





4  
**The Hindu**



3  
**PIB, PRS & Other newspaper**



1  
**The Indian Express**



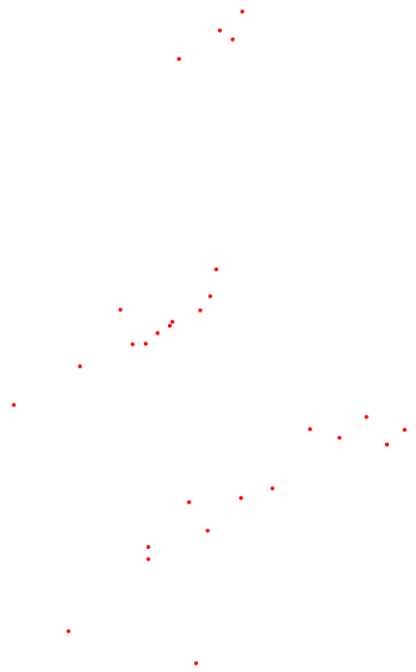
0  
**Jansatta**



2  
**Financial Express**



# Download class24



PDF



10 MCQ QUIZ

### Attempt Daily Current Affairs Quiz

- Daily Current Affairs Quiz Mar 12, 2025
- Daily Current Affairs Quiz Mar 11, 2025
- Daily Current Affairs Quiz Mar 10, 2025
- Daily Current Affairs Quiz Mar 08, 2025
- Daily Current Affairs Quiz Mar 07, 2025
- Daily Current Affairs Quiz Mar 06, 2025
- Daily Current Affairs Quiz Mar 05, 2025
- Daily Current Affairs Quiz Mar 04, 2025
- Daily Current Affairs Quiz Mar 03, 2025
- Daily Current Affairs Quiz Mar 01, 2025
- Daily Current Affairs Quiz Feb 28, 2025
- Older Date Current Affairs Quiz

### Download Daily Current Affairs PDF

- Current Affairs PDF Mar 12, 2025
- Current Affairs PDF Mar 11, 2025
- Current Affairs PDF Mar 10, 2025
- Current Affairs PDF Mar 08, 2025
- Current Affairs PDF Mar 07, 2025
- Current Affairs PDF Mar 06, 2025



13 March

## Daily Current Affairs News, PDF : Stay Prepared with Class24's Daily Updates

Stay ahead in your exam preparation with Class24's Daily Current Affairs PDF. Our expertly curated PDF documents provide you with a comprehensive summary of the latest national and international news, covering important topics for exams like SSC, Banking, UPSC, and RRB. Download the PDF daily and get a quick overview of crucial current affairs, ensuring you're well-prepared for the General Knowledge section of your competitive exams.

## Top Daily Current Affairs in PDF: Boost Your GK Knowledge for Competitive Exams

Get the top daily current affairs delivered to your device with Class24's PDF download. This resource highlights the most essential news from politics, economy, science, and international relations, helping you stay updated and improve your general knowledge. Perfect for SSC, UPSC, Banking, and RRB exams, this daily PDF will keep you on track with the latest developments that matter the most for your upcoming exams.

## Daily General Knowledge Booster: Enhance Your Exam Preparation with Class24

Boost your general knowledge with Class24's daily current affairs updates. Our detailed summaries are specifically tailored to prepare you for exams like SSC, Banking, RRB, and UPSC. Whether you're revising for your next exam or just starting your preparation, Class24's Daily GK updates will ensure you're always

### Trending Current Affairs

- Budget MCQs 2025-26, Download Free PDF
- Haryana Unveils 'Samman Sanjeevani' App on National Girl Child Day for Women's Empowerment
- Assam to Host the World Largest Jhumur Festival
- Sahitya Akademi Awards 2024: Recognizing Excellence in Indian Literature
- Decline in Haryana Sex Ratio at Birth 2024
- Padma Awards 2025: Full List of Recipients and Key Highlights
- ISFR 2023: Key Findings on India's Forest Cover & Climate Goals
- India Skills Report 2025: Unlocking Employability and Bridging the Skills Gap
- New Subordinate Legislation: Post Office Rules, 2024 and Post Office Regulations, 2024
- 6th International Millet Festival to be organized in Bengal 23rd to 25th Jan

Class24 Support: Hi, how can we help you?

### Topic-Wise Current Affairs

- National Current Affairs
- International Current Affairs



10 MCQ from the session

**What was the Supreme Court's stance on Justice Yashwant Varma's transfer?**

**सुप्रीम कोर्ट का न्यायमूर्ति यशवंत वर्मा के तबादले पर क्या रुख था?**

- **A. It was linked to the alleged incident at his residence / यह उनके आवास पर हुई कथित घटना से जुड़ा था**
- B. It was a routine decision by the Collegium / यह कोलेजियम का एक नियमित निर्णय था**
- C. It was a punishment for judicial misconduct / यह न्यायिक कदाचार के लिए एक दंड था**
- D. It was reversed after Bar Association objections / बार एसोसिएशन की आपत्तियों के बाद इसे वापस लिया गया**

**Which Bar Association objected to Justice Varma's transfer?**

**न्यायमूर्ति वर्मा के तबादले पर किस बार एसोसिएशन ने आपत्ति जताई?**

- **A. Delhi Bar Association**
- B. Allahabad Bar Association**
- C. Bombay Bar Association**
- D. Karnataka Bar Association**

**Why did the Madras High Court halt the publication of NIRF 2025 rankings?**

**मद्रास उच्च न्यायालय ने NIRF 2025 रैंकिंग के प्रकाशन पर रोक क्यों लगाई?**

- **A. The ranking process was found to be misleading and unverifiable / रैंकिंग प्रक्रिया को भ्रामक और अप्रमाणित पाया गया**
- B. Colleges refused to submit data for rankings / कॉलेजों ने रैंकिंग के लिए डेटा प्रस्तुत करने से इनकार कर दिया**
- C. NIRF rankings were suspected of corruption / NIRF रैंकिंग में भ्रष्टाचार का संदेह था**
- D. Government decided to scrap NIRF rankings / सरकार ने NIRF रैंकिंग को समाप्त करने का निर्णय लिया**



**How much faster are glaciers melting in the Hindu Kush Himalayas between 2011-2020 compared to the previous decade?**

**2011-2020 के बीच हिंदू कुश हिमालय में ग्लेशियर कितनी तेजी से पिघल रहे हैं?**

- **A. 30% faster**
- B. 50% faster**
- C. 65% faster**
- D. 80% faster**

**What could happen if global temperatures rise above 2°C?**

**यदि वैश्विक तापमान 2°C से अधिक बढ़ जाता है, तो क्या हो सकता है?**

- **A. Glacier volume may decline by 20-45% compared to 2020 levels / ग्लेशियर की मात्रा 2020 के स्तर की तुलना में 20-45% तक घट सकती है**
- B. Glaciers will completely disappear by 2050 / 2050 तक ग्लेशियर पूरी तरह गायब हो जाएंगे**
- C. There will be no impact on glaciers / ग्लेशियरों पर कोई प्रभाव नहीं पड़ेगा**
- D. Glaciers will expand due to climate shifts / जलवायु परिवर्तनों के कारण ग्लेशियरों का विस्तार होगा**

**Which river system will be most affected by Himalayan glacier melting?**

**हिमालयी ग्लेशियरों के पिघलने से कौन सा नदी तंत्र सबसे अधिक प्रभावित होगा?**

- **A. Indus River / सिंधु नदी**
- B. Ganga River / गंगा नदी**
- C. Brahmaputra River / ब्रह्मपुत्र नदी**
- D. Godavari River / गोदावरी नदी**

**What is the significance of the Ramadevara Betta Vulture Sanctuary?**

**रामदेवरा बेट्टा गिद्ध अभयारण्य का क्या महत्व है?**

- **A. It is the only vulture sanctuary in India / यह भारत का एकमात्र गिद्ध अभयारण्य है**
- B. It is the largest vulture habitat in Asia / यह एशिया का सबसे बड़ा गिद्ध आवास है**
- C. It is a UNESCO World Heritage Site / यह यूनेस्को की विश्व धरोहर स्थल है**
- D. It is home to all nine vulture species found in India / यह भारत में पाई जाने वाली सभी नौ गिद्ध प्रजातियों का घर है**

**What is the theme for International Day of Forests 2025?**

**अंतरराष्ट्रीय वन दिवस 2025 की थीम क्या है?**

- **A. Forests and Biodiversity**
- B. Forests and Sustainable Living**
- C. Forests and Food**
- D. Forests for Future Generations**

**What is unique about the newly developed nanoparticle-based security ink?**

**नव विकसित नैनोपार्टिकल-आधारित सुरक्षा स्याही की विशेषता क्या है?**

- **A. It changes color under different light wavelengths / यह विभिन्न प्रकाश तरंग दैर्घ्य के तहत रंग बदलती है**
- B. It is made of organic compounds only / यह केवल जैविक यौगिकों से बनी है**
- C. It is used only for military applications / इसका उपयोग केवल सैन्य अनुप्रयोगों के लिए किया जाता है**
- D. It is the costliest ink ever developed / यह अब तक विकसित की गई सबसे महंगी स्याही है**

**What was the primary objective of Exercise Sea Dragon 2025?**

**एक्सरसाइज सी ड्रैगन 2025 का मुख्य उद्देश्य क्या था?**

- **A. Strengthening anti-submarine warfare (ASW) capabilities / पनडुब्बी रोधी युद्ध (ASW) क्षमताओं को मजबूत करना**
- B. Testing nuclear submarine deployments / परमाणु पनडुब्बी तैनाती का परीक्षण करना**
- C. Conducting joint space research / संयुक्त अंतरिक्ष अनुसंधान करना**
- D. Coordinating cyber warfare strategies / साइबर युद्ध रणनीतियों का समन्वय करना**

# CURRENT AFFAIRS

By Bhunesh Sir

- ✓ UPDATED CURRENT AFFAIRS
- ✓ COMPLETE 2 YEARS (2023 + 2024) CURRENT AFFAIRS
- ✓ COMPLETE NOTES (PDF)
- ✓ 360° DEGREE EXAMS COVERED

