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Defence News

Pacts on uranium, critical minerals signed after Modi, Carney talks

India-Canada CEPA by year-end, defence dialogue established

Source: The Indian Express, Dt. 03 Mar 2026

Moving to transform ties to a “next level partnership” and put behind a bitter recent past, India and Canada signed a “landmark deal for long-term uranium supply” after Prime Ministers Narendra Modi and Mark Carney held talks in New Delhi Monday. In all, they signed eight government-to-government pacts, and 24 MoUs or partnerships among universities and institutions in areas such as AI, healthcare, agriculture, and innovation.

This a huge turnaround in bilateral ties which took a severe hit after Carney’s predecessor Justin Trudeau, in September 2023, alleged that Indian government agents were involved in the killing of Khalistan separatist Hardeep Singh Nijjar. Following bilateral talks with Modi, Carney said, “So this is not merely the renewal of a relationship, it is the expansion of a valued partnership with new ambition, focus and foresight, a partnership between two confident countries charting our own course for the future.”

Calling this an “important milestone”, Modi said, “Since our first meeting, our relationship has been infused with new energy, mutual trust, and positivity. I credit my friend, Prime Minister Carney, for the growing momentum in every area of cooperation.” “India and Canada share an unwavering belief in democratic values. We celebrate diversity. The well-being of humanity is our shared vision. This vision inspires us to move forward in every field. Today, we discussed transforming this vision into a next level partnership,” he said.

Without mentioning the pro-Khalistan activities in Canada, Modi said, “We agree that terrorism, extremism and radicalisation are common and serious challenges not only for our two countries but for all of humanity. Our close cooperation against these challenges is crucial for global peace and stability.” On trade, he said, “Our goal is to reach \$50 billion in trade by 2030. Unlocking the full potential of economic cooperation is our priority. Therefore, we have decided to finalise the Comprehensive Economic Partnership Agreement soon. This will create new investment and employment opportunities in both countries.”

Carney said the target was to conclude the pact by the end of 2026. “We are advancing towards a Canada-India Comprehensive Economic Partnership Agreement, with the aim to conclude by the end of this year. This ambitious agreement will reduce barriers, increase certainty, unlock opportunities for exporters, investors and workers in both our countries, with the aim to double trade by the end of this decade.”

Modi said, “Canada’s pension funds have invested \$100 billion in India. This is a symbol of their deep belief in India’s growth story.” He said the pact on critical minerals will “strengthen resilient supply chains”. “In civil nuclear energy, we have signed a landmark deal for long-term uranium supply. We will also work together on small modular reactors and advanced reactors,” Modi said.

Carney said, “As India seeks access to critical minerals for its manufacturing, its clean tech and its nuclear plans, Canada’s resource base and world leading companies position it as a strategic

partner. As one example, the nuclear agreement, the uranium agreement signed today... the fact that 40 per cent of the world's mining companies are listed in Canada." On defence cooperation, Modi said, "Growing cooperation in the field of defence and security is a symbol of our deep mutual trust and the maturity of our relationship. We will work to enhance defence industries, maritime domain awareness, and military exchanges. To this end, we have today decided to establish the India-Canada Defence Dialogue."

Carney said, "And we are renewing defence and security cooperation through a new Defense Partnership, through maritime collaboration in the Indo-Pacific through professional military exchange and practical coordination and cooperation on our shared security interests."

On education cooperation, Modi said, "People-to-people ties are the driving force behind our relationship. Today, we took several important decisions to further strengthen them. New partnerships between several universities in AI, healthcare, agriculture, and innovation are being announced. We also agreed on Canadian universities opening campuses in India." In the space sector, he said they will connect startups and industries of both countries. "We are natural partners in technology and innovation. With the Canada and India innovation partnership, we will turn ideas into global solutions," Modi said.

"I thank Prime Minister Carney for Canada's valuable contribution to the success of the AI Impact Summit held in India last month. We will expand cooperation in AI as well as quantum, supercomputing, and semiconductors," he said. "In the energy sector, we are building a next generation partnership which will place special emphasis on hydrocarbons as well as renewable energy, green hydrogen, and energy storage."

