the armed forces,” the PMO said in a statement. “Preparation of the armed forces and progress in defence ecosystem towards attaining ‘Aatmanirbharta’ (self-reliance) will also be reviewed.”

“Theaterisation, operational readiness of the armed forces and self-reliance are the most important issues for the armed forces at the moment. We can expect forward movement in all these areas as the PM is himself providing the directions to make the armed forces stronger,” said Air Marshal Anil Chopra (retd), director general, Centre for Air Power Studies.

Those taking part in the conference include defence minister Rajnath Singh, the chief of defence staff, the three service chiefs, and top commanders of the armed forces. Personnel below officer rank (PBOR) will also take part in conference.

“Inclusive and informal interaction will also be held with soldiers, sailors and airmen from army, navy and air force who will contribute to the deliberations,” the PMO said. PBOR took part in the Combined Commanders’ Conference for the first time in 2021 when it was held at Kevadia in Gujarat and attended by the PM.

The conference comes at a time when the government is pushing a bill in Parliament to empower the commanders of tri-services organisations to take action against service personnel of any of the three services -- serving under existing or future joint commands or institutions -- to ensure discipline and effective discharge of duties.

The existing legal framework of the armed forces has its limitations when it comes to tri-services matters as officers of one particular service lack the authority to exercise disciplinary and administrative powers over personnel belonging to another service. For instance, a three-star general heading a joint command cannot take action against air force or navy personnel serving under him.

Military personnel are currently governed by the respective laws of the three services , the Army Act, 1950, the Air Force Act, 1950, and the Navy Act, 1957.

The Inter-Services Organisations (Command, Control and Discipline) Bill, 2023, also seeks to empower the government to notify the setting up of inter-services organisations, including joint services commands --a key goal of the ongoing theaterisation drive -- comprising units and personnel drawn from the three services, and placed under a commander-in-chief.

Efforts to push theaterisation have gathered steam again after General Anil Chauhan took over as CDS in September 2022; the momentum was hit after his predecessor, General Bipin Rawat, died in a helicopter crash in December 2021.

The theaterisation model being pursued under General Rawat sought to set up four integrated commands -- two land-centric theatres, an air defence command and a maritime theatre command. This, however, is being reworked on the back of the Indian Air Force’s reservations about the joint structures that were earlier under consideration. The armed forces have 17 single-service commands spread across the country. The army and air force have seven commands each, while the navy has three. Creating theatres would involve merging the existing commands.

The situation along the Line of Actual Control (LAC) with China is also expected to be discussed during the conference, the officials said.

Despite four rounds of disengagement from Galwan Valley, Pangong Tso, Gogra (PP-17A) and Hot Springs (PP-15), the Indian and Chinese armies still have more than 60,000 troops each and advanced weaponry deployed in the Ladakh theatre. The Indian and Chinese armies have held 17 rounds of talks so far, but problems at Depsang in Daulet Beg Oldi sector and Charding Nullah Junction (CNJ) in Demchok sector are still on the negotiating table. The two sides have been locked in a standoff for almost three years.

On March 14, India announced the setting up of a top-level panel to fast-track infrastructure projects in areas close to LAC. The projects being executed in forward areas involve several ministries including defence; road transport and highways; environment, forest and climate change; railways and communications, and power and new and renewable energy.

The secretaries of these ministries will be part of the new committee.

Self-reliance in defence will figure prominently on the conference's agenda, the officials said on a day the defence ministry signed contracts worth ₹32,100 crore for buying indigenous military hardware to boost the capabilities of the armed forces.

India has earmarked 75% of this year's defence capital procurement budget for buying weapons and systems from local manufacturers, a move aimed at unlocking new opportunities for achieving self-reliance targets and ramping up the country's defence exports.

The share of the domestic sector in the defence budget was never higher. India set aside 68% of the military's capital acquisition budget for making indigenous purchases in 2022-23, 64% in 2021-22, and 58% in 2020-21. Around ₹1 lakh crore has been set aside for domestic procurement this year, compared to ₹84,598 crore, ₹70,221 crore and ₹51,000 crore in the three previous years.

Apart from creating a separate budget for buying locally made military hardware, the government has taken a raft of steps to promote self-reliance in the defence manufacturing sector including increasing foreign direct investment (FDI) from 49% to 74%, and notifying hundreds of weapons and systems that cannot be imported.

<https://www.hindustantimes.com/india-news/pm-modi-to-join-top-military-meet-focus-on-theaterisation-101680200354634-amp.html>

## Business Standard

*Wed, 29 Mar 2023*

### **Guns vs Butter-II: Indian Military's Quest for Indigenous Weaponry**

The 37th Report of the 17th Lok Sabha's Standing Committee on Defence, which was tabled before Parliament on March 31, reveals that, despite the government's encouragement of defence procurement from domestic sources, almost 40 per cent of the defence capex budget has been expended on foreign military equipment over the preceding decade.

Extrapolating from the report, which scrutinises defence expenditure from Financial Year 2012-13 (FY13) to FY22, the expenditure on foreign vendors exceeded 35 per cent in seven of those 10 years. In the remaining three years, foreign capex exceeded 40 per cent – on one occasion going up to 49 per cent.

The defence ministry furnished the Standing Committee with the following information on the import of defence equipment: During the last five financial years (FY 2017-18 to 2021-22) and the current FY 2022-23 (up to December 2022), 264 capital acquisition contracts have been signed, of which 88 contracts, worth about 36.26 per cent of the total contract value, have been signed with vendors from foreign countries including Russia, USA, Israel, France etc for capital procurement of defence equipment -- helicopters, aircraft, radars, rockets, guns, assault rifles, missiles and ammunitions (sic).

Amongst the measures the defence ministry has announced to boost domestic procurement includes the target of increasing domestic procurement from the existing 68 per cent to 75 per cent in Financial Year 2023-24 (FY24).



The defence ministry also announced that private industry will be allocated 25 per cent of the budget for defence research and development (R&D). In addition, Rs 1231 crore would be allocated for indigenous prototype development under the “Make” category in FY24.