~~₹999/-~~ ₹750/-



CLASS24

# COMPLETE GK/GS COURSE

By Bhunesh Sir

- ✓ STATIC GK
- ✓ HISTORY
- ✓ POLITY
- ✓ GEOGRAPHY
- ✓ ECONOMICS
- ✓ SCIENCE

~~₹999/-~~ ₹750/-

USE CODE - B25

CALL FOR SUPPORT: +91-7414862047

USE CODE - B25





# SSC CGL



## SELECTION BATCH

- 2 Year Program
- **700+ Hours** Classroom Content
- LIVE FROM CLASSROOM
- Bilingual
- TEST SERIES
- Classes by **India's Best Teachers**

**50% OFF**  
Use Code **SSC50**

~~₹12999/-~~ ₹6499/-



**START YOUR JOURNEY  
TO SUCCESS NOW.**

**CALL FOR SUPPORT- 7414862047**

16 marks

17/17

3

30

**A man asked his gardener  
why his plants grew so  
beautifully.**

**The gardener said:  
“I don’t force them to grow.  
I remove what stops them.”**



### Secessionist forces active in Punjab, T.N., says Governor

The Hindu Bureau  
GUMMAI

Maharashtra Governor C.P. Radhakrishnan on Saturday said "secessionist forces" remained active in Tamil Nadu and Punjab, though in different ways, and said the thoughts of unity and integration propounded by Rashtriya Swayamsevak Sangh (RSS) founder K.B. Hedgewar were more relevant today than ever. The Governor recalled his association with RSS and highlighted the work done by RSS in Tamil Nadu.

Speaking at the launch of *Hedgewar - A Definitive Biography*, a book, authored by British-Indian writer Sachin Nandha at the Raj Bhavan, Mr. Radhakrishnan highlighted concerns about religious, caste, and communal issues, and stressed the importance of national unity.

He criticised narratives suggesting the nation was created by the British, arguing that India had been functionally and traditionally united long before colonial rule.

The Governor reflected on Tamil Nadu's historical divisions, noting that the region was once split into Chera, Chola, Pandya, and Konganadu kingdoms. "Tamil Nadu was political-ly created by the British. No Tamilian created a single Tamil Nadu," he said. He warned that such division could weaken India's ability to assert itself internationally.



The police say they demolished an illegal structure on property linked to a Pakistan-based LeT handler. @ANWARPOOL/PTI

### Property of LeT militant demolished in Anantnag: police

Prerzada Ashia  
SRINAGAR

The Jammu and Kashmir Police on Saturday demolished the house of a LeT militant in Anantnag in south Kashmir, in a bid "to dismantle terror networks" in the Kashmir Valley.

The police said the property belonged to Haroon Rashid Ganie, son of Abdul Rashid Ganie, a known terrorist handler associated with the banned terror outfit.

"Ganie, operating from Pakistan since 2018, has been implicated in orchestrating terror activities aimed at undermining national security and sovereignty," the police said. "An illegally constructed house and plinth at Kerkha Hassannpora, which was on 'encroached State land'," a spokesperson described the police action as "a decisive operation".

The video of the demolition drive, showing an earth-mover bringing down a concrete structure. "This is part of an ongoing campaign to dismantle terror networks and eradicate their support structures," the police said.

In a separate operation, the police searched for the residence of Democratic Front Party (DFP) member Ferooz Ahmad Dar in Turkpora, Handwara, for alleged links to a banned organisation. "Inculminating material (has been) seized and further searches are expected," the police said.

Separatist leader Shabir Shah's political party DFP was banned by the Ministry of Home Affairs as an illegal outfit a few years ago. The police also searched the residences of Ghulam Mohammad Sheikh (alias Gadda), son of Ghulam Mohiuddin Sheikh, of Bagh Bandipora, and Ghulam Mohammad Waza, son of Ghulam Qadir Waza, of Bandipora.

### Man injured in Nagpur riot dead; CM says city now calm

40-year-old Irfan Ansari dies of injuries sustained in the violence in March 17; Fadnavis says action has been initiated against 92 people, including 12 minors, involved in the violence

Abhinav Deshpande  
MUMBAI

A 40-year-old man grievously injured in the March 17 violence in Nagpur died in a hospital on Saturday.

The deceased Irfan Ansari, who worked as a welder, had left home for the Nagpur railway station around 11 p.m. on Monday to take a train to Itarsi. The railway station area was one of those affected by the violence. His family had got a call from the India's Gandhi Government Medical College and Hospital that he had been admitted there, officials said.

The violence was triggered by demands for the removal of Mughal emperor Aurangzeb's grave from Maharashtra. Tensions escalated further due to rumouring and demands for a holy cloth inscribed with criminalising material (has been) seized and further searches are expected," the police said.

Following stone-throwing and arson, authorities imposed a curfew in several parts of the city. The situation has since stabilised and the curfew partially lifted in some areas.

Seven more arrested. The police on Saturday arrested another leader of the Minority Democratic Party (MDP) and six more



Under control: Maharashtra Chief Minister Devendra Fadnavis at a press conference in Nagpur on Saturday. PTI

people in connection with the violence, taking the total number of those arrested to 112.

On Friday, Maharashtra Chief Minister Devendra Fadnavis visited Nagpur, his political home turf, for the first time since the violence, assessed the situation, and chaired a meeting with senior police and administrative officials at the Police Commissioner's office.

Later, dismissing claims of an intelligence failure, he said: "It is foolish to say such things. There is no political angle to the violence."

PM's visit. Mr. Fadnavis confirmed that Prime Minister Narendra Modi's scheduled visit to Nagpur on March 30, coinciding with Gudi Padwa, would go on as planned. During his visit, the Prime Minister will lay

The situation has since stabilised and the curfew partially lifted in some areas

the foundation stone for Madhav Eye Hospital, an RSS-backed initiative. He is expected to visit the Hedgewar Smaruti Mandir.

The Chief Minister said the cost of property damage during the violence would be recovered from the rioters. "If the perpetrators of violence fail to compensate, their properties will be seized and sold to recover the losses."

Asked if Nagpur would witness an "Uttar Pradesh-style" bulldozer action against the rioters, Mr. Fadnavis said the Maharashtra government has its own style of working... the bulldozer will be used if necessary... Wherever wrong

things are happening, they will be crushed. Nobody (perpetrators) will be spared."

He said 104 people involved in the violence had been identified based on CCTV footage and video recordings. Legal action had been initiated against 92, including 12 minors.

The Chief Minister said that Nagpur was now calm, and efforts were under way to relax the curfew. "Riots broke out only in parts of the city, while 80% of Nagpur was not impacted," he said.

Distribution of compensatory social media posts will begin soon. Mr. Fadnavis mentioned that 68 inflammatory social media posts that aggravated the situation had been identified and removed.

While an FIR said a woman was constabulary harassed during the violence while others "promptly targeted a particular community and spread hate", Action Shakti will be taken against those who

He said no evidence of foreign involvement or any Bangladeshi link had surfaced. "However, a connection to Malaga was seen in the violence, as one of the accused is affiliated with a political party from Malaga and was registered with the Maharashtra rioters," he said, without naming MP leader Fahim Khan, who has been arrested on charges of sedition.

### Tavasya, the fourth Krivak-class Stealth frigate, launched into water

Dinakar Peri  
GOA

The last of the four follow-on Krivak-class stealth frigates contracted from Russia and the second one under construction at Goa Shipyard Ltd. (GSL) with technology transfer, Tavasya, was launched into the water on Saturday by Ms. Neeta Seth in the presence of Union Minister of State for Defence Sanjay Seth.

"This launch is a defining moment in India's naval history, showcasing our technological capabilities and unwavering commitment to self-reliance," Mr. Seth said speaking at the launch.

"The launch of Tavasya is not just a step forward for the Navy but a giant leap for India's strategic



Localised build: The Tavasya, the second frigate launched by Goa Shipyard Limited on Saturday. PTI

defence ambitions," he stated, referring to the successful localisation of various systems onboard. The first of the two frigates, *Triptari*, was launched in July last year. As per schedule, GSL is set to deliver the first ship to the Navy in 2026 and the

second six months later. In October 2016, India and Russia signed an Interim Government Agreement for four additional follow-on stealth frigates, under which two were to be directly imported and two manufactured by GSL under technology transfer. A

\$1 billion deal was signed for the two frigates under direct purchase. In November 2018, GSL signed a \$500 million deal with Rosoboronexport of Russia for material, design, and specialist assistance to locally manufacture two frigates. In January 2019, the contract was signed between the Indian Defence Ministry and GSL. All ships are powered by engines from Zorya-Mashproekt corporation of Ukraine.

The first of the two ships manufactured in Russia, *INS Tatyusha*, was commissioned on December 9, 2024, at Kaliningrad. It has since reached its home port in Karwar on February 14. The second frigate, *Tamara*, is in advanced trials and is expected to be commissioned in June.

### Farmers burn Mann in effigy over eviction, police action at protest site

Press Trust of India  
CHANDIGARH

The Kisan Mazdoor Sangharsh Committee (KMSC) said on Saturday that its members burnt the effigies of the Aam Aadmi Party government and Punjab Chief Minister Bhagwant Mann in villages near the eviction of farmers from the Shambhu and Khanauri border points by the State police.

Meanwhile, a few farmer leaders paid a visit to their imprisoned colleagues, including Manjinder Singh Panthar, at the Patiala jail. They said around 125 protesters are lodged in the Patiala jail, 150 in the Nabha jail, and 40 in the Sangrur jail. "We met farmer leaders, including women, in the Patiala jail.



On fire: Bharatiya Kisan Union members burn an effigy in Meerut on Friday in protest against police action at protesting farmers. PTI

They said they are in high spirits and that the protest is on," farmer leader Gurnam Singh Mangat said. In a crackdown on Wednesday, several farmer leaders, including Mr. Panthar and Jagjit Singh Dullewal, were detained by the Punjab police.