"We are pleased that Canada has decided to join the International Solar Alliance and the Global Biofuel Alliance. To advance our shared efforts, we will hold the India-Canada Renewable Energy and Storage Summit this year," he said. On agriculture ties, Modi said, "Value addition in agriculture, agri-technology, and food security are our shared priorities. To this end, an India-Canada Pulse Protein Centre of Excellence will be established in India."

Stating that indigenous and tribal communities are an important part of shared cultural heritage, he said a pact has been signed to enhance cultural exchange. Canada, Modi said, is an important partner for India in the Indo-Pacific. "We welcome their interest in becoming a Dialogue Partner in the Indian Ocean Rim Association. This will add new depth to our maritime cooperation," he said.

Invoking Swami Vivekananda, Carney said, "More than a century ago, Swami Vivekananda spent time in both Vancouver and Winnipeg, and in his travels and his texts, he personified this maxim: Arise, awake and stop not till the goal is reached. With this partnership, we will advance, we will not stop, until the goals of Viksit Bharat 2047, and Canada Strong are reached. It moves us forward. It builds our prosperity. It builds for all, and it builds for a better world."

<https://indianexpress.com/article/india/india-canada-reset-uranium-deal-defence-dialogue-50bn-trade-2030-10560956/>

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रूस से एस-400 के पांच नए स्क्वाड्रन खरीदेगा भारत

Source: Dainik Jagran, Dt. 03 Mar 2026

आपरेशन सिंदूर के दौरान एस-400 सिस्टम ने निभाई थी अहम भूमिका

नई दिल्ली, एनआइ: भारत रूस से एस-400 'सुदर्शन' एयर डिफेंस सिस्टम के पांच नए स्क्वाड्रन खरीदने की तैयारी में है। रक्षा मंत्रालय जल्द ही वायुसेना के प्रस्ताव को मंजूरी के लिए आगे बढ़ाएगा। पिछले साल आपरेशन सिंदूर के दौरान एस-400 सिस्टम के प्रदर्शन के बाद और खरीदने का निर्णय लिया गया है। इसे भारतीय सेना में सुदर्शन चक्र के नाम से जाना जाता है।

रक्षा अधिकारियों ने बताया कि नए सिस्टम को पूर्वी और पश्चिमी दोनों सीमाओं पर तैनात किया जाएगा। इससे चीन और पाकिस्तान, दोनों मोर्चों पर भारत की हवाई सुरक्षा क्षमता मजबूत होगी। आपरेशन सिंदूर के दौरान एस-400 सिस्टम ने अहम भूमिका निभाई थी और पाकिस्तान के पांच-छह लड़ाकू विमानों और एक जासूसी विमान को 300 किलोमीटर से ज्यादा दूरी पर मार गिराया था। वायुसेना ने एस-400 को भारत की हवाई सुरक्षा रणनीति का गेम चेंजर बताया था। आपरेशन सिंदूर में, पाकिस्तान ने चीन निर्मित एचक्यू-9 वायु रक्षा



एस-400 • सौजन्य इंटरनेट मीडिया

एस-400 डिफेंस सिस्टम क्या है?

एस-400 की एक स्क्वाड्रन में 256 मिसाइल होती हैं। भारत के पास इस वक्त तीन स्क्वाड्रन हैं, जिन्हें अलग-अलग तरफ की सीमाओं पर तैनात किया गया है। यह रूस का एडवांस्ड मिसाइल सिस्टम है, जिसे 2007 में लांच किया गया था। यह सिस्टम फाइटर जेट, बैलिस्टिक और क्रूज मिसाइल, ड्रोन और स्टेल्थ विमानों तक को मार गिरा सकता है। यह हवा में कई तरह के खतरों से बचाव के लिए एक मजबूत ढाल की तरह काम करता है।

प्रणालियों के अतिरिक्त स्क्वाड्रन तैनात किए थे, जो पाकिस्तान के

भीतर कई आतंकी ठिकानों को मार गिराने वाले भारतीय विमानों के सामने कुछ खास कारगर साबित नहीं हुए।