## CAPITAL PROCUREMENT: FOREIGN VS INDIGENOUS BUYS

(Figures in ₹cr)

	Service						Total		
	Army		Navy		Air Force		Foreign	Indig	%*
	Foreign	Indig	Foreign	Indig	Foreign	Indig			
2012-13	1,598	23,185	7,465	12,751	21,308	16,783	30,371	52,719	37
2013-14	1,636	14,443	13,151	8,268	23,069	16,924	37,856	39,635	49
2014-15	3,804	16,778	8,334	14,669	17,084	18,084	29,222	49,531	37
2015-16	3,150	19,133	8,205	12,617	14,835	18,238	26,190	49,988	35
2016-17	5,508	24,787	7,223	13,932	17,762	15,049	30,493	53,768	36
2017-18	5,259	24,961	5,997	14,844	22,157	15,147	33,413	54,952	38
2018-19	6,125	24,030	6,237	17,325	30,612	9,153	42,974	50,508	46
2019-20	6,047	25,113	9,986	18,940	28,586	19,732	44,619	63,785	41
2020-21	6,689	23,585	19,450	24,605	24,570	40,442	50,709	88,632	36
2021-22	5,086	25,508	17,760	28,927	25,425	32,922	48,271	87,357	36

Note: \*Percentage of foreign systems/sub-systems procured in the year compared to indigenous ones  
Source: Standing Committee on Defence Report No. 37

“For ensuring Atmanirbhar Bharat, certain policy alignments have been carried out. The government has taken out four positive indigenisation lists since 2020 which, as on today, account for 411 items which range from guns, rifles, to submarines etc. which are kept on the Import Embargo List. That means these items will not be imported in the future. Also, some 3,738 items have been identified for the DPSUs which will be sourced only from the Indian industry,” the defence ministry stated during briefings, according to the Standing Committee report.

The defence ministry also responded to the Standing Committee’s inquiries about dependency on foreign players, specifically the reports in various publications, that 84.3 per cent of the major conventional arms procured by India in FY2016-20 were of foreign origin, of which licensed production accounted for 57.8 per cent.

In response, the Defence Secretary stated: “Yes. We do not have certain technologies like jet engine technology. We even have to depend (on other countries) for power packs for ships. We are making efforts. The government’s policies are helping our efforts. As has been pointed out, we are entering into licensed production.”

“That itself will transfer enormous amount of knowledge into the country, and because of the new decision of the government in 2021 that imports will be limited, we will be able to get several technologies into the country through technology transfer. But we will be dependent in



the short term for certain critical equipment, especially power packs, and we are making all efforts to overcome that,” said the defence secretary.

[https://www.business-standard.com/india-news/guns-vs-butter-indian-military-s-quest-for-indigenous-weaponry-123032900928\\_1.html](https://www.business-standard.com/india-news/guns-vs-butter-indian-military-s-quest-for-indigenous-weaponry-123032900928_1.html)

## Business Standard

Thu, 30 Mar 2023

### Guns vs Butter-III: Much of Army's War-Fighting Equipment Remains Vintage

The 36th Report of the 17th Lok Sabha’s Standing Committee on Defence, which was tabled before Parliament on March 21, reveals that an unduly high proportion of the army’s warfighting equipment remains obsolescent.

While discussing the recommendation made in 2018 by the Standing Committee on Defence that one-third of the army’s equipment must be state-of-the-art and one-third in the contemporary category, while the remaining one-third could be vintage equipment; an army representative stated: “Sir, you are right. It was 30:40:30. 30 per cent was to be new generation equipment, 40 per cent was to be current equipment and 30 per cent could be the older generation equipment. Currently, the situation is, approximately, 15 per cent is new generation equipment, around 40 per cent is current equipment, and the balance is the older generation equipment. So, this is the transition that we have to go about. There is some time to go before we are able to reach the ideal state of 30:40:30.”

#### REVENUE & CAPITAL FUNDING: DEMAND-SUPPLY GAP

(In ₹ crore)

Year	Revenue			Capital		
	Projection	Expenditure	Shortfall (%)	Projection	Expenditure	Shortfall (%)
2018-19	151,814	134,241	11.5	44,573	27,439	40
2019-20	152,321	142,529	6.5	44,661	29,000	35
2020-21	165,228	139,903	15.0	50,374	26,321	49
2021-22	170,705	157,092	8.0	51,492	25,131	51
2022-23	174,038	127,936*	26.0	46,844	21,600*	55
2023-24	184,990	181,371	2.0	37,342	37,342	Nil

\* Figure up to December 2022

Source: Standing Committee on Defence, Report No.36

The Standing Committee report also reveals that the army has been allocated a significantly lower budget than it had projected as its requirement – both under revenue and capital heads. In the preceding five years leading to the present – i.e. Financial Year 2018-19 (FY19) to FY23 – the army has been allocated 6.5 per cent to 26 per cent less funding than it has demanded under the revenue head. The allocation shortfall under the capital head has been even larger during the same period – between 35 per cent and 55 per cent.

Only in the current year's budget, i.e. for FY24, has the army received almost the same amount it has projected as its requirement. Under the revenue head, the army has been allocated Rs 181,371 crore – Rs 3,619 crore less than its projection of Rs 184,990 crore. Under the capital head, it has been allocated Rs 37,342 crore – exactly the amount it has asked for.

In recommending that the army must be allocated the funding it has demanded, the Standing Committee has played up its role: "Indian Army strengthens the idea of India and lives by national values. Army is dedicated to preserving national interests, safeguarding sovereignty, territorial integrity and unity of our Nation. The challenges before Army include thwarting proxy wars, arresting internal threats, assist the Government and the people of India during all needs and crises such as natural disasters etc.," says the report.

According to the report, the Financial Advisor (Defence Services) clarified the shortfalls in the army's capital allocations: "I would just like to mention two things. The budgetary allocations for defence are a function of two aspects. One is the demands projected by the army based on their requirements, and the other is the expenditure which they have been incurring in the past. It is the balance of the two," he said.

"I would just like to mention that in the past five or six years, the expenditure of the Army as far as the capital is concerned, has been in the range of Rs. 25,000 crore to Rs. 28,000 crore... During the current year, it has been increased to Rs. 37,000 crore. It is based on the demand which the Army has projected. It has already been increased," said the FA(DS)

Underscoring the defence ministry's readiness to expedite capital procurements for the army, the Standing Committee reveals that the ministry had accorded Acceptance of Necessity (AoN) in 29 acquisition cases worth about Rs 60,679 crore. These AoNs have been accorded during FY22, and during the current FY23 (up to December 2022). They are under various stages of the acquisition process for induction of the equipment into service during subsequent years.

[https://www.business-standard.com/economy/news/guns-vs-butter-iii-much-of-indian-army-s-arsenal-remains-vintage-123033000829\\_1.html](https://www.business-standard.com/economy/news/guns-vs-butter-iii-much-of-indian-army-s-arsenal-remains-vintage-123033000829_1.html)



*Thu, 30 Mar 2023*

## **India and Romania Sign Agreement for 'Practical Cooperation between Armed Forces'**

India and Romania have signed a defence agreement as Simona Cojocaru, the European country's deputy minister of defence, met defence secretary Giridhar Aramane in New Delhi.