Meanwhile, KMSC leader Sarwan Singh Panu slammed the AAP government for detaining farmer leaders and evicting protesters from Shambhu and Khanauri. He demanded that the detained farmers be released. He also said the belongings of farmers

### Maharashtra government being biased, says Congress

Press Trust of India  
NAGPUR

Maharashtra Congress leader Manikrao Thakare on Saturday accused the BJP-led Mahayuti government of being biased against a particular community. He said the police did not allow his party's fact-finding committee to visit violence-hit areas in Nagpur on the pretext of curfew being imposed.

Mr. Thakare, head of the seven-member committee, also wondered how the government would ensure a fair and impartial probe into the violence that erupted on March 17 after rumours spread that a *chadar* with religious inscriptions had been burnt during protests led by the Vishwa Hindu Parishad demanding the removal of Mughal emperor Aurangzeb's tomb in Chhatrapati Sambhajnagar district.

At a press conference here, he said the government failed to protect citizens while rioters "promptly targeted a particular community and spread hate". Action Shakti will be taken not only against those involved in violence but also the investigators, the Congress leader said.

He also accused the police and government of sharing "half-truths", "It is the government's duty to maintain law and order. But in the past couple of days, we will intensify our agitation," he said.

### Uttarakhand Madrasa Board to request gov. to transfer students

Press Trust of India  
DEHRADUN

The Uttarakhand Madrasa Education Board on Saturday expressed concern over the future of children enrolled in illegal madrasas closed by the State government for not being affiliated to the board.

It urged the District Magistrates concerned to make arrangements for the transfer of these students in the near future. A formal letter will soon be sent to the DMs, board chairman Mufti Shamsoor Kasmi said. Around 100 illegal madrasas in Dehradun, Pantnagar, Pauri, Nainital, and Udham Singh

Nagar were sealed after the government found they were being run without proper documents. "Not many affected" However, not many students have been affected by the action as the government for not being affiliated to the board. "It is a huge, he said. Still, the board will request the authorities concerned to transfer them at the earliest to the recognised madrasas, he added.

He also justified the State government's action against the illegal madrasas saying their operators should follow the norms and have them legalised.

### Indo-France naval drill focuses on anti-submarine warfare

Dinakar Peri  
ON BOARD CHARLES DE GAULLE OFF GOA

India and France deployed aircraft carriers *INS Vikrant* and *Charles de Gaulle* for the bilateral exercise Varuna, with Indian getting a chance to closely observe and operate with the Rafale-M fighter jets that it is set to contract very soon and also focus on Anti-Submarine Warfare (ASW) operations.

"The exercise was held from March 19 to 22 off the coast of Goa."

"For four days, we have been working on every naval warfare domain — below the surface, on the surface, or above the surface — interacting with the Indian submarine, with the Rafales, all working together," said Rear admiral



Advanced techniques: Indian and French Navy personnel during the 23rd edition of the bilateral naval exercise Varuna, held from March 19 to 22 off the coast of Goa. @INDIANNAVY

ral Jacques Mallard, Chief of the French carrier strike group speaking to two Indian media onboard the carrier about 90-100 miles off Goa. "We are working back from the debriefing

on the exercise on *INS Vikrant* and we have been through all the detailed exercise that we just carried out, working all together to improve interoperability in order to know and trust

each other better, and to be able to operate each other," he stated. This year, the focus was on Anti-Submarine Warfare exercises and improving interoperability. "One Indian subma-

rine played the aggressor, and all frigates, either French or Indian, were protecting the high-value units played by the French officer Jacques Chastrier. We learned a lot working together on how to work together."

Rigorous training. The ASW exercises provide a unique opportunity for water domain awareness, while surface warfare operations demonstrate synchronised manoeuvres between the Indian and French fleets, the Navy stated.

Maritime patrol aircraft enhance situational awareness, and replenishment-at-sea exercises fortify logistical cooperation, it ad-

ded, highlighting that this collaboration underscores "French and Indian safeguarding a free, open, and secure maritime environment".

The French CSG has been on deployment in the Indian Ocean Region since November 2024 as part of the Clemenceau 25 mission, aiming to strengthen ties with its partners in the Indo-Pacific and engage in a series of exercises during the period.

"After conducting air and naval exercises with Indian forces following the stopovers of French ships in Goa, we are pleased to see the cooperation between the two countries continues with the return of the French CSG in the Indian Ocean," the French Embassy in New Delhi said in a statement on Thursday.

# *Tavasya*, the fourth Krivak-class Stealth frigate, launched into water

**Dinakar Peri**

GOA

The last of the four follow-on Krivak-class stealth frigates contracted from Russia and the second one under construction at Goa Shipyard Ltd. (GSL) with technology transfer, *Tavasya*, was launched into the water on Saturday by Ms. Neeta Seth in the presence of Union Minister of State for Defence Sanjay Seth.

“This launch is a defining moment in India’s naval history, showcasing our technological capabilities and unwavering commitment to self-reliance,” Mr. Seth said speaking at the launch.

“The launch of *Tavasya* is not just a step forward for the Navy but a giant leap for India’s strategic



**Localised build:** The *Tavasya*, the second frigate launched by Goa Shipyard Limited on Saturday. PTI

defence ambitions,” he stated, referring to the successful localisation of various systems onboard.

The first of the two frigates, *Tripur*, was launched in July last year. As per schedule, GSL is set to deliver the first ship to the Navy in 2026 and the

second six months later.

In October 2016, India and Russia signed an Inter-Governmental Agreement for four additional follow-on stealth frigates, under which two were to be directly imported and two manufactured by GSL under technology transfer. A

\$1 billion deal was signed for the two frigates under direct purchase. In November 2018, GSL signed a \$500 million deal with Rosoboronexport of Russia for material, design, and specialist assistance to locally manufacture two frigates. In January 2019, the contract was signed between the Indian Defence Ministry and GSL. All ships are powered by engines from Zorya-Mashproekt corporation of Ukraine.

The first of the two ships manufactured in Russia, *INS Tushil*, was commissioned on December 9, 2024, at Kaliningrad. It has since reached its home port in Karwar on February 14. The second frigate, *Tamal*, is in advanced trials and is expected to be commissioned in June.

Ship Name	Project Name	Built By	Status	Features
<b>INS Tushil</b>	Project 11356 (Krivak IV)	Yantar Shipyard, Russia	Under construction (as of 2024)	BrahMos missiles, stealth design, advanced sensors
<b>INS Tamala</b>	Project 11356 (Krivak IV)	Yantar Shipyard, Russia	Under construction	Similar specs to INS Tushil
<b>INS Himgiri</b> <i>(not official name)</i>	Project 11356 (Krivak IV)	Goa Shipyard Limited (GSL), India	Under construction	Equipped with Indian weapons/sensors
<b>INS Dunagiri</b> <i>(not</i>	Project 11356 (Krivak	Goa Shipyard Limited	Under construction	Enhanced indigenous content

- **Tavasya**, the last of the four Krivak-class stealth frigates contracted from Russia, was launched at **Goa Shipyard Ltd. (GSL)**.

‘Tavasya’, रूस से अनुबंधित चार क्रिवाक-क्लास स्टेल्थ फ्रिगेट्स में अंतिम है, जिसे गोवा शिपयार्ड लिमिटेड (GSL) में लॉन्च किया गया।

- This is the **second frigate under construction at GSL** as part of a technology transfer deal with Russia.

यह रूस से प्रौद्योगिकी हस्तांतरण के तहत **GSL में निर्मित दूसरा फ्रिगेट है।**

- **Union Minister of State for Defence**, Sanjay Seth, was present at the ceremony and called it a "**defining moment**" in India's naval history.

रक्षा राज्य मंत्री संजय सेठ की उपस्थिति में यह लॉन्च हुआ और उन्होंने इसे भारत के नौसैनिक इतिहास में **निर्णायक क्षण** कहा।

## Defence & Strategic Importance / रक्षा और रणनीतिक महत्व:

This launch supports India's vision of **Aatmanirbhar Bharat** by showcasing **indigenous shipbuilding** capabilities.

यह लॉन्च आत्मनिर्भर भारत की दिशा में एक कदम है और भारत की स्थानीय जहाज निर्माण क्षमता को प्रदर्शित करता है।

Mr. Seth mentioned the **localisation of various onboard systems**, which reflects India's increasing **technological capability**.

श्री सेठ ने कहा कि इस जहाज में कई प्रणालियों का स्थानीयकरण किया गया है, जो भारत की तकनीकी आत्मनिर्भरता को दर्शाता है।



## Background & Timeline / पृष्ठभूमि और समयरेखा:

- **INS Triput**, the first GSL-built frigate, was launched in **July 2023**.  
INS त्रिपुत, GSL द्वारा निर्मित पहला फ्रिगेट, **जुलाई 2023** में लॉन्च हुआ था।
- **Tavasya** will be followed by another frigate scheduled for delivery in **2026** and then the **last one after six months**.  
Tavasya के बाद **2026** में एक और फ्रिगेट और उसके छह महीने बाद एक और दिया जाएगा।

## Indo-Russia Defence Agreement / भारत-रूस रक्षा समझौता:

- A **\$1 billion deal** was signed for two frigates through direct purchase.  
दो फ्रिगेट्स की सीधी खरीद के लिए \$1 बिलियन का सौदा हुआ।
- Another **\$500 million deal** was signed with Russia's **Rosoboronexport** for local manufacturing support at GSL.  
**\$500 मिलियन का एक और समझौता** रूस की **Rosoboronexport** कंपनी से हुआ, ताकि GSL में स्थानीय निर्माण किया जा सके।
- The engines are provided by **Ukraine's Zorya-Mashproekt Corporation**, indicating **multi-national collaboration**.  
इंजन **यूक्रेन की Zorya-Mashproekt Corporation** द्वारा दिए गए हैं, जो **बहुराष्ट्रीय सहयोग** को दर्शाता है।

## First Two Ships Built in Russia / रूस में निर्मित पहले दो जहाज:

- **INS Tushil** was commissioned in **December 2024** and reached India in **February 2025**.

**INS तशील** को **दिसंबर 2024** में कमीशन किया गया और **फरवरी 2025** में भारत पहुंचा।

- **INS Tamal**, the second Russian-built frigate, is expected to be commissioned by **June 2025**.

