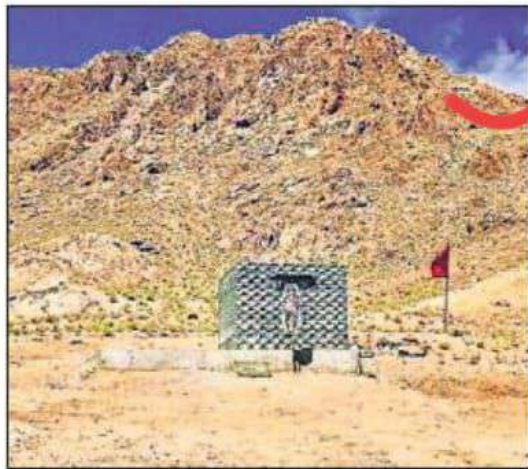


# IIT Hyderabad helps Indian Army build world's first on-site 3D-printed military bunker in Leh



BENGALURU, Apr 17 (PTI)

WITH the help of the Indian Institute of Technology Hyderabad, a Hyderabad-based deep-tech startup, Simpliforge Creations, has built the world's first on-site 3D-printed bunker in Leh for military use.

Project Prabal envisages military bunkers in different configurations in remote locations at higher altitudes, said Professor K V L Subramaniam of IIT-Hyderabad,

under whose guidance the project was conceptualised.

"The demonstration project that we did is located in Leh, at an altitude of 11,000 feet above sea level, and we completed the construction under what is called HALO conditions – high altitude and low oxygen," Subramaniam told PTI.

According to him, thanks to a lot of planning, they managed to achieve the project in under two weeks, including the transportation of the printer to the remote spot.

"The location was highly inhospitable, where we had to function at 40 to 50 per cent oxygen levels. Lack of oxygen meant both man and machine had to perform at lower efficiency levels," said the professor.

The team is also behind the world's first 3D-printed temple inside Charvitha Meadows, a gated villa community at Burugupalli in Siddipet, Telangana. But the mil-

itary project took several attempts before they could perfect the concrete mix required for high-altitude printing, added Subramaniam. "We tried to simulate the conditions prevalent in the chosen location to get the mix right," said the professor. As it was a defence construction, they were also required to design a specially geometric-patterned façade, which would minimise the ricochet of bullets, said Subramaniam.

"We created undulations on the surface, which, incidentally, is possible only with 3D printing—so that bullets would not bounce off the structure," he added.

"It's a monumental leap for defence infrastructure and construction technology," said Dhruv Gandhi, CEO of Simpliforge Creations, which will now be rolling out several bunkers in different configurations using the proven design and technology for the Indian Army.

# B'desh, Pakistan hold first foreign Secretary-level talks in 15 years

DHAKA, Apr 17 (PTI)

BANGLADESH on Thursday raised "historically unresolved issues" and demanded a public apology from Pakistan over the 1971 atrocities as the two countries held their first foreign secretary-level talks in 15 years here.

Dhaka also asked Islamabad to pay USD 4.3 billion as its share from the combined assets at the time when East Pakistan split from West Pakistan in 1971 to form an independent Bangladesh.

"We have raised the historically unresolved issues with Pakistan," Bangladesh Foreign Secretary M Jashim Uddin told reporters after the Foreign Office Consultation (FOC) meeting with Pakistani counterpart Amna Baloch held at state guest house Padma.

Their talks came days ahead of Pakistani Deputy Prime Minister and Foreign Minister Ishaq Dar's visit to Dhaka on April 27 and 28.

Jashim Uddin said the issues included "the repatriation of stranded Pakistanis, equitable distribution of undivided assets, transfer of foreign aid funds sent for the victims of the 1970 cyclone, and a formal public apology for the genocide committed by the then Pakistani military in 1971". "We said this is the right time to settle the historical unsettled issues," he said, adding these issues needed to be resolved to have a "solid foundation of our relations" for mutual benefits and interests. Asked about Pakistan's response to

the call, Jashim Uddin said they would like to "remain engaged" with a positive outlook to discuss the unsettled issue in future. In a statement, Pakistan's Foreign Office said that both sides had a "constructive and forward-looking engagement in a cordial environment where the entire spectrum of Pakistan-Bangladesh bilateral relations came under discussion, including political, economic and trade relations".