भारतीय वायु रक्षा प्रणालियों ने न केवल कई पाकिस्तानी विमानों को मार गिराया, बल्कि पाकिस्तान की ओर से दागी गई क्रूज और बैलिस्टिक मिसाइलों को भी नष्ट कर दिया। भारत और रूस के बीच 2018 में एस-400 सिस्टम के पांच स्क्वाड्रन खरीदने का समझौता हुआ था। अब तक इनमें से तीन स्क्वाड्रन भारतीय वायुसेना में शामिल होकर आपरेशनल हो चुके हैं, जबकि बाकी की आपूर्ति प्रक्रिया जारी है। वायुसेना एस-400 सिस्टम के लिए बड़ी संख्या में अतिरिक्त मिसाइलें भी खरीदने पर विचार कर रही है। इसके लिए रूस के साथ बातचीत जारी है और जल्द ही टेंडर फिर से जारी किया जा सकता है। वहीं, भारतीय रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) भी प्रतिष्ठित परियोजना कुशा के तहत अपनी खुद की लंबी दूरी की वायु रक्षा प्रणाली विकसित करने की दिशा में काम कर रहा है।

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Indian warships in the Gulf on standby for humanitarian operations

Source: The Hindu, Dt. 03 Mar 2026

India is closely monitoring the evolving security situation in parts of West Asia following the recent escalation of tensions, with Indian Navy ships deployed in the region under Operation Sankalp placed on standby for possible humanitarian assistance and disaster relief (HADR) operations.

A senior defence official on Monday (March 2, 2025) confirmed that developments are being tracked closely and updates are being shared with the concerned departments for further direction. "Under Operation Sankalp, two Indian Navy ships (a frigate and a destroyer) are already deployed in the Gulf of Aden and the Gulf of Oman. They have been deployed for anti-piracy operations and the safety of merchant vessels since 2019. If required, these ships could be utilised for HADR

operations. The Navy has prior experience in such missions,” the official said. The deployment under Operation Sankalp was initiated to safeguard Indian-flagged vessels and ensure maritime security in the region amid rising threats to commercial shipping. The official also stated that INS Surat is currently in Bahrain as part of a regional maritime security engagement.

PM chairs CCS

On Monday (March 1, 2026), Prime Minister Narendra Modi chaired a meeting of the Cabinet Committee on Security (CCS), the country’s highest decision-making body on security and strategic affairs. The meeting reviewed the conflict in West Asia and its implications for India.



INS Surat is currently in Bahrain as part of a regional maritime security engagement.

The meeting was attended by Defence Minister Rajnath Singh, Home Minister Amit Shah, External Affairs Minister S. Jaishankar, and Finance Minister Nirmala Sitharaman. Top officials briefed the committee on the prevailing regional dynamics and assessed their impact on India’s strategic, economic and diaspora interests..

India has historically leveraged its naval presence in the region for evacuation and relief missions during crises, and officials indicated that contingency planning remains in place should the situation warrant further action.

<https://www.thehindu.com/news/national/indian-warships-in-the-gulf-on-standby-for-humanitarian-operations/article70696250.ece>

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INS Sudarshini arrives at Alexandria after milestone transit through Suez Canal

Source: Press Information Bureau, Dt. 02 Mar 2026

INS Sudarshini arrived at the historic port city of Alexandria on 01 Mar 2026, marking a significant milestone in her ongoing transoceanic expedition, Lokayan-26. The arrival follows the vessel’s northbound transit through the Suez Canal after departing Safaga last week. The three-masted barque’s passage through the 193-kilometre canal - one of the world’s historic maritime gateways linking East and West - served as a major training highlight for the trainees participating in this global voyage.

The entry into Alexandria reinforces the “Bridges of Friendship” initiative, celebrating the enduring maritime partnership between India and Egypt. The two nations share a rich legacy of cultural connections and economic ties spanning several centuries. In recent years, bilateral relations have further strengthened across multiple sectors, including defence and maritime cooperation. The visit of Sudarshini reaffirms India’s commitment to deepening bilateral ties and enhancing cooperation in the maritime domain.