**INS तमाल**, रूस में निर्मित दूसरा फ्रिगेट, **जून 2025** तक कमीशन होने की उम्मीद है।

## Historical & Political Context / ऐतिहासिक और राजनीतिक संदर्भ:

- The Krivak-class deal traces back to **India-Russia defence ties**, especially after the success of INS Talwar class in the 2000s.  
Krivak-क्लास सौदा **भारत-रूस रक्षा सहयोग** के मजबूत इतिहास पर आधारित है, विशेष रूप से INS Talwar क्लास की सफलता के बाद।
- The **October 2016 Inter-Governmental Agreement** reinforced strategic defence cooperation.  
**अक्टूबर 2016 के अंतर-सरकारी समझौते** ने रणनीतिक रक्षा सहयोग को और मजबूत किया।

## Economic & Industrial Impact / आर्थिक और औद्योगिक प्रभाव:

- Boosts India's **defence manufacturing sector** through **technology transfer**.  
प्रौद्योगिकी हस्तांतरण के माध्यम से भारत के रक्षा निर्माण क्षेत्र को बढ़ावा मिलता है।
- Strengthens GSL's position as a **hub for high-tech naval shipbuilding**.  
GSL को उच्च तकनीक वाले नौसैनिक जहाज निर्माण केंद्र के रूप में सशक्त बनाता है।
- Creates opportunities for **local employment and indigenous R&D**.  
स्थानीय रोजगार और अनुसंधान एवं विकास के लिए अवसर उत्पन्न होते हैं।

**IN BRIEF**



**Ranchi tribal outfits protest over construction of flyover**

Normal life was affected in Ranchi on Saturday after over 40 tribal outfits called for a bandh to protest against the construction of a flyover near Sama Sihal, a site sacred to the tribal Adivasi community. Supporters of the bandh demand the removal of a ramp being built in Siram Toli, which, they say, would obstruct access to the religious site and could disturb its sanctity due to frequent traffic movements. Protesters blocked roads and burned tyres leading to gridlocks at many places. In view of the bandh call, adequate security arrangements had been made in the Jharkhand capital. Several tribal organisations had taken out a torchlight procession on Friday.

**Yati Narsinghanand booked for inflammatory comments**

Controversial priest Yati Narsinghanand Giri has been booked in Uttar Pradesh for allegedly spreading hate and abusing top police officers in a video, officials said on Saturday. According to the FIR filed against him, the priest of the Duna Devi Temple has been accused of making derogatory remarks against Mahatma Gandhi and using words intended to incite religious sentiments, cause criminal intimidation, insult, defame, and disturb public peace. The complainant also alleged that Mr. Narsinghanand used abusive language against the Chennai police commissioner and the Assistant Police Commissioner of Loni in the video.

**Calcutta HC orders temple in Bengal to allow entry to Dalits**

The Calcutta High Court ordered on Friday that Dalits must be allowed inside a Hindu temple in West Bengal's Nadia district. This is the second such incident in the State within a month where the authorities had to intervene to provide equal worshiping rights to the marginalised community. In an order passed by Justice Tribhakar Ghosh, he allowed the Dalit community's entry into the temple in light of the upcoming Gopon Festival, a Shiva deity festival celebrated mostly in eastern India. The festivities will now take place under close watch of the District Judge of Nadia as there is a fear of clashes and violence in the Deogram area of Nadia.

**Odisha Vigilance arrests govt. staff for embezzling ₹3.5 crore**

Two Odisha government employees, responsible for implementing all major Central and State government welfare schemes, have been found embezzling over ₹3.5 crore for playing cricket betting online. Odisha's Vigilance Directorate, an anti-corruption wing, has arrested Debananda Sagar, a suspended Panchayot Executive Officer (PEO) in Kalahandi district and Ekpranabha Nayak, PEO in Ganjam district. Sagar was accused of misusing government funds to the tune of ₹2.26 crore, says the Vigilance Directorate. While Nayak was found misappropriating government funds worth ₹13,01,640.

**SUDOKU**

			6		3			
2	8		7	9				
4	5	8	3				7	
	9							1
	6	7			8			
	7		8	3	2		6	
			6	5			4	9
	5		2					

**Solution to yesterday's Sudoku**

2	3	9	6	8	1	7	4	
6	1	9	4	7	3	8	2	5
3	9	4	5	8	1	7	6	2
1	2	7	3	6	9	8	4	5
4	8	1	2	5	3			
9	6	2	3	1	5	4	7	8
7	3	1	8	9	4	2	5	6
5	4	8	6	2	7	3	9	1

**SOLUTION TO YESTERDAY'S SUDOKU**

**Nitish flags off Bihar Divas events showcasing heritage**

Advanced Bihar, developed Bihar is the theme for this year's event at Patna's Gandhi Maidan; several gov. departments have set up stalls that provide information about government schemes

**Amid Bihar Divas**

The five-day Bihar Divas celebrations began on Saturday in the modern Gandhi Maidan here with Chief Minister Nitish Kumar formally inaugurating the event. This year's theme is 'Developed Bihar, advanced Bihar, developed Bihar'.

Mr. Kumar was accompanied by both Deputy Chief Ministers Samrat Choudhary and Vijay Kumar Sinha along with other Cabinet Ministers.

A large number of people reached the Gandhi Maidan, where stalls have been set up by various government departments. Before the inauguration, Mr. Kumar visited the exhibition set up at the ground related to the development works being done by various departments.

Showcasing the rich cultural heritage of Bihar, 3D replicas of major tourist places in Mahabub Temple, Nalanda University, Vidya Shanti Stupa, and the Lakshmi Devi Temple Patna Sahib have also been displayed at the venue.



Cheerful start Nitish Kumar releases balloons at the inauguration event of Bihar Divas at the Gandhi Maidan in Patna on Saturday.

The Department of Art, Culture, and Youth Affairs, has set up a stall, where the achievements, modes of operation, and future plans of the department are displayed.

**High-tech stalls**  
The Department of Labour Resources has a stall where information about various government schemes are provided. The department's high-tech stall drew the attention of several visitors, who checked out a model of the Centre of Excellence (CoE) developed in collaboration with

An exhibition of two-wheelers, four-wheelers, e-vehicles and CNG vehicles has also been organised. Special emphasis is being laid on road safety, awareness of traffic rules and awareness of traffic rules and awareness of traffic rules.

There were also free facilities such as two-wheeler simulators, a live demonstration of charging stations, an eye check-up for drivers, and so on.

Meanwhile, a facility for making bus passes with special offers to students has been arranged, so that they could take advantage of accessible and affordable travel. Also, a painting and slogan writing competition on the theme of road safety, in which the winners will be rewarded with helmets, key-rings, or reflector bands.

Additional Chief Secretary of Education Department Dr. S. Siddharth welcomed the Chief Minister to the programmes by presenting him a book.

**Fertilizers committee warns Ministry against under-funding of nutrient subsidy schemes**

**The Hindu Bureau NEW DELHI**

The Parliamentary Standing Committee on Chemicals and Fertilizers, headed by Trinamool Congress MP Arun Jaitley, has urged the Union Fertilizer Ministry to seek additional funds for the sector at the revised estimate stage to ensure that subsidy schemes for farmers are not negatively affected.

In a report on Demands for Grants tabled in Parliament recently, the panel also recommended the Centre the expansion of production capacity of nano urea and nano diammonium phosphate (DAP) by 20% over the current production units.

The committee noted that while the Centre facil-



Powering up: Panel recommended expanding production capacity of nano urea and nano diammonium phosphate.

itates agreements between Indian fertilizer companies and their counterparts in resource-rich countries to ensure the availability of raw materials, intermediates, and finished fertilizers, no efforts have been made to secure mining lease agreements for extraction, exploration, re-

fining, or production. "Without introducing physical measures and pumping in investment, the goal of self-sufficiency in the field of fertilizers is difficult to achieve," the report stated.

The panel observed that while the Department of Fertilizers had projected

an outlay of ₹1,84,704.63 crore for its various schemes in 2025-26, the Ministry of Finance had allocated this reduction by 38% to ₹1,17,062.44 crore.

"The reduction has been made in both the Nutrient Based Subsidy (NBS) Scheme and the Urea Subsidy Scheme of the Department," the report said, adding that this cut would affect the smooth implementation of subsidy schemes.

The committee also highlighted underutilisation of funds across various categories during 2024-25, including 20% under imported PK, 14.76% under indigenous phosphorus and potassium (PK) fertilizers, 12% under indigenous urea, and 38.5% under Muriatic Development Assistance

**CUET-UG application date extended after glitches on website**

**Maini, Purocha NEW DELHI**

After receiving multiple requests from candidates to extend the last date for submission of online application form for the Common University Entrance Test (CUET-UG) 2025, the National Testing Agency (NTA) on Saturday evening announced that the revised last date for the submission will be March 24 till 11:50 p.m.

Previously, the deadline was March 22. While the online submission of applications was available from March 15, several candidates complained of not being able to log into the NTA website on Saturday.

NTA Joint Director Dr. Archana Shukla has also stated in a circular that the last date for successful transaction of fees has

been extended to March 25 up to 11:50 p.m.

Students can apply for corrections in particulars between March 25 and March 28 up to 11:50 p.m.

The NTA is likely to conduct CUET-UG from May 8 to June 1 in computer-based test mode.

**Looking for ties with Indian varsities: Irish Education Minister**

**R. Sulatha CHENNAI**

Ireland's Minister for Further and Higher Education, Research, Innovation and Science James Lawless is currently in India to promote training and educational links between the two countries, in an interview with The Hindu, he spoke about plans to collaborate with Indian educational institutions.

"We have a significant number of Indian students studying in Ireland, mostly postgraduates. We are looking at undergraduate options as well," said Mr. Lawless.

In Chennai, he met with Chief Minister M.K. Stalin while his delegation visited the Indian Institute of Technology, Madras. "They [IIT-M] are doing groundbreaking research. We are definitely trying to grow collaborations with them," he said. Some planned collaborations include joint degree programmes at the undergraduate and post-graduate levels.