Speaking to The Indian Express, Cojocaru said, "The central part of my visit here is, of course, the signing of our first Defence Cooperation Agreement, which will set the foundation of the practical cooperation between our armed forces. It will categorically give a new impetus to our bilateral agenda on defence." "We are living [in] challenging times and we see that the multilateral system is in crisis. Both Romania—as a solid Nato and EU member country and India—as the fifth economy in the world and one of the largest troop contributors to United Nations peacekeeping missions could play a constructive role in overcoming these challenges

and have an important role in strengthening our democratic societies, according to UN Charter principles and values,” she said.

On the significance of the defence pact, she said it represented the basis to setting up and expanding the military relationship.

“It will provide us with greater opportunities to work together in various fields and we are ready to identify domains and topics of common interest. We have already worked together in a multinational environment, such as UN missions. We salute India’s contribution to the UN peacekeeping missions. Our countries are making a significant contribution to enhancing stability and strengthening peace and security in areas marked by the horrors of war. My visit here is a very clear proof of the importance that Romania attaches to the Indo-Pacific region. We are, of course, aware of the strategic importance of this region and we share many of the security concerns and their global implications,” she said.

“We are looking forward to cooperating with India on military education, training, cyber defence, military medicine, military history and other domains that could benefit both our countries. Just to give you one example, I have in my delegation the representatives of the Romanian Institute for Political Studies of Defense and Military History and we are open to cooperate with the Indian Manohar Parrikar Institute for Defence Studies and Analyses, within the framework of this first agreement,” she said. On the Russian invasion of Ukraine, she said that Russian President Vladimir Putin had started a war of choice and shocked the entire world by invading Ukraine. “This war of aggression against a sovereign and independent country brought to our region numerous challenges that threaten its stability and security...The attack against Ukraine is an attack against the entire rule-based international order, its values and principles, and Romania, along with its like-minded partners, responded in solidarity and unity. We are against tyranny, dictatorship and the distortion of European history. More than three decades after the collapse of the Soviet Union, Russia has imperialistic ambitions and does not share the values of our societies,” she said. “We stand in full solidarity with Ukraine, we mourn the loss of human lives after indiscriminate attacks of the Russian forces against Ukrainian villages and towns.”

<https://indianexpress.com/article/india/india-romania-sign-agreement-practical-cooperation-between-armed-forces-8526674/>

## नवभारत टाइम्स

Thu, 30 Mar 2023

### यूक्रेन युद्ध से क्या सीख सकता है भारत, सैटलाइट इंटेलिजेंस डेटा और AI कितना कारगर?

हर्ष वी. पंत

यूक्रेन के शहर बखमुत में रूस और यूक्रेन के बीच चल रही लंबी खूनी लड़ाई ने एक बार फिर इस सच का अहसास कराया है कि अंतरराष्ट्रीय राजनीति में युद्ध ही निर्णायक होता है।

अंतरराष्ट्रीय राजनीति युद्ध के साये में ही आकार लेती है। इसीलिए सैन्य शक्ति इसका व्यावहारिक औजार बनी हुई है।

### **भारत के लिए सबक**

#### **भारत के लिहाज से देखा जाए रूस-यूक्रेन युद्ध के कुछ बड़े सबक हैं:**

पहला, रूस-यूक्रेन युद्ध के लिहाज से देखा जाए तो बखमुत में हार-जीत किसी भी पक्ष के लिए रणनीतिक तौर पर बहुत ज्यादा मायने नहीं रखती। इसके बावजूद दोनों ही पक्ष करीब सात महीनों से वहां जीतने की कोशिश कर रहे हैं और इसके लिए पूरी ताकत झोंक रखी है। इससे यह भी पता चलता है कि युद्ध में किसी खास इलाके पर कब्जा करना या उसे बनाए रखना कितना अहम होता है।

दूसरा, जमीनी लड़ाई में कौन भारी पड़ सकता है, यह बात महत्वपूर्ण है। भारत को इसे समझना चाहे क्योंकि देश की सुरक्षा के लिहाज से यह बात अहम है। इस पर चाहे जो भी खर्च आए, अपनी जमीन की रक्षा करने वाली मजबूत फौज के रूप में सैन्य शक्ति की कमी किसी भी देश के लिए हार का कारण बन सकती है। आखिर इंसान जमीन पर ही रहते हैं और युद्ध का फैसला भी जमीन पर ही होता है। इसलिए युद्ध में बखतरबंद गाड़ियों, तोपखाना और उनके साथ तकनीक के जानकार इंजीनियरों की काफी अहमियत है। इसकी भरपाई साइबर, स्पेस और ऐसी दूसरी क्षमताओं से नहीं की जा सकती। साइबर या इलेक्ट्रो-मैग्नेटिक स्पेक्ट्रम जैसी क्षमताएं युद्ध में सहायक भूमिका में होती हैं, लेकिन इन्हें आमने-सामने की लड़ाई का विकल्प नहीं माना जा सकता।

तीसरा, रूस-यूक्रेन युद्ध ने दिखाया है कि समुद्री ताकत को सस्ती मिसाइलों के सहारे कितनी आसानी से बेअसर या नष्ट किया जा सकता है। इसीलिए रूसी नौसेना का ब्लैक सी बेड़ा युद्ध में बड़ी भूमिका नहीं निभा पाया है। वह यूक्रेन की मिसाइलों से सुरक्षित दूरी बनाए रखने को मजबूर है। यह अकारण नहीं है कि चीन ने अमेरिकी और मित्र राष्ट्रों के नौसैनिक बेड़ों को अपनी सीमा से दूर रखने के लिए एंटीशिप बैलिस्टिक मिसाइलों (ASBMs) और एंटीशिप क्रूज मिसाइलों (ASCMs) की पूरी रेंज बना रखी है। यहां भी भारत यूक्रेन और चीन से सीख लेते हुए भू-आधारित बैलिस्टिक और क्रूज मिसाइलों की रेंज तैयार कर सकता है।