Upon arrival, the ship was received by officials from the Egyptian Navy and the Indian Embassy. The Commanding Officer called on Rear Admiral Mahmoud Abdelsattar, Commander of Alexandria Naval Base. During the port call, the crew will participate in professional exchanges, community outreach, and cultural engagements aimed at fostering mutual goodwill, strengthening interoperability, and enhancing cooperation between the two navies.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2234688®=3&lang=1>

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Shri B.P. Singh, takes over as Director General of Naval Armament

Source: Press Information Bureau, Dt. 02 Mar 2026

Shri B.P. Singh Assumed Charge as Director General of Naval Armament (DGONA) at Naval Headquarters, New Delhi, on 01 Mar 2026 . An officer of the 1994 batch of the Indian Naval Armament Service (INAS), he succeeds Shri Divakar Jayant, who superannuated on 28 Feb 2026, after rendering distinguished service to the nation.

A Mechanical Engineering graduate from Bihar College of Engineering (now National Institute of Technology), Patna, Shri B.P. Singh brings with him over three decades of rich and diverse experience in the Naval Armament Organisation. Prior to his appointment as DGONA, he was serving as Chief General Manager, Naval Armament Depot (NAD), Mumbai, where he led critical operational, logistics and infrastructure initiatives.



Shri B.P. Singh has held several important assignments at key establishments, including NAD Visakhapatnam, NAD Mumbai, and NAD Trombay. He has also previously served at the Directorate General of Naval Armament at Naval Headquarters, New Delhi, contributing to policy formulation and strategic planning in the armament domain. Additionally, he has served as Chief General Manager, NAD Aluva, where he further strengthened operational efficiency and depot management practices.

Shri BP Singh possesses vast experience in the management of conventional armament and ammunition, as well as guided weapon systems of the Indian Navy. His expertise spans procurement, storage, maintenance, safety, logistics management and life-cycle support of complex weapon systems, significantly enhancing operational readiness. An alumnus of the prestigious National Defence College (NDC-60), Shri BP Singh has undergone advanced training in strategic and national security studies, further augmenting his leadership credentials.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2234596®=3&lang=1>

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Weapon defining the war in West Asia

Source: Hindustan Times, Dt. 03 Mar 2026

Weapons defining the war in West Asia

In the escalating conflict, the US has deployed a massive naval armada—the largest since 2003—comprising two carrier strike groups and over 15 surface combatants, while Iran is relying on the 'Affordable Mass' doctrine, which means using swarms of low-cost drones and rockets to deplete enemy's expensive, finite stockpiles before launching high-value precision strikes. Iran has shifted toward decentralised, flexible warfare, and while pressure is mounting on US munitions stockpiles, maritime risks are rising with attacks on ships and oil and gas infrastructure

UNITED STATES
OPERATION EPIC FURY



OFFENSIVE ASSETS

Strategic Bombers: B-2 Spirit (stealth) dropped 2,000 pound bombs on hardened underground Iranian ballistic missile storage facilities

Fighter Jets: F-35 Lightning II (Stealth/SEAD), F/A-18

Missiles: Tomahawk (Block IV/V) launched from ships and subs, HIMARS land-based rockets




Drones: LUCAS 'Kamikaze' drones, MQ-9 Reaper (high-endurance strike)

Naval Assets: USS Gerald R Ford and USS Abraham Lincoln aircraft carriers

DEFENSIVE ASSETS


Directed Energy: ODIN (Optical Dazzling Interdictor, Navy) laser systems on destroyers to 'soft-kill' Iranian scouting drones



Missile Defence: THAAD (Terminal High Altitude Area Defense), Patriot (PAC-3 MSE), and SM-3 (Aegis-based)



ISRAEL
OPERATION ROARING LION



Arrow missile

Israel operates a unique, four-layered 'Sky Shield' that is currently under immense pressure from drone swarms