**Looking for ties with Indian varsities: Irish Education Minister**

several gov. departments have set up stalls that provide information about government schemes



James Lawless

students work in areas of high demand, like engineering, STEM and health care. So, very few end up looking for work for too long."

Research collaborations could be in niche areas, including interdisciplinary programmes, he suggested. Citing IIT Madras' collaboration with Zanzibar, the institute's oceanography programme is of interest to Ireland, he added.

Companies such as LinkedIn, Amazon, Intel, Pfizer, Carrier, besides other large companies in sectors of food, science, and semi-conductors, have established their headquarters in Ireland, he said.

Candidates who take up UC or PG programmes can also enjoy a 'stay back' visa that allows them to work. "Talented candidates could get a permanent residence, the Minister said.

**Meghalaya ramps up TB detection with 126% surge in examinations**

**Hindu Shilpa Paragadam SHILLONG**

Battling a tuberculosis (TB) death rate that has not indicated a significant fall, Meghalaya has now ramped up TB detection leading to a 126% surge in presumptive TB examinations as per the latest data released by the State government.

Data released indicated that testing has been increased from 845 people per lakh in 2015 to 1,011 per lakh in 2025. "This effort is aimed at breaking the last stage diagnosis cycle and preventing new infections, particularly in high-burden districts, through community involvement and targeted interventions. Meghalaya has brought in cutting-edge technology to detect and treat the disease faster, including Nucleic Acid Amplification Test (NAAT) machines and portable X-rays.

It also introduced free transport for patients and one attendant — between home and health facility. "We are giving nutritional support of ₹2,000 per month to boost immunity and ensure faster recovery for patients, and are also providing skill development to those who have recovered. Health is a community subject and the idea is to ensure that patients recover fast and well, so that the disease doesn't push them into an economic crisis," said Ramesh S., secretary and MD, National Health Mission, Shillong.

**Award brings with it sense of responsibility, says Jnanpith winner Vinod Kumar Shukla**

**Shubhomojy Sikdar RAIPUR**

After his name was announced for the 59th Jnanpith award on Saturday, Vinod Kumar Shukla, the Rajgarh-based poet-writer, called the recognition a responsibility. "This is a big award in my life. It gives me a sense of responsibility," Mr. Shukla said. He is the Hindi writer and the first from Chhattisgarh to receive the Jnanpith award, India's highest literary honour.

The award carries a cash reward of ₹1 lakh, a bronze statue of Saraswati, the Hindu goddess of learning and creation. His name was finalised during a meeting of the Jnanpith Selection Committee, chaired by eminent

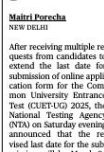


Vinod Kumar Shukla

Lagbhag Jishind, was published. Over the years, he has penned several other well-received poetry collections, including Kavita Se Lambi Kavita.

His novels, including Dwar Mein Ek Khuli Khehri and Nuskah Ki Gomeri, are well-claimed, with the latter even being made into a film. Looking back at a literary journey spanning over half a century, he said, "I wanted to write a lot but could write very little. I saw a lot, heard a lot, felt a lot, but could only write a fraction of that."

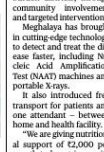
While emphasising that he wanted to write more, he added that at his age, it was difficult to keep pace with the speed of time. (With inputs from PTI)



Maini Purocha



The NTA is likely to conduct CUET-UG from May 8 to June 1 in computer-based test mode.



The NTA is likely to conduct CUET-UG from May 8 to June 1 in computer-based test mode.

# Award brings with it sense of responsibility, says Jnanpith winner Vinod Kumar Shukla

**Shubhomoy Sikdar**

RAIPUR

After his name was announced for the 59th Jnanpith award on Saturday, Vinod Kumar Shukla, the Raipur-based poet-writer, called the recognition a responsibility.

“This is a big award in my life. It gives me a sense of responsibility,” Mr. Shukla said. He is the 12th Hindi writer and the first from Chhattisgarh to receive the Jnanpith award, India’s highest literary honour.

The award carries a cash reward of ₹11 lakh, a bronze statue of Saraswati, the Hindu goddess of learning, and a citation.

His name was finalised during a meeting of the Jnanpith Selection Committee, chaired by eminent



Vinod Kumar Shukla

storyteller and Jnanpith awardee Pratibha Ray.

## **Life and works**

Mr. Shukla was born in 1937 in Chhattisgarh’s Rajnandgaon and has won the Sahitya Akademi Award and several other recognitions throughout his career.

His journey as a writer started in 1971, when his first poetry collection

*Lagbhag Jaihind*, was published.

Over the years, he has penned several other well-received poetry collections, including *Kavita Se Lambi Kavita*.

His novels, including *Deewar Mein Ek Khidki Rehti Thi* and *Naukar Ki Kameez*, are well-acclaimed, with the latter even being made into a film.

Looking back at a literary journey spanning over half a century, he said, “I wanted to write a lot but could write very little. I saw a lot, heard a lot, felt a lot, but could only write a fraction of that.”

While emphasising that he wanted to write more, he added that at his age, it was difficult to keep pace with the speed of life.

*(With inputs from PTI)*

# Jnyanapeeth Award

Award for individual contributions to Literature  
Instituted in 1961



Citation plaque

**Awarded for** Literary award in India

**Sponsored by** [Bharatiya Jnanpith](#)

**Reward(s)** ₹11 lakh (equivalent to  
₹17 lakh or US\$19,000 in  
2023)

**First award** 1965

**Final award** 2024

**Most recent  
winner** [Vinod Kumar Shukla](#)

## Highlights

**Total awarded** 65

**First winner** [G. Sankara Kurup](#)



## Recognition & Responsibility | मान्यता और ज़िम्मेदारी

- Vinod Kumar Shukla, a poet and writer from Raipur, called the award a "sense of responsibility".

रायपुर के कवि और लेखक विनोद कुमार शुक्ल ने इस पुरस्कार को "जिम्मेदारी की भावना" कहा।

- He is the first author from Chhattisgarh and the 12th Hindi writer to win India's highest literary honour.

वह छत्तीसगढ़ से पहले लेखक और हिंदी भाषा से 12वें लेखक हैं जिन्हें यह सम्मान मिला।

- The **Jnanpith Award** carries:

- ₹11 lakh cash prize
- A **bronze idol of Saraswati**
- A **citation (प्रशस्ति पत्र)**

- It is considered **India's highest literary recognition.**

यह **भारत का सर्वोच्च साहित्यिक पुरस्कार** माना जाता है।

## Life & Career | जीवन और साहित्यिक यात्रा

- Born in **1937** in **Rajnandgaon, Chhattisgarh**  
जन्म **1937**, राजनांदगांव, छत्तीसगढ़ में
- Received the **Sahitya Akademi Award** and other honours over the years.  
वर्षों में उन्हें साहित्य अकादमी पुरस्कार और कई सम्मान मिल चुके हैं।
- Started his writing journey in **1971** with his first poetry collection –  
**Lagbhag Jaihind.**  
उनके लेखन की शुरुआत **1971** में कविता संग्रह **लगभग जय हिंद** से हुई थी।

## Major Works | प्रमुख कृतियाँ

### Poetry:

- **Kavita Se Lambi Kavita**
- लगभग जय हिंद, कविता से लंबी कविता जैसी कविता संग्रह

### Novels:

- **Deewar Mein Ek Khidki Rehti Thi**
- **Naukar Ki Kameez** – was adapted into a film
- दीवार में एक खिड़की रहती थी, नौकर की कमीज़ – जिस पर फिल्म भी बनी

## SCIENCE

## Study provides clues to why we fail to remember being a baby

## The Hindu Bureau

Challenging assumptions about infant memory, a novel functional magnetic resonance imaging (fMRI) study shows that babies as young as 12 months old can encode memories. Researchers report in a study published in *Science*. The findings suggest that infantile amnesia – the inability to remember our first few years of life – is more likely

caused by memory retrieval failures rather than an inability to form memories in the first place. Despite infancy being a period of rapid learning, do not persist into later childhood or adulthood. In general, humans cannot recall events from the first three years of life. Why grown humans have a years-long blind spot in their episodic memory for

the period of infancy remains a puzzle. One theory suggests this occurs because the hippocampus, a brain region crucial for episodic memory, is not fully developed during infancy. “Remains unclear” In humans, infants demonstrate memory through behaviours such as conditioned responses, and recognition of familiar stimuli. However,

whether these abilities rely on the hippocampus or other brain structures remains unclear. In a study using fMRI to scan the brains of infants aged about four to 25 months while performing a memory task, Tristram from Columbia University, New York, and colleagues aimed to determine whether the hippocampus in infants can encode individual memories.

The memory task, adapted from a well-established method for adults, involved showing images to infants – faces, scenes, and objects – followed by a memory test based on preferential looking, all while undergoing neuroimaging. As per a release, the researchers show that the infant hippocampus has the capacity to encode memories of individual scenes beginning around

one year of age, providing evidence that the capacity to form individual memories develops during infancy. According to the authors, the presence of encoding mechanisms for episodic memory during infancy – despite their ephemeral nature – suggests that infantile amnesia is more likely due to failures in memory retrieval mechanisms.

## No mismatch between circulating flu strains and vaccine strains

WHO recommends the influenza strains to be used in the vaccine for the coming flu seasons in advance based on currently circulating strains. WHO announced the flu vaccine composition for the 2025-2026 northern hemisphere flu season

## R. Prasad

In March 7 and March 8, several newspapers reported a surge in influenza (flu) cases in the Delhi-NCR region, with some mentioning the “spike” as over 54%. The source of this news was a local survey (LocalCircle) of over 13,000 people in the Delhi-NCR region. While the estimate was not based on clinical testing but on common viral fever symptoms, and the press release only mentioned “viral illnesses (Cough/fever/fever)”, newspaper reports attributed the “spike in cases” to influenza.

According to NCDC’s Integrated Disease Surveillance Programme (IDSP) data posted on February 27, 2025, there were 516 influenza cases and six deaths in January this year. The number of flu cases across India for all of 2024 was 40,414 and 347 deaths. It is difficult to say if the cases reported in January this year are higher than in the same month last year as IDSP does not provide segregated monthly data. Compared with IDSP, the U.S. CDC provides a weekly influenza surveillance report.