चौथा, रोटरी या फिक्स्ड विंग एयरक्राफ्ट के सहारे दुश्मन के इलाकों में दूर तक घुसकर मार करने की रणनीति इस युद्ध में कारगर नहीं रही है। अगर अपाचे जैसे रोटरी विंग एयरक्राफ्ट का ही उदाहरण लें, जिनका भारत ऐसे मिशन में इस्तेमाल करता है, तो 2003 के दूसरे खाड़ी युद्ध में भी ये इराक की ग्राउंड बेस्ड एयर डिफेंस आर्टिलरी के सामने खास असरदार साबित नहीं हुए थे। ऐसे में चीन या पाकिस्तान के खिलाफ भारतीय अपाचे की कोई भूमिका अगर हो

सकती है तो शायद वह टोह लेने, निगरानी करने या जमीनी टुकड़ियों को मदद देने की ही होगी। रूसी फिक्सड विंग और रोटरी विंग एयरक्राफ्टों के खिलाफ यूक्रेनी सेना ने शॉर्ट रेंज एंटी एयरक्राफ्ट वेपंस या तुलनात्मक रूप से छोटे हथियारों से गोलाबारी का प्रभावी इस्तेमाल किया है। दूसरी तरफ यूक्रेनी सेना भी दुश्मन के इलाके में दूर तक मार करने के मामले में खास सफल नहीं रही। उसे हवाई क्षमता का इस्तेमाल जमीन पर लड़ रही टुकड़ियों की मदद के लिए करना था। नतीजा यह कि कोई भी पक्ष हवाई लड़ाई में किसी पर भारी नहीं पड़ा। ऐसे में, भारत के लिए भी दूर तक मार करने की क्षमता विकसित करने में ऊर्जा लगाने के बजाय काउंटर अनमैंड एरियल सिस्टम (CUAS) विकसित करना ज्यादा फायदेमंद हो सकता है।

पांचवीं बात ध्यान में रखने की यह है कि हवाई या एंफिबियस मिशन आसानी से दुश्मन की नजरों में आ जाते हैं। यूक्रेन युद्ध से ही नहीं, अतीत के अनुभवों से भी इस बात की पुष्टि होती है। यूक्रेन पर हमले के आरंभिक चरणों में एयरपोर्ट पर कब्जा करने की कोशिशों में रूसी वायु सेना को भारी नुकसान झेलना पड़ा था। इसका मतलब यह नहीं कि ये अतीत की चीज हो गए हैं, लेकिन यह जरूर है कि इनका इस्तेमाल बहुत सोच-समझकर और खास मिशन में ही करने की जरूरत है।

#### AI की भूमिका

आखिर में, आर्टिफिशल इंटेलिजेंस (AI) ने इस युद्ध में तो अहम भूमिका निभाई है, आगे भी इसकी यह भूमिका बनी रहने वाली है। यूक्रेनी फौज ने बखमुत में मोर्चे पर लड़ाकू टुकड़ियों के साथ ही सॉफ्टवेयर इंजीनियरों को भी तैनात किया है। इनकी मदद से यूक्रेन के कमांडर रूसी सेना के ठिकानों का सटीक ढंग से पता लगा पाते हैं, जिससे फौज की मारक क्षमता बढ़ जाती है। यूक्रेन, रूसी फौज के खिलाफ हमलों को ज्यादा प्रभावी बनाने के लिए सैटलाइट इंटेलिजेंस से आए डेटा के साथ ही AI से मिले डेटा का भी इस्तेमाल कर रहा है। AI ने निश्चित रूप से रूसी हमलों के बरक्स यूक्रेनी फौज के टिके रहने की क्षमता बढ़ा दी है।

कुल मिलाकर, निष्कर्ष यही है कि भारतीय सेना को बख्तरबंद गाड़ियों, मिसाइलों और तोपखानों की क्षमता बढ़ाने में ही पूरी ऊर्जा लगाने के बजाय उभरती टेक्नॉलजी को अपनाने पर ध्यान देना चाहिए, इनके विकल्प के तौर पर नहीं बल्कि इन्हें ज्यादा सक्षम और ज्यादा कारगर बनाने वाले उपाय के रूप में।

<https://blogs.navbharattimes.indiatimes.com/nbteditpage/what-india-can-learn-from-the-russia-ukraine-war/>



## SCO की बैठक में आतंकवाद पर पाक घिरा, विस्तार नीति पर चीन

■ आईएनएस, नई दिल्ली

शंघाई सहयोग संगठन (SCO) के राष्ट्रीय सुरक्षा सलाहकारों की बुधवार को नई दिल्ली में हुई बैठक में भारत ने पाकिस्तान और चीन की मौजूदगी में परोक्ष रूप से उन पर निशाना साधा। राष्ट्रीय सुरक्षा सलाहकार अजित डोभाल ने पाकिस्तान को 'आतंकी' नीति और चीन को 'विस्तारवादी' नीति पर घेरा। डोभाल ने कहा कि आतंकवाद की कोई भी गतिविधि, चाहे उसके पीछे जो भी वजह हो, वह अपने सभी रूपों और अभिव्यक्तियों में अनुचित है। इसका पोषण करना अंतरराष्ट्रीय शांति और सुरक्षा के लिए सबसे बड़ा खतरा है। आतंकवाद से निपटने के लिए सभी देशों को संयुक्त राष्ट्र सुरक्षा परिषद के प्रस्तावों पर ध्यान देना चाहिए और इस दिशा में अपनी जिम्मेदारियों को पूरा करना चाहिए।

SCO देशों के NSA की 18वीं बैठक में डोभाल ने कहा कि समूह के सदस्यों को क्षेत्रीय अखंडता का सम्मान करना चाहिए और आसपास के इलाकों में सैनिक गतिविधियां नहीं करनी चाहिए। चीन का नाम लिए बिना डोभाल ने कहा कि SCO चार्टर सदस्य देशों से ताकत का इस्तेमाल न करने, अंतरराष्ट्रीय संबंधों में बल प्रयोग की धमकी न देने या एकतरफा सैन्य श्रेष्ठता की मांग न करने की बात कहता है।



बैठक में पाकिस्तान और चीन के NSA विडियो कॉन्फ्रेंसिंग से शामिल हुए

इशारों में पाक पर

आतंकवाद सभी रूपों में अंतरराष्ट्रीय सुरक्षा के लिए गंभीर खतरा है। सभी देश इससे निपटने के दायित्वों को पूरा करें।

चीन पर परोक्ष वार

समूह के सदस्य संप्रभुता, क्षेत्रीय अखंडता का सम्मान करें, बल प्रयोग और एकतरफा सैन्य श्रेष्ठता की बात न करें।