It added that cooperation in agriculture, environment and education, cultural exchanges and defence relations were also discussed and new avenues of cooperation were explored by the two sides. Later, Baloch called on Chief Adviser Muhammad Yunus and Foreign Affairs Adviser Touhid Hossain separately. Yunus emphasised strengthening relations with Pakistan to boost mutual cooperation and explore trade and business potentials.

"There are certain hurdles. We have to find ways to overcome those and move forward," he told Baloch.

Acknowledging past issues, Baloch said Bangladesh and Pakistan must find ways to "harness the potentials between the two countries."

"We kept missing each other for a long time as our relationship was frozen. We have to overcome the barriers," Yunus said as he recalled his meeting with Prime Minister Shehbaz Sharif in New York on the sidelines of the UNGA in September last year and in Cairo on the sidelines of the D-8 Summit in December.

**Dhaka seeks public apology and USD 4.3 billion for 1971 atrocities**

# 'US V-P Vance's visit will give BOOST TO BILATERAL TIES'



NEW DELHI, Apr 17 (PTI)

INDIA on Thursday said it is "very positive" that the upcoming visit of US Vice President J D Vance will give "further boost" to the India-US bilateral ties and "all relevant issues" will be on the table.

Ministry of External Affairs (MEA) spokesperson Randhir Jaiswal made the comments while indicating that issues relating to trade and tariff will figure during Vance's talks with Indian leaders.

Vance is scheduled to pay a four-day visit to India beginning April 21 during which he will hold talks with Prime Minister Narendra Modi that are expected to focus on an early finalisation of the proposed bilateral trade pact.

Vance will be accompanied by his wife, Usha, their three young children -- Ewan, Vivek and Mirabel -- and senior members of the US administration. "This is an official visit. He will be meeting the Prime Minister. With the US, we have a comprehensive strategic global partnership. When you

have that level of partnership with any country, obviously, you will discuss all relevant issues," Jaiswal said. "And with the US, our relationship is such that we are doing anything that is part of human endeavour," he added.

"All the bilateral issues will be discussed and we are very positive that the visit will give further boost to our bilateral ties," Jaiswal said at his weekly media briefing in response to a question.

Vance is travelling to India amid rising global concerns over US President Donald Trump's tariff tussle and both sides are likely to deliberate on firming up the proposed trade deal that is aimed at addressing issues relating to levies, market access and supply chains.

Soon after their arrival on Monday in New Delhi, Vance and his family are expected to visit the Red Fort, people familiar with the matter said. In the afternoon, Vance will meet National Security Adviser (NSA) Ajit Doval, External Affairs Minister S Jaishankar and Bharatiya Janata Party (BJP) president J P Nadda, they said.

Modi will interact with Vance and his family and host them for a formal dinner in the evening, the people said. The Vances will travel to Jaipur on April 22 and visit key tourist sites and have some engagements, they added.

They will travel to Agra the next day to visit the Taj Mahal, the people said. The US Vice President is travelling to India against the backdrop of Trump's policy on tariffs that has triggered massive trade disruptions and fears of a global economic recession. Days after his recip-

rocal tariff kicked in this month, Trump announced a 90-day pause on it for all countries, except China, as countries around the world wilted under the impact of the seismic action. Vance's visit will take place weeks after US Director of National Intelligence (DNI) Tulsi Gabbard's trip to India.

## Working closely with Belgium on Mehul Choksi's extradition: MEA

India on Thursday said it is working closely with Belgium for extradition of fugitive diamondaire Mehul Choksi. Choksi was arrested in Belgium's Antwerp on Saturday based on a formal request from the Indian Government.

"Based on our extradition request, he was arrested. We are working closely with the Belgium side on his extradition so that he can face trial in the country," EAM spokesperson Randhir Jaiswal said.

## How can anything foreign be their jugular vein?

Hitting strongly at Pakistan Army chief General Asim Munir for referring Kashmir as Islamabad's "jugular vein", India on Thursday reminded Pakistan yet again that it continues to illegally occupy the territory of Jammu and Kashmir, which it must vacate.