While influenza infection does occur year-round in India, it peaks during monsoon season with a secondary peak during winter. As per a May 2023 viewpoint in the *Indian Journal of Medical Research*, influenza causes “substantial influenza deaths” every year in India. Acute respiratory infection (ARI) surveillance between 2016 and 2018 by six centres spread

## Undercounting influenza cases, deaths

Seasonal influenza infection occur year-round in India

■ Between 2016 and 2018, six centres spread across India found 15.4% acute respiratory infection (ARI) cases were influenza. This acute respiratory infection (ARI) cases were influenza (54%)

■ A 2020 modelling study estimated a mean of 1,27,292 influenza-associated respiratory and circulatory deaths per year in India

■ The study used death data from the Sample Registration System and serological data from the influenza surveillance network of 10 labs across eight States

■ Estimated flu-associated deaths were high among adults over 65 years and children under five years. Yet, according to the May 2018 guidelines for influenza vaccination issued by the Health Ministry, influenza vaccine is only con-

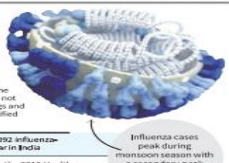
■ Estimating the number of flu deaths is a challenge as routine testing for influenza is not done in clinical settings and influenza is rarely certified as a cause of death.

■ By modelling “excess” deaths using death data from the Sample Registration System and serological data from the influenza surveillance network of 10 labs across eight States from 2010-2013, a June 2020 paper estimated a mean of 1,27,292 influenza-associated respiratory and circulatory deaths per year in India.

■ Estimated flu-associated deaths were high among adults over 65 years and children under five years. Yet, according to the May 2018 guidelines for influenza vaccination issued by the Health Ministry, influenza vaccine is only con-

■ By modelling “excess” deaths using death data from the Sample Registration System and serological data from the influenza surveillance network of 10 labs across eight States from 2010-2013, a June 2020 paper estimated a mean of 1,27,292 influenza-associated respiratory and circulatory deaths per year in India.

■ Estimated flu-associated deaths were high among adults over 65 years and children under five years. Yet, according to the May 2018 guidelines for influenza vaccination issued by the Health Ministry, influenza vaccine is only con-



Influenza cases peak during monsoon season with a secondary peak during winter. SOURCE: DOUGLAS JORHAN

■ As per the 2018 Health Ministry guidelines, influenza vaccine is deemed “desirable” for people older than 65 years and children below five years

■ Influenza vaccine is not part of India’s universal immunisation programme, and uptake of influenza vaccine is low in India

■ As per the 2018 Health Ministry guidelines, influenza vaccine is deemed “desirable” for people older than 65 years and children below five years

■ Influenza vaccine is not part of India’s universal immunisation programme, and uptake of influenza vaccine is low in India

■ As per the 2018 Health Ministry guidelines, influenza vaccine is deemed “desirable” for people older than 65 years and children below five years

■ Influenza vaccine is not part of India’s universal immunisation programme, and uptake of influenza vaccine is low in India

■ As per the 2018 Health Ministry guidelines, influenza vaccine is deemed “desirable” for people older than 65 years and children below five years

children received a flu vaccine. Influenza vaccine uptake in India has been historically low. It has not increased significantly despite some of the worst flu outbreaks in recent years – 2015 recorded the most number of cases (42,592) and 2,990 deaths in India. Though not at the same scale, there have been large flu outbreaks since 2015 – in 2017 there were 38,811 cases and 2,270 deaths, 29,798 cases and 1,218 deaths in 2019, and 20,414 cases and 347 deaths in 2024. Influenza vaccine is not part of India’s universal immunisation programme.

As per the Health Ministry guidelines, healthcare workers “should be vaccinated”. The vaccine is “recommended” for pregnant women, children and adults with chronic illnesses, while it is “desirable” for adults older than 65 years and children under five years despite the high mortality in the two extreme age groups. A 2022 study found that only 1.3% of adults aged 45 years or older were ever vaccinated for influenza.

“Influenza vaccine uptake in India remains low (less than 5%). While the market has shown significant year-on-year growth, overall coverage remains inadequate due to low public awareness and the absence of widespread programmes,” Dr. Rajeev Dhare, Senior Scientific Advisor, Serum Institute tells *The Hindu*.

As of February 15, 2025, for the 2024-25 season, an estimated 57 million doses of flu vaccine were administered to adults in the U.S., and as of March 1, 2025, nearly 47% of chil-

ren received a flu vaccine. Influenza vaccine uptake in India has been historically low. It has not increased significantly despite some of the worst flu outbreaks in recent years – 2015 recorded the most number of cases (42,592) and 2,990 deaths in India. Though not at the same scale, there have been large flu outbreaks since 2015 – in 2017 there were 38,811 cases and 2,270 deaths, 29,798 cases and 1,218 deaths in 2019, and 20,414 cases and 347 deaths in 2024. Influenza vaccine is not part of India’s universal immunisation programme.

As per the Health Ministry guidelines, healthcare workers “should be vaccinated”. The vaccine is “recommended” for pregnant women, children and adults with chronic illnesses, while it is “desirable” for adults older than 65 years and children under five years despite the high mortality in the two extreme age groups. A 2022 study found that only 1.3% of adults aged 45 years or older were ever vaccinated for influenza.

“Influenza vaccine uptake in India remains low (less than 5%). While the market has shown significant year-on-year growth, overall coverage remains inadequate due to low public awareness and the absence of widespread programmes,” Dr. Rajeev Dhare, Senior Scientific Advisor, Serum Institute tells *The Hindu*.

As of February 15, 2025, for the 2024-25 season, an estimated 57 million doses of flu vaccine were administered to adults in the U.S., and as of March 1, 2025, nearly 47% of chil-

ren received a flu vaccine. Influenza vaccine uptake in India has been historically low. It has not increased significantly despite some of the worst flu outbreaks in recent years – 2015 recorded the most number of cases (42,592) and 2,990 deaths in India. Though not at the same scale, there have been large flu outbreaks since 2015 – in 2017 there were 38,811 cases and 2,270 deaths, 29,798 cases and 1,218 deaths in 2019, and 20,414 cases and 347 deaths in 2024. Influenza vaccine is not part of India’s universal immunisation programme.

As per the Health Ministry guidelines, healthcare workers “should be vaccinated”. The vaccine is “recommended” for pregnant women, children and adults with chronic illnesses, while it is “desirable” for adults older than 65 years and children under five years despite the high mortality in the two extreme age groups. A 2022 study found that only 1.3% of adults aged 45 years or older were ever vaccinated for influenza.

“Influenza vaccine uptake in India remains low (less than 5%). While the market has shown significant year-on-year growth, overall coverage remains inadequate due to low public awareness and the absence of widespread programmes,” Dr. Rajeev Dhare, Senior Scientific Advisor, Serum Institute tells *The Hindu*.

As of February 15, 2025, for the 2024-25 season, an estimated 57 million doses of flu vaccine were administered to adults in the U.S., and as of March 1, 2025, nearly 47% of chil-

## SNAPSHOTS



## Insomniac fruit fly mutants show enhanced memory

Fruit fly mutants that have severe sleep deficits perform better at olfactory learning and memory tasks. The paradox of enhanced memory despite sleep loss could be explained by the protein Kinase A (PKA) signaling pathway that specifically mediates the sleep deficits of the mutants. Elevated PKA signaling also contributes to the shorter life expectancy of the mutants. While this elevated PKA signaling restricts excessive memory, it comes at the cost of reduced sleep levels and shortened lifespan in the mutants.



## Cool temperate rainforests thrive with disturbance: study

Scientists believed cool temperate rainforests were fragile ecosystems easily damaged by disturbances like fires or logging. But new research challenges this view, revealing how these ancient forests depend on disturbance for their survival. The researchers found that *N. menziesii* grow faster and recruited more successfully following higher disturbance intensities. Also, 60% of the 30 species examined could regenerate after disturbance, highlighting the resilience of cool temperate rainforests.



## Recycled cements reduce emissions sans strength loss

Researchers have developed an approach for recycling cement waste into a sustainable, low-carbon alternative. After pulverising or crushing concrete into a fine powder, the team heated it to 500 degrees C, high enough to dehydrate the cement powder and restore its properties as a binder but low enough to prevent additional carbon dioxide emissions. Combining it with small amounts of finely ground Portland cement or limestone led to having workability.

## Question Corner

## Noise pollution

Do birds get affected by noise pollution? Songbirds, typically used to ward off intruders, and physical aggression behaviours such as approaching the speaker repeatedly and making close and making songbird with traffic noise, the researchers found that Galapagos yellow warblers living in heightened levels of aggression. Researchers played bird songs from a speaker, simulating an intruder, accompanied by recorded traffic noise at 38 locations populated by Galapagos yellow warblers on the islands of Floreana and Santa Cruz – 20 sites were within 50 metres of the nearest road and 18 were over 100 metres away. They then measured

aggression. Researchers played bird songs from a speaker, simulating an intruder, accompanied by recorded traffic noise at 38 locations populated by Galapagos yellow warblers on the islands of Floreana and Santa Cruz – 20 sites were within 50 metres of the nearest road and 18 were over 100 metres away. They then measured

aggression. Researchers played bird songs from a speaker, simulating an intruder, accompanied by recorded traffic noise at 38 locations populated by Galapagos yellow warblers on the islands of Floreana and Santa Cruz – 20 sites were within 50 metres of the nearest road and 18 were over 100 metres away. They then measured