OFFENSIVE ASSETS

Aircraft: F-15I (Ra'am) and F-35I (Adir); the IAF conducted the largest sortie in its history (200+ aircraft) on February 28

Missiles: Black Sparrow air-launched ballistic missiles and undisclosed long-range standoff weapons

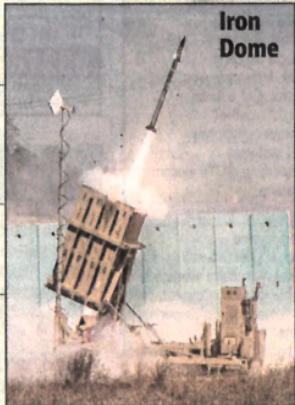
DEFENSIVE ASSETS

Iron Dome: Intercepts short-range rockets and mortar shells (4-70km)

Iron Beam: Newly operational (late 2025) high-power laser system for cheap, 'infinite' defence against UAVs and mortars

David's Sling: Designed for medium-range ballistic missiles and cruise missiles (100-200km)


Arrow-2 & Arrow-3: Exo-atmospheric interceptors for long-range Iranian ballistic threats




NOTE ON STOCKPILES

Pentagon officials and Israeli commanders are currently warning that the rate of fire from Iranian drone swarms is exceeding the production rate of high-end interceptors, creating a deficit of defence that may necessitate pulling reserves from the Pacific theatre, WSJ reported

Fattah missile



IRAN
MOSAIC DEFENCE



Iran's hardware is designed for asymmetric 'saturation' attacks, using hundreds of cheap assets to 'soak up' the \$3 million interceptors used by the US and Israel

OFFENSIVE ASSETS

One-Way Attack (OWA) Drones: Shahed-136, low-cost, propeller-driven 'suicide' drones used in massive waves

Hypersonic Missiles: Fattah (Mach 5+) designed to bypass traditional radar

Ballistic Missile Array: Long Range (2,000km+): Kh-55, Sejil, Khorramshahr, Kheibar

Medium Range (1,300-1,700km): Emad, Haj Qasem, Shahab-3


Short/Tactical (300-700km): Zolfaghar, Shahab-1

DEFENSIVE ASSETS

Air Defence: Talaash long-range systems and Sayyad missiles

CHINESE SYSTEM UNDER SCRUTINY AFTER STRIKE THAT KILLED KHAMENEI

The HQ-9B, China's premier long-range surface-to-air missile system marketed as a rival to Russia's S-400 system, saw combat tests in 2025 and 2026 after which experts described its performance as abysmal. It was reportedly positioned around critical sites like the Natanz nuclear complex but was unable to stop the penetration of F-35s and swarm drone attacks. Analysts suggest the system was overwhelmed by the scale of the offensive. HQ-9B can track up to 100 targets but only engage 8-10 simultaneously—a limit that was easily surpassed by 'swarm' tactics