"See, how can anything for-

eign be their jugular vein? This is a Union Territory of India.

Its only relationship with Pakistan is the vacation of illegally-occupied territories by that country," said Randhir Jaiswal, spokesperson for the Ministry of External Affairs (MEA) at a regular media briefing on Thursday.

Addressing a Convention for Overseas Pakistanis, Munir had urged the gathering to not forget that they belong to a "superior ideology and culture". "You should definitely tell Pakistan's story to your children. Our forefathers thought that we are different from the Hindus in every aspect of life. Our religions, our customs, traditions, thoughts and ambitions are different. That was the foundation of the two-nation theory that was laid," he said.

"Our stance is absolutely clear, it was our jugular vein, it will be our jugular vein, we will not forget it," the Pakistani General added.

## Pak's reputation as epicentre of global terrorism will not diminish: MEA

Slaming Islamabad's attempts to distance itself from Tahawwur Hussain Rana, the mastermind of the deadly 26/11 Mumbai terror attacks, India on Thursday said that no matter how hard Pakistan tries, its reputation as the epicentre of global terrorism will not diminish. Soon after Rana was successfully extradited to

India from the United States last week, the Pakistan Foreign Office (PFO) had stated that the Mumbai attacks plotter has not renewed his Pakistani-origin documents for the last two decades and should be treated only as a Canadian national. "Pakistan may try very hard, but its reputation as the epicentre of global terrorism will not diminish," said Randhir Jaiswal, spokesperson for the Ministry of External Affairs (MEA) at a regular media briefing on Thursday.

"The extradition of Rana is a reminder yet again to Pakistan that it needs to act, to bring to justice other perpetrators of the Mumbai terror attacks, whom it continues to shield," he added.

Rana is believed to have had close ties with Pakistan's Inter-Services Intelligence and is accused of conspiring with David Coleman Headley, or Daood Gilani, and of designated terrorist organisations Lashkar-e-Taiba along with other Pakistan-based co-conspirators, to carry out the devastating terror attacks.

### PRAYER

Visualise the LORD on the Cross with all His disciples and His mother surrounding Him, the angels of God watching from Heaven and even God the Father hearing His Son cry, "Father why have You forsaken Me?" He was all alone, despised and rejected. Today the LORD is still seen as a rejected person.

# INTERNATIONAL BIG CAT ALLIANCE headquarters to be set up in India

NEW DELHI, Apr 17 (PTI)

THE Government and the International Big Cat Alliance (IBCA) on Thursday signed an agreement to establish the alliance's headquarters and secretariat in India, the Ministry of External Affairs announced.

The IBCA was launched by Prime Minister Narendra Modi on April 9, 2023, during the 50th anniversary celebration of 'Project Tiger'. It became a treaty-based intergovernmental organisation in 2025.

The 'Headquarters Agreement' was signed by P Kumaran, Secretary (East), Ministry of External Affairs, and S P

Yadav, Director General, IBCA, in New Delhi.

"The agreement provides for India to be the host for the IBCA headquarters and secretariat; and it entails necessary provisions to enable IBCA to meet its intended objectives and also for the efficient discharge of its official functions," the MEA said in a statement.

The text pertains to visas, privileges, and immunities to be extended to the IBCA secretariat and personnel, premises, entry into force, supplementary agreements, and some general provisions, it said.

The Government of India shall pro-

vide budgetary support of Rs 150 crore to the IBCA for creating a corpus, building infrastructure, and meeting recurring expenditure for five years from 2023-24 to 2028-29, the statement said.

The IBCA's primary aim is to conserve seven big cats -- tigers, lions, leopards, snow leopards, cheetahs, jaguars and pumas -- with objectives like facilitation of collaboration and synergy among the concerned stakeholders, consolidation of successful conservation practices and expertise to achieve conservation of big cats around the globe.

# No fresh appointments or de-notification of existing waqfs till May 5: Govt to SC



Advocate Md Sulaiman Khan speaks to the media outside the Supreme Court of India, in New Delhi on Thursday. (PTI)

NEW DELHI, Apr 17 (PTI)

**THE** Supreme Court on Thursday recorded the Centre's assurance that neither waqf properties, including "waqf by user", will be denotified nor appointments will be made to the central waqf council and boards till May 5.