## Health benefits of jackfruit



where it is exported to the Middle East. The jackfruit tree is large, and the fruit does hang down from branches but grows directly from the trunk and limbs. This helps it to grow to enormous sizes, the record being a 42 kg specimen from Kerala. The ripe fruit is sweet and tasty. Unlike jackfruit, which has many culinary uses. It is even used as a substitute for meat, since it has lower fat and cholesterol levels, and tastes just as good as meat. Jackfruit biryani is a tasty vegetarian alternative, as is jackfruit curry. The tree has many other uses. In Bengali, it is known as ‘kathal’ in Hindi, ‘pala’ in Tamil, ‘kathal’ in Bengali and ‘chakka’ in Malayalam, the plant and its fruit are used in cooking in Southern and Northeastern States of India, while it is eaten more as a fruit elsewhere. It is abundant in Southeast Asian countries such as Malaysia, from

where it is exported to the Middle East. The jackfruit tree is large, and the fruit does hang down from branches but grows directly from the trunk and limbs. This helps it to grow to enormous sizes, the record being a 42 kg specimen from Kerala. The ripe fruit is sweet and tasty. Unlike jackfruit, which has many culinary uses. It is even used as a substitute for meat, since it has lower fat and cholesterol levels, and tastes just as good as meat. Jackfruit biryani is a tasty vegetarian alternative, as is jackfruit curry. The tree has many other uses. In Bengali, it is known as ‘kathal’ in Hindi, ‘pala’ in Tamil, ‘kathal’ in Bengali and ‘chakka’ in Malayalam, the plant and its fruit are used in cooking in Southern and Northeastern States of India, while it is eaten more as a fruit elsewhere. It is abundant in Southeast Asian countries such as Malaysia, from

where it is exported to the Middle East. The jackfruit tree is large, and the fruit does hang down from branches but grows directly from the trunk and limbs. This helps it to grow to enormous sizes, the record being a 42 kg specimen from Kerala. The ripe fruit is sweet and tasty. Unlike jackfruit, which has many culinary uses. It is even used as a substitute for meat, since it has lower fat and cholesterol levels, and tastes just as good as meat. Jackfruit biryani is a tasty vegetarian alternative, as is jackfruit curry. The tree has many other uses. In Bengali, it is known as ‘kathal’ in Hindi, ‘pala’ in Tamil, ‘kathal’ in Bengali and ‘chakka’ in Malayalam, the plant and its fruit are used in cooking in Southern and Northeastern States of India, while it is eaten more as a fruit elsewhere. It is abundant in Southeast Asian countries such as Malaysia, from

where it is exported to the Middle East. The jackfruit tree is large, and the fruit does hang down from branches but grows directly from the trunk and limbs. This helps it to grow to enormous sizes, the record being a 42 kg specimen from Kerala. The ripe fruit is sweet and tasty. Unlike jackfruit, which has many culinary uses. It is even used as a substitute for meat, since it has lower fat and cholesterol levels, and tastes just as good as meat. Jackfruit biryani is a tasty vegetarian alternative, as is jackfruit curry. The tree has many other uses. In Bengali, it is known as ‘kathal’ in Hindi, ‘pala’ in Tamil, ‘kathal’ in Bengali and ‘chakka’ in Malayalam, the plant and its fruit are used in cooking in Southern and Northeastern States of India, while it is eaten more as a fruit elsewhere. It is abundant in Southeast Asian countries such as Malaysia, from

where it is exported to the Middle East. The jackfruit tree is large, and the fruit does hang down from branches but grows directly from the trunk and limbs. This helps it to grow to enormous sizes, the record being a 42 kg specimen from Kerala. The ripe fruit is sweet and tasty. Unlike jackfruit, which has many culinary uses. It is even used as a substitute for meat, since it has lower fat and cholesterol levels, and tastes just as good as meat. Jackfruit biryani is a tasty vegetarian alternative, as is jackfruit curry. The tree has many other uses. In Bengali, it is known as ‘kathal’ in Hindi, ‘pala’ in Tamil, ‘kathal’ in Bengali and ‘chakka’ in Malayalam, the plant and its fruit are used in cooking in Southern and Northeastern States of India, while it is eaten more as a fruit elsewhere. It is abundant in Southeast Asian countries such as Malaysia, from

where it is exported to the Middle East. The jackfruit tree is large, and the fruit does hang down from branches but grows directly from the trunk and limbs. This helps it to grow to enormous sizes, the record being a 42 kg specimen from Kerala. The ripe fruit is sweet and tasty. Unlike jackfruit, which has many culinary uses. It is even used as a substitute for meat, since it has lower fat and cholesterol levels, and tastes just as good as meat. Jackfruit biryani is a tasty vegetarian alternative, as is jackfruit curry. The tree has many other uses. In Bengali, it is known as ‘kathal’ in Hindi, ‘pala’ in Tamil, ‘kathal’ in Bengali and ‘chakka’ in Malayalam, the plant and its fruit are used in cooking in Southern and Northeastern States of India, while it is eaten more as a fruit elsewhere. It is abundant in Southeast Asian countries such as Malaysia, from

where it is exported to the Middle East. The jackfruit tree is large, and the fruit does hang down from branches but grows directly from the trunk and limbs. This helps it to grow to enormous sizes, the record being a 42 kg specimen from Kerala. The ripe fruit is sweet and tasty. Unlike jackfruit, which has many culinary uses. It is even used as a substitute for meat, since it has lower fat and cholesterol levels, and tastes just as good as meat. Jackfruit biryani is a tasty vegetarian alternative, as is jackfruit curry. The tree has many other uses. In Bengali, it is known as ‘kathal’ in Hindi, ‘pala’ in Tamil, ‘kathal’ in Bengali and ‘chakka’ in Malayalam, the plant and its fruit are used in cooking in Southern and Northeastern States of India, while it is eaten more as a fruit elsewhere. It is abundant in Southeast Asian countries such as Malaysia, from

where it is exported to the Middle East. The jackfruit tree is large, and the fruit does hang down from branches but grows directly from the trunk and limbs. This helps it to grow to enormous sizes, the record being a 42 kg specimen from Kerala. The ripe fruit is sweet and tasty. Unlike jackfruit, which has many culinary uses. It is even used as a substitute for meat, since it has lower fat and cholesterol levels, and tastes just as good as meat. Jackfruit biryani is a tasty vegetarian alternative, as is jackfruit curry. The tree has many other uses. In Bengali, it is known as ‘kathal’ in Hindi, ‘pala’ in Tamil, ‘kathal’ in Bengali and ‘chakka’ in Malayalam, the plant and its fruit are used in cooking in Southern and Northeastern States of India, while it is eaten more as a fruit elsewhere. It is abundant in Southeast Asian countries such as Malaysia, from

# Study provides clues to why we fail to remember being a baby

## The Hindu Bureau

Challenging assumptions about infant memory, a novel functional magnetic resonance imaging (fMRI) study shows that babies as young as 12 months old can encode memories, researchers report in a study published in *Science*. The findings suggest that infantile amnesia – the inability to remember our first few years of life – is more likely

caused by memory retrieval failures rather than an inability to form memories in the first place.

Despite infancy being a period of rapid learning, memories from this time do not persist into later childhood or adulthood. In general, humans cannot recall events from the first three years of life. Why grown humans have a years-long blind spot in their episodic memory for

the period of infancy remains a puzzle. One theory suggests this occurs because the hippocampus, a brain region crucial for episodic memory, is not fully developed during infancy.

### **‘Remains unclear’**


In humans, infants demonstrate memory through behaviours such as conditioned responses, imitation, and recognition of familiar stimuli. Howev-

er, whether these abilities rely on the hippocampus or other brain structures remains unclear. In a study using fMRI to scan the brains of infants aged about four to 25 months while performing a memory task, Tristan Yates from Columbia University, New York, and colleagues aimed to determine whether the hippocampus in infants can encode individual memories.

The memory task, adapted from a well-established method for adults, involved showing images to infants – faces, scenes, and objects – followed by a memory test based on preferential looking, all while undergoing neuroimaging. As per a release, the researchers show that the infant hippocampus has the capacity to encode memories of individual experiences beginning around

one year of age, providing evidence that the capacity to form individual memories develops during infancy.

According to the authors, the presence of encoding mechanisms for episodic memory during infancy – despite their ephemeral nature – suggests that infantile amnesia is more likely due to failures in memory retrieval mechanisms.

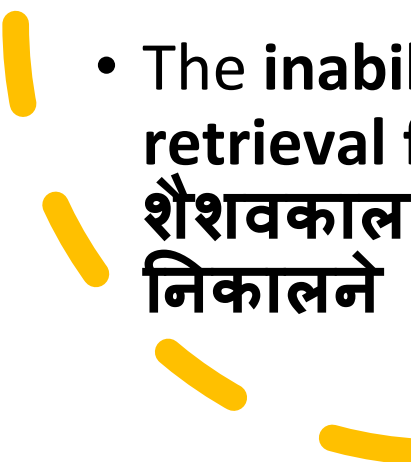
- 
- **Functional MRI (fMRI) studies** show that babies as young as **12 months** can encode memories.