-अजित डोभाल, राष्ट्रीय सुरक्षा सलाहकार

'रूस को जोड़ने वाले कॉरिडोर में चाबहार शामिल हो': भारत ने कहा कि भारत-रूस के बीच अंतरराष्ट्रीय उत्तर दक्षिण ट्रांसपोर्ट कॉरिडोर में ईरान के चाबहार बंदरगाह को शामिल करना चाहिए।

यूक्रेन संघर्ष के शांतिपूर्ण समाधान की अपील: यूक्रेन जंग पर डोभाल ने कहा कि चार्टर सदस्य देशों से युद्धों को रोकने और शांतिपूर्ण समाधान में सहयोग का आह्वान भी करता है।

### विदेश मंत्री ने कहा, रूस-यूक्रेन जंग के बाद दुनिया अब मुश्किल जगह

■ पीटीआई, नई दिल्ली: रूस-यूक्रेन जंग पर विदेश मंत्री एस. जयशंकर ने बुधवार को कहा कि अब दुनिया बहुत ज्यादा मुश्किल जगह बन गई है। एक टीवी चैनल के कार्यक्रम में जयशंकर ने कहा कि भारत G20 को ग्लोबल ग्रोथ और विकास के अपने मूल अजेंडे पर वापस लाया है। इस

बीच, रूस की तेल कंपनी रोसनेफ्ट और इंडियन ऑयल कॉरपोरेशन ने भारत को तेल सप्लाई बढ़ाने का सौदा किया है। रूस ने महाविनाशक यास मिस्साइलों के साथ साइबेरिया में अज्ञात जगह अभ्यास शुरू किया है। यूक्रेन के राष्ट्रपति जेलेन्स्की ने चीन के राष्ट्रपति शी चिनफिंग को अपने यहां आने का न्योता दिया है।





## China's New Defence Minister Likely to Visit India for SCO Meet in April

China's newly appointed Defence Minister, General Li Shangfu, is set to make his first visit to India in April, which is also set to be the first high-level military visit from China since the Line of Actual Control (LAC) crisis began in 2020. Separately, External Affairs Minister S. Jaishankar, speaking at an event on Thursday, said that resolution of the stand-off in eastern Ladakh "is work in progress" and in the last three years the combination of military and diplomacy working in lockstep has made progress in resolving it.

General Li, also a State Councillor, is likely to attend the Shanghai Cooperation Organisation (SCO) Defence Ministers' meet in April in person. Chinese Minister of Public Security and State Councillor Wang Xiaohong only participated virtually in the SCO National Security Advisers' meeting held this week.

India and China are also exploring holding a bilateral meeting between the two Defence Ministers during the visit, which will be the first since a meeting between Rajnath Singh and General Li's predecessor, General Wei Fenghe, on the sidelines of the SCO Defence Ministers' meeting in Moscow in September 2020.

General Li is the first of China's Defence Ministers to come from the aerospace sector, and has served in the PLA's equipment development department. He was sanctioned by the U.S. over China's purchase of the S-400 missile defence system from Russia. His appointment by President Xi Jinping underlines the current focus on PLA modernisation, which General Li has been tasked with spearheading.

### LAC stand-off

His visit comes as India and China continue to discuss disengagement in the last two of seven friction points – Demchok and Depsang – having previously come to an agreement in Galwan Valley, Pangong Tso, Gogra and Hot Springs. The two countries have so far held 17 rounds of Corps Commanders' talks to resolve the stand-off along the Line of Actual Control (LAC) in eastern Ladakh. While India maintains that two more areas, Depsang and Demchok, are yet to be resolved, China maintains that disengagement is complete and the remaining two areas of contention predate the stand-off.

In February, Joint Secretary (East Asia) in the Ministry of External Affairs (MEA) Shilpak Ambule held talks in Beijing with senior Chinese border officials for the first in-person meeting of the Working Mechanism for Consultation and Coordination on India-China Border Affairs (WMCC) since July 2019. Both sides discussed proposals for disengaging in the two remaining friction areas along the LAC to create conditions to "restore normalcy" in relations, according to statements issued after the talks.

They also agreed to hold the next round of Corps Commander's talks, which are likely to take place soon with the conclusion of the National People's Congress in Beijing on March 13 that saw the appointment of new officials, including General Li.

PLA Senior Colonel Tan Kefei, spokesperson for China's Ministry of National Defence, at a monthly press briefing in Beijing on Thursday said that a working group from the Ministry "recently visited India to participate in meetings among the international military cooperation departments under the Defence Ministries of SCO member states." They "elaborated the Global Security Initiative in depth," he said, referring to Mr. Xi's new security initiative.

"In mid-to-late March, the Chinese side also sent delegates to India to attend respectively the SCO Workshop on Humanitarian Assistance and Disaster Relief (HADR) and the SCO think tank exchange on military health and medicine, and participated in the Expert Working Group (EWG) affiliated with the Meeting of the Council of Defence Ministers of the SCO member states through a video link," he added. During these meetings, the Chinese delegates had close and extensive communication with other participants, which profoundly enhanced the mutual trust and coordination among the parties, the spokesperson said.

"In the next stage, China is willing to cooperate with defence departments and militaries of all SCO member states to vigorously promote the 'Shanghai Spirit', continue to accelerate practical cooperation in high-level exchanges, education and training, military inspections and other fields, thus contributing to building a closer SCO community with a shared future," he added.

Speaking at the News 18 'Rising India' summit Mr. Jaishankar said that the resolution of the stand-off is still "unfinished" work. "There are places where we have forward deployments. We continue to work at it," he stated.

He said that in the last two or three years, the military has done what the military should do and the military and diplomacy have worked in lockstep. He said the issue has never been left entirely to the military commanders. "The military commanders and diplomats work as a team... In the last three years this combo of military and diplomacy working in lockstep has made progress," the External Affairs Minister said, adding that the two sides had not been able to sort everything out, but would keep at it.

"When I met the new Chinese Foreign Minister Qin Gang on the sidelines of G-20, it was something we discussed. It is work in progress and I would certainly like to see more progress," he added.

<https://www.thehindu.com/news/national/chinas-new-defence-minister-likely-to-visit-india-for-sco-meet/article66680183.ece>

## THE ECONOMIC TIMES

*Thu, 30 Mar 2023*

### **China Willing to Work with Russian Military on Several Fronts - Chinese Defence Ministry**

China said its military was willing to work together with the Russian military to strengthen strategic communication and coordination, the Chinese defence ministry said on Thursday.

The two countries would work together to implement global security initiatives, said Tan Kefei, a spokesman at the Chinese defence ministry, at a regular press conference.