The Centre strongly opposed the Supreme Court's proposal to pass an interim order against the denotification of waqf properties, including 'waqf by user', aside from staying a provision allowing the inclusion of non-Muslims in the central waqf councils and boards.

"During the course of hearing, the solicitor general states that the respondent (Union of India) would like to put in a short response within seven days. He further states and assures that till the next

date of hearing, no appointments will be made to the council and boards under sections 9 and 14 (of the Act)," the bench said. Mehta, the court recorded further, had also said that till the next date of hearing, waqf properties, including 'waqf by user' already registered or declared by way of notification, shall not be disturbed and denotified.

A three-judge bench comprising Chief Justice Sanjiv Khanna and Justices Sanjay Kumar and K V Viswanathan was urged by solicitor general Tushar Mehta, appearing for the Centre, that a law passed by Parliament "with due deliberations" should not be stayed without hearing the Government. The bench then granted a week's time to the Centre to file a preliminary response to the pleas challeng-

ing the validity of the contentious Waqf (Amendment) Act, 2025 and posted the matter on May 5.

"If your lordships will say something about 'waqf by user', what will be the fallout?" Mehta said.

He added, "We, as a government, and Parliament, are answerable to the people." The CJI said if the registration of any waqf property had taken place under the erstwhile 1995 Act, then those properties can't be denotified till further hearing. The apex court, while hearing the matter on Wednesday, proposed to stay certain key provisions of the Act,

(Contd on page 5)

Read Editorial  
**'VERY DISTURBING'**  
on page 8

# Researchers find 'strongest evidence' of life outside Solar System

Indian-origin lead researcher Nikku Madhusudhan and team detected the chemical fingerprints of dimethyl sulphide (DMS) and/or dimethyl disulphide (DMDS), in the atmosphere of the exoplanet K2-18b using data from the next-generation James Webb Space Telescope (JWST)

NEW DELHI, Apr 17 (PTI)

**HINTS** of molecules known to be produced by marine organisms have been detected on an exoplanet, providing "the strongest evidence yet" of life outside the Solar System,

researchers have said, cautioning that more data is needed.

'K2-18 b' is an exoplanet over 8.5 times as massive as Earth, where previously molecules containing carbon, such as methane (CH<sub>4</sub>) and carbon dioxide (CO<sub>2</sub>), have been found. The exoplanet lies 120

light-years from Earth and orbits the star 'K2-18'.

In this study, the researchers, led by those from the University of Cambridge, UK, analysed data recorded by NASA's James Webb Space Telescope and found fingerprints of 'dimethyl sulphide' and 'dimethyl disulphide' -- known to be produced on Earth by microbes, such as a marine phytoplankton.

The molecules provide "the strongest evidence yet that life may exist on a planet outside our solar system", even as



how they formed on K2-18 b remain unknown, the team said in a statement.

However, lead researcher, Nikku Madhusudhan, professor of astrophysics and exoplanetary science at the University of Cambridge, said

that while the results are exciting, it's vital to obtain more data before claiming that life has been found on another world.

He added that while he is cautiously optimistic, there could be previously unknown

chemical processes at work on K2-18b that may account for the observations.

"We report new independent evidence for (dimethyl sulphide) and/or (dimethyl disulphide) in the atmosphere at 3-sigma (statistical

significance, with high abundance (over 10 parts per million by volume) of at least one of the two molecules," the authors wrote in the study published in the *Astrophysical Journal Letters*.

"More observations are needed to increase the robustness of the findings," they wrote.

In a 2023 study, published in the *Astrophysical Journal Letters*, the team documented evidence of "abundant" levels of carbon-containing gases -- methane and carbon dioxide -- in the atmosphere of K2-18, which was found to be rich in hydrogen. "The abundant CH<sub>4</sub> and CO<sub>2</sub>, along with the nondetection of ammonia (NH<sub>3</sub>), are consistent with chemical predictions for an ocean under a temperate H<sub>2</sub>-rich atmosphere on K2-18 b," the authors wrote in the 2023 study.

(Contd on page 5)