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Science & Technology News

Indian scientists helped rewrite a 50-year-old biological rule

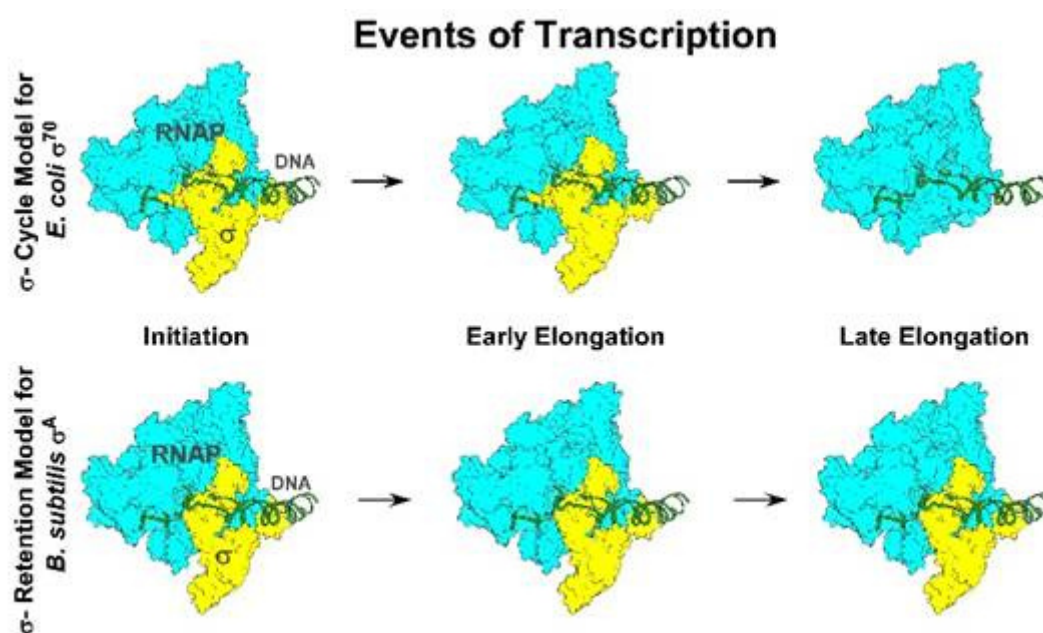
Source: Press Information Bureau, Dt. 02 Mar 2026

A new study overturns a central textbook model of bacterial gene regulation and unveils new paths for understanding bacterial gene regulation and its evolution. This could help designing better antibiotics or regulatory inhibitors that block infection mechanism and design microorganisms that produce biofuels, biodegradable plastics, or therapeutic compounds efficiently.

For nearly 50 years, biology has related the story of how bacteria turn their genes on with the help of the so-called “ σ (sigma) cycle” – factors that bind RNA polymerase to initiate transcription and then dissociate to allow elongation. This concept was built largely on observations of bacterial strain *E. coli* $\sigma 70$.

However, Researchers from the Bose Institute, an autonomous institute of the Department of Science and Technology (DST) and Rutgers University reveal that the cycle is not a universal phenomenon. In a study published in the Proceedings of the National Academy of Sciences (PNAS) they have reported that, contrary to decades of scientific belief, the principal transcription initiation factor in *Bacillus subtilis*— σA —and a modified version of the *Escherichia coli* $\sigma 70$ factor remain bound to RNA polymerase throughout transcription, rather than being released after initiation.

“Our work shows that in *Bacillus subtilis*, the σA factor stays attached to RNA polymerase all the way through the transcription process,” said Dr. Jayanta Mukhopadhyay, corresponding author from the Bose Institute. “This fundamentally changes how we think about bacterial transcription and gene regulation.”



Using a combination of modern techniques like biochemical assays, chromatin immunoprecipitation, and fluorescence-based imaging — the researchers watched the sigma factor’s behaviour in real time. They found that *Bacillus subtilis* σA and an *E. coli* $\sigma 70$ variant

lacking a part called 1.1 remain stably associated with transcription complexes. This is in stark contrast to full-length E. coli $\sigma 70$, which is released stochastically during elongation.

“These findings provide compelling evidence that the long-accepted σ cycle does not apply to all bacteria,” added co-author Aniruddha Tewari of Bose Institute. “It opens new avenues for understanding bacterial gene regulation and its evolution.”

The discovery has broad implications for microbiology, potentially influencing how researchers approach bacterial physiology, stress response, and the development of antibiotics targeting transcription. The study, was authored by Aniruddha Tewary, Shreya Sengupta, Soumya Mukherjee, Nilanjana Hazra, from Bose Institute and YWE and RHE and Yon W. Ebright, Richard H. Ebright, and Jayanta Mukhopadhyay from Rutgers University, USA

Publication link: [doi:10.1073/pnas.2503801122](https://doi.org/10.1073/pnas.2503801122)

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2234503®=3&lang=1>

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The Tribune
The Statesman
ਪੰਜਾਬ ਕੇਸਰੀ ਜਨਸੱਤਾ
The Hindu
The Economic Times
Press Information Bureau
The Indian Express
The Times of India
Hindustan Times
नवभारत टाइम्स
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