Tan said the two countries would deepen military trust and jointly safeguard international fairness and justice. They will also further organise joint maritime, air patrols and joint exercises, Tan said.

China President Xi Jinping recently visited Russia and met with President Vladimir Putin - a visit the United States denounced.

<https://economictimes.indiatimes.com/news/defence/china-willing-to-work-with-russian-military-on-several-fronts-chinese-defence-ministry/articleshow/99111318.cms>



*Thu, 30 Mar 2023*

## **Russia Stops Sharing Missile Test Info with US, Opens Drills**

Russia will no longer give the US advance notice about its missile tests as envisioned under a nuclear pact the Kremlin has suspended, a senior Moscow diplomat said Wednesday, as its military rolled missile launchers across Siberia in a show of the country's massive nuclear capability amid fighting in Ukraine.

Deputy Foreign Minister Sergei Ryabkov told Russian news agencies that Moscow has halted all information exchanges with Washington under the last remaining nuclear arms treaty with the US after suspending its participation in it last month.

Along with the data about the current state of the countries' nuclear forces routinely released every six months in compliance with the New START treaty, the parties also have exchanged advance warnings about test launches and deployments of their nuclear weapons. Such notices have been an essential element of strategic stability for decades, allowing Russia and the United States to correctly interpret each other's moves and make sure that neither country mistakes a test launch for a missile attack.

The termination of information exchanges under the pact marks yet another attempt by the Kremlin to discourage the West from ramping up its support for Ukraine by pointing to Russia's massive nuclear arsenal. In recent days, President Vladimir Putin announced the deployment of tactical nuclear weapons to the territory of Moscow's ally Belarus.

Putin suspended the New START treaty last month, saying Russia can't accept US inspections of its nuclear sites under the agreement at a time when Washington and its NATO allies have openly declared Moscow's defeat in Ukraine as their goal. Moscow emphasized that it wasn't withdrawing from the pact altogether and would continue to respect the caps on nuclear weapons the treaty set.

It wasn't immediately clear whether Ryabkov's statement indicated Moscow's intention to terminate all warnings about missile tests or just those envisioned by the New START treaty. Moscow and Washington have exchanged notifications about test launches of ballistic missiles since the Cold War era, and the Foreign Ministry said last month that Russia will keep issuing them in line with a 1988 US-Soviet agreement.

“There will be no notifications at all,” Ryabkov said in remarks reported by Russian news agencies when asked if Moscow would also stop issuing notices about planned missile tests. “All notifications, all kinds of notifications, all activities within the framework of the treaty will be suspended and will not be conducted regardless of what position the US may take.”

US State Department deputy spokesman Vedant Patel said the Biden administration was aware of Ryabkov’s comments but it has not “received any notice indicating a change.”

He added that Washington has “across-the-board concerns about Russia’s reckless behavior as it relates to the New START treaty.”

Heather Williams, director of the Project on Nuclear Issues at the Center for Strategic and International Studies, a Washington think-tank, said Russia’s rhetoric was concerning but fits a pattern of behavior related to Ukraine.

“They use nuclear weapons to turn up the volume on a lot of their other activities, and arms control treaties are just the latest way for Russia to try to advance its goals in Ukraine,” she said.

Of more concern, Williams said, is that the collapse of New START has caused a severe reduction in communications between Washington and Moscow, which could be dangerous. “One of the biggest tragedies of the breakdown in New START is the loss of the communication channel,” she said.

Pavel Podvig, an expert on Russian nuclear forces, tweeted that Ryabkov’s reference to the termination of notices in the context of the New START indicated that Russia will keep issuing them in conformity with the 1988 pact.

Ryabkov’s announcement followed US officials’ statement that Moscow and Washington have stopped sharing biannual nuclear weapons data that were envisioned by the New START treaty. Officials at the White House, Pentagon and State Department said the US had offered to continue providing this information to Russia even after Putin suspended its participation in the treaty, but Moscow told Washington it would not be sharing its own data.

The New START, signed in 2010 by then-Presidents Barack Obama and Dmitry Medvedev, limits each country to no more than 1,550 deployed nuclear warheads and 700 deployed missiles and bombers. The agreement envisages sweeping on-site inspections to verify compliance.

The inspections have been put on hold since 2020 because of the Covid-19 pandemic. Discussions on resuming them were supposed to have taken place in November 2022, but Russia abruptly called them off, citing US support for Ukraine.

As part of the Russian drills that began Wednesday, Yars mobile missile launchers will maneuver across three regions of Siberia, Russia’s Defense Ministry said. The movements will involve measures to conceal the deployment from foreign satellites and other intelligence assets, the ministry said.

The Defense Ministry didn’t say how long the drills would last or mention plans for any practice launches. The Yars is a nuclear-tipped intercontinental ballistic missile with a range of about 11,000 kilometers (over 6,800 miles). It forms the backbone of Russia’s strategic missile forces.

A Defense Ministry video shows trucks carrying the missiles driving from a base to go on patrol. The maneuvers involve about 300 vehicles and 3,000 troops in eastern Siberia, according to the ministry.

The exercise took place days after Putin announced a plan to deploy the tactical nuclear weapons in Belarus, Russia's neighbor and ally. Such weapons are intended for use on the battlefield and have a relatively short range and a much lower yield compared with the long-range strategic missiles fitted with nuclear warheads that are capable of obliterating whole cities.

Putin's decision on the tactical weapons followed his repeated warnings that Moscow was ready to use "all available means" — a reference to its nuclear arsenal — to fend off attacks on Russian territory.

Ryabkov said Wednesday that Putin's move followed the failure by Kyiv's allies to heed previous "serious signals" from Moscow because of what he described as the "fundamental irresponsibility of Western elites before their people and international security."

Russian officials have issued a barrage of hawkish statements since their troops entered Ukraine, warning that the continuing Western support for Kyiv raised the threat of a nuclear conflict.

In remarks published Tuesday, Nikolai Patrushev, the secretary of Russia's Security Council, which Putin chairs, sternly warned the U.S. and its allies against harboring hopes for Russia's defeat in Ukraine.

Patrushev alleged that some American politicians believe the US could launch a preventative missile strike on Russia to which Moscow would be unable to respond, a purported belief that he described as "short-sighted stupidity, which is very dangerous."

"Russia is patient and isn't trying to scare anyone with its military superiority, but it has unique modern weapons capable of destroying any adversary, including the United States, in case of a threat to its existence," Patrushev said.

<https://www.indiatoday.in/world/story/russia-stops-sharing-missile-test-info-with-us-opens-drills-2353262-2023-03-30>

## Science & Technology News

### नवभारत टाइम्स

Fri, 31 Mar 2023

## क्या गुल खिलाने वाली है बातें बनाने वाली AI

चंद्रभूषण

आर्टिफिशल इंटेलिजेंस (AI) यानी कृत्रिम बुद्धि का मायने-मतलब पिछले दो-ढाई दशकों में लगातार बदलता आ रहा है। लेकिन इसका एक खास रूप- शब्द के आगे शब्द जोड़कर उपयोगी बातचीत कर लेना, सार्थक लेख लिख देना, कुछेक मुश्किलों का ठीक-ठाक हल सुझा देना- इधर दो

महीनों से लगातार चर्चा में है। थोड़ा पीछे जाएं तो यह लहर पिछले छह महीनों से चल रही है, लेकिन इसमें बड़े ब्रैंडों की धमक अभी हाल ही में सुनाई पड़ी है।

### ऐसे शुरू हुआ सिलसिला

– नवंबर 2022 में OpenAI नाम की अमेरिकी कंपनी ने ChatGPT नाम से अपनी एक खास AI लॉन्च की।

– इसके बाद माइक्रोसॉफ्ट ने अपने सर्च इंजन बिंग को ChatGPT पर ही आधारित 'बिंगचैट' सुविधा के साथ बीती 7 फरवरी को नए सिरे से लॉन्च किया।

– गूगल ने अभी 21 मार्च को 'बार्ड' नाम से अपनी AI शुरू की, जिसके लिए फिलहाल आपका एक वेटिंग लिस्ट का हिस्सा बनना जरूरी है।

– बीच में 14 मार्च को OpenAI कंपनी ने अपने ChatGPT का नया संस्करण भी लॉन्च किया है, जो पिछले तीन वर्षों से तैयार किए जा रहे GPT-4 पर आधारित है। यह सुविधा फिलहाल स-शुल्क है और इसके लिए हर महीने आपको 20 डॉलर अदा करने पड़ेंगे।

इसकी तह में जाने से पहले कुछ भारी-भरकम शब्दों का मतलब समझा जाए। GPT का फुल फॉर्म है 'जेनरेटिव प्री-ट्रेंड ट्रांसफॉर्मर'। इस सॉफ्टवेयर को एक निश्चित शब्द-भंडार में से सही शब्दों का चयन करते हुए सवालों का सबसे सटीक, सबसे प्रासंगिक जवाब तैयार करने के लिए प्रशिक्षित किया गया है। ध्यान रहे, गूगल सर्च या बिंग की तरह इसका काम इंटरनेट पर पहले से मौजूद जवाबों को खोजकर उनका लिंक चिपका देना नहीं है। GPT का काम कोई भी जवाब बिल्कुल नए सिरे से बनाना है, जिसके लिए वह अपने पास मौजूद सूचना भंडार से सूचनाएं उठा सकता है या इंटरनेट से जुड़ा होने की स्थिति में उसकी सेवाएं भी ले सकता है। ChatGPT का नया संस्करण बहुत ताकतवर होते हुए भी इंटरनेट से नहीं जुड़ा है। प्रॉसेसिंग के लिए उसके पास अंतिम सूचनाएं 2021 तक की ही हैं। इसका फायदा यह है कि उसके जवाब बाकियों से ज्यादा साफ हैं। इसका तीसरा संस्करण GPT-3 सिर्फ 3000 शब्दों से काम चलाता था, जबकि चौथा GPT-4 पचीस हजार शब्दों पर खड़ा है।

ध्यान रहे, इस तरह के चैटबॉट सिर्फ OpenAI कंपनी ही बना रही है, जिसमें अमेरिका की कई बड़ी सॉफ्टवेयर कंपनियों ने अपनी पूंजी लगा रखी है।

– इसके बनाए चैटबॉट्स का इस्तेमाल अभी सबसे आगे बढ़कर सर्च इंजन चलाने वाली दो मुख्य कंपनियों गूगल और माइक्रोसॉफ्ट ने किया है। उन्होंने इसकी ट्रेनिंग अपने-अपने ढंग से कराई है।



– माइक्रोसॉफ्ट का बिंगचैट और गूगल का बार्ड, दोनों जिस प्लैटफॉर्म पर बनाए गए हैं, वह GPT-3.5 है, यानी GPT-3 और GPT-4 के बीच का संस्करण। इसमें बिंगचैट के तीन रूप हैं- बैलेंस्ड, क्रिएटिव और प्रेस्सी। तीनों के नतीजे अलग-अलग आते हैं।

– बार्ड और बिंगचैट के बीच कॉन्सेप्ट के स्तर पर सबसे बड़ा फर्क इनकी ट्रेनिंग के डेटाबेस से आता है। बिंगचैट को मुख्यतः सूचनाओं की खोज के लिए गढ़ा गया है जबकि बार्ड की ट्रेनिंग इंसानी बातचीत के डेटाबेस पर आधारित है।

– इस फर्क के चलते निजी बातचीत के लिए बार्ड बहुत उम्दा चैटबॉट साबित हो सकता है, जबकि किसी खोजबीन या एक कैटिगरी की कुछ मिलती-जुलती चीजों की आपसी तुलना के आधार पर नतीजे निकालने के लिए बिंगचैट को बेहतर पाया जा रहा है।

– रही बात OpenAI द्वारा सीधे जारी ChatGPT की तो उसकी बुनियाद ही इन दोनों से आगे की है तो ज्यादातर मामलों में इसके नतीजे भी बेहतर आना स्वाभाविक है।

एक बात तय है कि अभी यह अपने क्षेत्र में बिल्कुल शुरुआती स्तर की टेक्नॉलजी है। कुछ विशेषज्ञों का कहना है कि माइक्रोसॉफ्ट ने सिर्फ गूगल का खेल बिगाड़ने के लिए अपना बिंगचैट इतनी जल्दी बाजार में ला दिया। गूगल सर्च से उसका बाजार छीनने की उसकी दो कोशिशें, इंटरनेट एक्सप्लोरर और बिंग बेकार साबित हो चुकी हैं। उसे उम्मीद है कि बिंगचैट के बल पर इस लड़ाई में वह शायद कुछ नया कर ले जाएगी। रही बात गूगल की तो बार्ड को लेकर उसकी एक लंबी योजना थी। लैम्डा यानी ‘लैंग्वेज मॉडल फॉर डायलॉग ऐप्लिकेशंस’ अलग-अलग क्षेत्र में अलग-अलग मूड के मुताबिक बातचीत की दिशा तय करने का कार्यक्रम था।

कहना मुश्किल है कि बतौर एक प्रॉडक्ट ‘बार्ड’ के बाजार की होड़ में उतर आने के बाद लैम्डा का काम निर्धारित रास्ते पर बढ़ पाएगा या नहीं। गूगल के लैम्डा का खोजी दायरा इससे कहीं ज्यादा बड़ा रहा है। याद करें तो पिछले साल लैम्डा पर काम कर रहे उसके एक सीनियर सॉफ्टवेयर इंजीनियर ब्लेक लेमॉइन ने इस चैटबॉट को एक सचेतन प्राणी, सेंटिएंट बीइंग बता दिया था।

### **गंदी-संदी बातचीत**

एक सोशल साइट पर यह आर्टिकल प्रकाशित होने के साथ ही हल्ला उठा कि रोबॉट और मैट्रिक्स जैसी कुछ चर्चित हॉलिवुड फिल्मों में जिस तरह कृत्रिम बुद्धि को मानवता पर कब्जा करते दिखाया गया है, कहीं वैसा ही कोई काम अपनी लैब में गूगल ने तो नहीं कर डाला है। पादरी बनने का प्रशिक्षण ले चुके कट्टर ईसाई मिजाज वाले ब्लेक लेमॉइन ने न सिर्फ लैम्डा के साथ अपनी बातचीत को सार्वजनिक कर दिया था बल्कि इसे एक रिपब्लिकन सीनेटर को सौंप दिया था, ताकि ‘नैतिकता के आधार पर’ लैम्डा को ‘गंदी-संदी’ बातचीत के लिए प्रशिक्षित करने

से रोका जा सके। ऐसे में गूगल ने प्रफेशनल गोपनीयता के मुद्दे पर ब्लेक को बाहर का दरवाजा दिखा दिया।

समस्या यह है कि अभी छप रही सारी तुलनाएं बार्ड, बिंगचैट और नए ChatGPT द्वारा तैयार किए गए छोटे लेखों की हैं और इनका आधार यह है कि वे कितने उपयोगी और सटीक हैं। इसकी जड़ में यह नुकसान छिपा है कि इस तकनीक की संभावनाएं कहीं सिकुड़ती न चली जाएं।

<https://blogs.navbharattimes.indiatimes.com/chandrabhushan/chatgpt-bing-chat-like-ai-creating-new-debate-on-ethics-in-technology-detailed-report/>



*Thu, 30 Mar 2023*

## **G20 Chief Science Advisers Meet in Uttarakhand: Lessons from Covid-19, Open Access to Scientific Knowledge Feature in Discussions**

The first meeting of the G20 Chief Science Advisers Roundtable (G20-CSAR) in Ramnagar, Uttarakhand, Wednesday, witnessed intense discussion on transboundary science and technology issues of mutual interest.

This was the first time that chief science advisers of different countries gathered for a roundtable conference at the G20 platform. Professor Ajay Kumar Sood, Principal Scientific Adviser to the Government of India, who led the roundtable, said that it was decided that under India's G20 presidency that all the science advisers should come together under the G20-CSAR flagship event to discuss topics that are important for all the countries.

The day-long roundtable witnessed discussions under the broad themes of opportunities in 'one health' for better disease control and pandemic preparedness; synergising global efforts to expand access to scholarly scientific knowledge; diversity, equity, inclusion, and accessibility in science & technology; and an institutional mechanism for inclusive, continuous, and action-oriented global science & technology policy dialogue. A total of 51 delegates from 18 nations participated in the roundtable.

On Tuesday, the delegates reached Ramnagar for the three-day event, where cultural teams dressed in Kumaoni costumes welcomed them by applying tilak, wearing pahari topi, patka, and tulsī mala. While enjoying the hill culture-based Chholia dance and program by the guests, some delegates were seen capturing these moments on their mobiles and taking selfies, while some delegates could not stop themselves from dancing to the tunes of Kumaoni music and music.

To acquaint the delegates with local products, the district administration organised an exhibition based on local products, in which various types of local products were displayed.

Uttarakhand Chief Minister Pushkar Singh Dhami reached Ramnagar and inspected the route. With Uttarakhand being the host for the meeting, the district administration also beautified several residential buildings in the area.

“There were four different topics discussed during the roundtable. The first topic was the lessons from the Covid-19 pandemic and how to deal with a similar situation in the future. We have termed this ‘one health’, which means the collective of human health, animal (livestock) health, and wildlife health. We want to plan with all three in mind so that we can know about a pandemic in advance. There are several scientific advancements in the field. The first way is to do environmental surveillance, like monitoring the drains, which will have a regular increase of viruses and pathogens in case of an upcoming pandemic,” said Sood, adding that India is already working on the ‘one health’ mission.

Under the topic, the panel discussed the pandemic preparedness plan for flexible, adaptive, and timely responses to pandemics, integrated disease surveillance mechanisms for humans, livestock, and wildlife, research & development roadmap for diseases of ‘one health’ importance, and investing in analytics and data standards.

“The second topic covered the issue of open access to knowledge and new discoveries and inventions through publications. In the last few years, this has become very complicated and we discussed the possible methods to end this asymmetry. The third topic discussed was diversity, equity, inclusion, and accessibility so that our traditional knowledge can come to the mainstream. We want all these platforms on an equal footing. The fourth topic was the need for a scientific inclusive policy framework, in which all the countries participate,” he said.

During the roundtable, it was discussed that access to scholarly scientific knowledge should be free, immediate, and universal, and the high subscription and article processing charges levied by journals must be reduced. Under the third theme, the participating countries shared their work in advancing access to the under-represented, under-privileged, marginalised, minority as well as tribal and native communities in the larger scientific enterprise.

It was agreed upon that the scientific advisers play a critical role in shaping policy choices by providing evidence-driven science advice and that in the spirit of cooperation and dialogue, it is the responsibility of chief science advisers to collaborate and engage in international dialogue to address transboundary issues affecting the entire scientific enterprise so that the science and technology can benefit all.

Talking to the media after the roundtable, Sood informed that all the 18 countries which participated in the meeting and the Indian delegation agreed on the said points. Suggestions were also received from all the experts on how to refine the decisions so that there is a policy statement ready for the next meeting scheduled in August.

The deliberations and engagement on the topics discussed today will continue until August 2023, when the next meeting is scheduled, in which a science policy communiqué will be released.

<https://indianexpress.com/article/india/uttarakhand-g20-science-advisers-meet-covid-scientific-knowledge-8527660/>