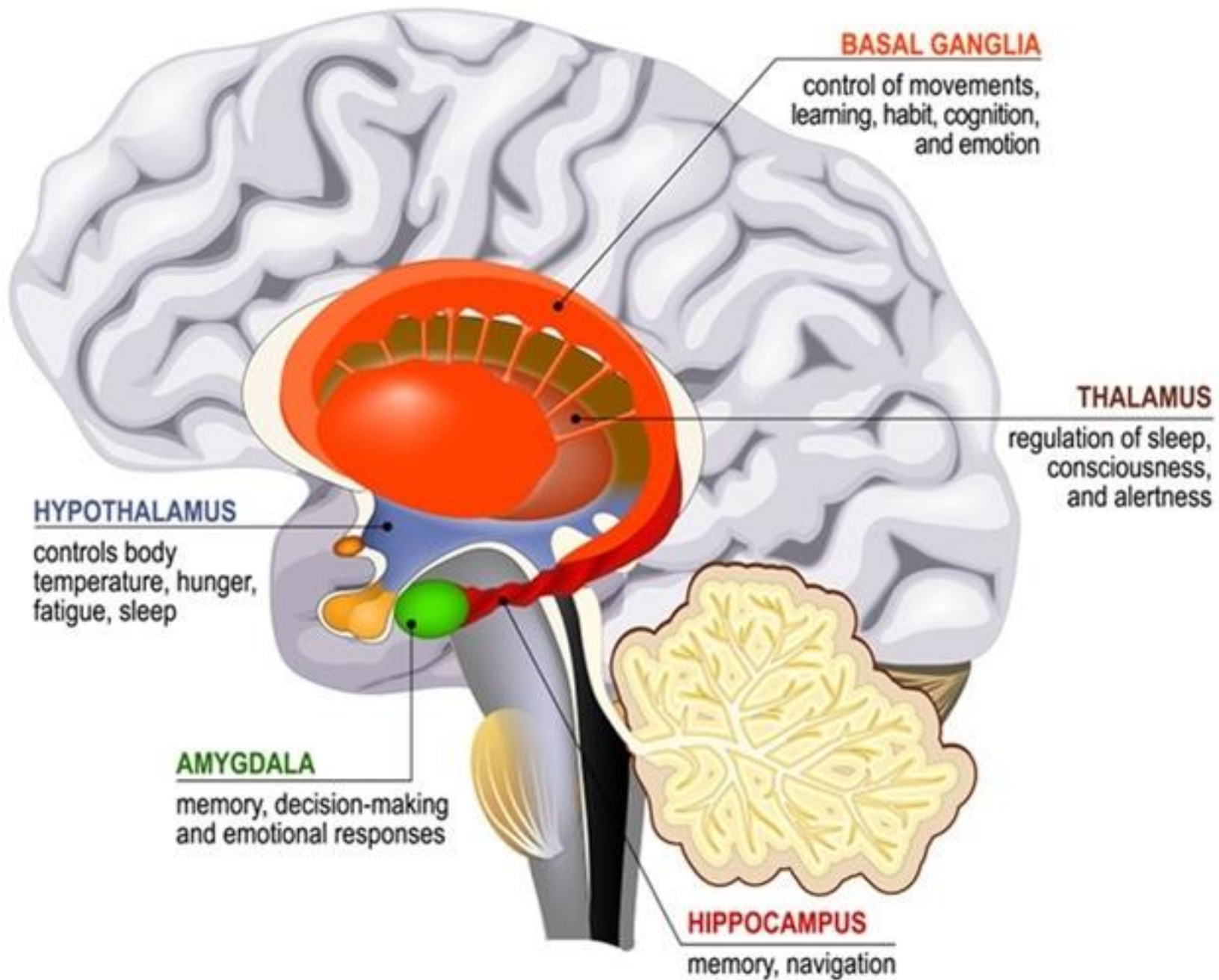
fMRI अध्ययन से पता चलता है कि 12 महीने के शिशु भी यादें संचित (encode) कर सकते हैं।

- This challenges the earlier belief that infants cannot form memories.  
यह पहले की मान्यता को चुनौती देता है कि शिशु यादें नहीं बना सकते।

- The **inability to remember early life (infantile amnesia)** is likely due to **retrieval failures**, not a lack of memory formation.

शैशवकाल की भूलने की प्रवृत्ति (Infantile Amnesia) का कारण यादें निकालने की विफलता है, न कि उन्हें बनाने की।







## Role of the Hippocampus | हिप्पोकैम्पस की भूमिका

- Hippocampus is the brain region crucial for **episodic memory** (memory of personal experiences).

हिप्पोकैम्पस मस्तिष्क का वह भाग है जो एपिसोडिक मेमोरी (निजी अनुभवों की स्मृति) से संबंधित होता है।

- It's suggested that the **hippocampus is not fully developed in infancy**, which may be why long-term memories aren't formed or accessed later. ऐसा माना जाता है कि शैशवावस्था में हिप्पोकैम्पस पूरी तरह विकसित नहीं होता, जिससे दीर्घकालिक स्मृति बनती नहीं या उपलब्ध नहीं हो पाती।

## Study Design | अध्ययन की रूपरेखा


- Scientists scanned brains of 4 to 25-month-old infants while they were shown **images of faces, objects, and scenes.**  
वैज्ञानिकों ने 4 से 25 माह के बच्चों के मस्तिष्क का स्कैन किया जब उन्हें चेहरों, वस्तुओं और दृश्यों की छवियाँ दिखाई गईं।
- Memory was tested based on how long the infants looked at familiar vs unfamiliar images – a method known as **preferential looking.**  
**प्रेफरेंशियल लुकिंग** नामक विधि के आधार पर यह जांचा गया कि शिशु परिचित और अपरिचित छवियों को कितनी देर तक देखते हैं।
- Results showed that **infant hippocampus can encode memories**, indicating memory formation **starts as early as 1 year of age.**  
परिणाम से स्पष्ट हुआ कि शिशु हिप्पोकैम्पस स्मृति बना सकता है, अर्थात् स्मृति निर्माण एक वर्ष की उम्र से शुरू हो सकता है।

## Behavioural Evidence | व्यवहारजन्य प्रमाण

- Infants show memory in actions like:
  - Conditioned responses
  - Imitation
  - Recognition of familiar objects and people  
शिशु इन व्यवहारों से अपनी स्मृति दिखाते हैं:
  - परिस्थिति-आधारित प्रतिक्रिया
  - अनुकरण
  - परिचित चीजों और चेहरों को पहचानना



- The study may help in:

- Early childhood education strategies
  - Understanding developmental disorders like autism
  - Memory-based therapeutic models  
यह अध्ययन मदद कर सकता है:
  - प्रारंभिक शिक्षा रणनीतियाँ बनाने में
  - **ऑटिज़्म जैसे विकारों को समझने में**
  - स्मृति आधारित चिकित्सा विधियाँ बनाने में
- 

**TOLL CROSSES 50,000**  
**Israel orders evacuation of southern Gaza**  
A flight between two groups in Manipur's Imphal Valley led to the recovery of a heroin-like substance on March 22. The 15 grams of suspected heroin was seized from an officer of Assam's Tengoi. > PAGE 4

**WORLD CROSSES 50,000**  
**Israel orders evacuation of southern Gaza**  
A flight between two groups in Manipur's Imphal Valley led to the recovery of a heroin-like substance on March 22. The 15 grams of suspected heroin was seized from an officer of Assam's Tengoi. > PAGE 4

**WORLD CROSSES 50,000**  
**Israel orders evacuation of southern Gaza**  
A flight between two groups in Manipur's Imphal Valley led to the recovery of a heroin-like substance on March 22. The 15 grams of suspected heroin was seized from an officer of Assam's Tengoi. > PAGE 4

**WORLD CROSSES 50,000**  
**Israel orders evacuation of southern Gaza**  
A flight between two groups in Manipur's Imphal Valley led to the recovery of a heroin-like substance on March 22. The 15 grams of suspected heroin was seized from an officer of Assam's Tengoi. > PAGE 4

**WORLD CROSSES 50,000**  
**Israel orders evacuation of southern Gaza**  
A flight between two groups in Manipur's Imphal Valley led to the recovery of a heroin-like substance on March 22. The 15 grams of suspected heroin was seized from an officer of Assam's Tengoi. > PAGE 4

**WORLD CROSSES 50,000**  
**Israel orders evacuation of southern Gaza**  
A flight between two groups in Manipur's Imphal Valley led to the recovery of a heroin-like substance on March 22. The 15 grams of suspected heroin was seized from an officer of Assam's Tengoi. > PAGE 4

### INSIDE

**'Heroin' seized from Manipur radical group**  
A flight between two groups in Manipur's Imphal Valley led to the recovery of a heroin-like substance on March 22. The 15 grams of suspected heroin was seized from an officer of Assam's Tengoi. > PAGE 4

**Muslim bodies boycott Bihar CM's Iftar event**  
Major Muslim outfits in Bihar boycotted an Iftar hosted by Chief Minister Nitish Kumar at his official residence in Patna on Sunday, protesting his party's support for the Waqf Amendment Bill, according to a letter. > PAGE 5

**Meghalaya seeks TB survivors' help to battle disease**  
The Meghalaya government is innovatively pushing for tuberculosis-free State by bring TB survivors into TB control programmes and reskilling them as "TB champions" to promote early detection and treatment adherence among patient. > PAGE 6

**Ukraine and U.S. teams begin talks in Saudi Arabia**  
U.S. President Donald Trump's envoy said he expects progress in Ukraine-Russia talks on Monday at Saudi Arabia and meets Russian leader Vladimir Putin does not want to expand his invasion of the pro-Western country. > PAGE 14

## CJI seeks details of guards at judge's home

Chief Justice of Delhi High Court forwards query to the police; judge asked not to dispose of his phones or delete or modify any conversation, message or data in them during the probe; the Police Commissioner's report to the Chief Justice of Delhi says a guard at the residence of Justice Varma saw 'half-burnt articles' and debris being removed

**Krishnasdas Rajarajam**  
NEW DELHI  
With Chief Justice of India Sanjay Khanna seeking the ascertainment of details of security guards and personal security officers posted at the residence of Justice Yashwant Varma in the past six months, the Chief Justice of the Delhi High Court, Justice D.K. Upadhyaya, has forwarded the query to the police.  
The Supreme Court's publication of documents and visual material related to the inquiry into the incident is a stride towards transparency even as the records raise further questions which the committee may examine.  
For one, the published records show that the Police Commissioner got in touch with Chief Justice



Photos published by the top court show the storeroom, firefighters, and burnt currency notes at the Delhi judge's residence. (PI)

Upadhyaya only around 4.50 p.m. on March 15 when the fire had broken out around 11.30 p.m. the previous night. On receiving the information, Chief Justice Upadhyaya immediately swung into action. The Delhi Police Commissioner's report to Chief Justice Upadhyaya said a security guard at the resi-

disposal of his phones or delete or modify any conversation, message or data from them.  
All these details will be placed by the Supreme Court before the probe committee. The three-member probe committee of the Chief Justices of two High Courts and a Karnataka High Court judge will take a deeper dive into the facts of the case.  
The Supreme Court's publication of documents and visual material related to the inquiry into the incident is a stride towards transparency even as the records raise further questions which the committee may examine.  
For one, the published records show that the Police Commissioner got in touch with Chief Justice

what caused the fire or if CCTV footage was recovered.  
Justice Varma, in his response, has said he has no knowledge of cash lying in that room. He has strongly rejected "the insinuation, if made, that we removed currency. None of my staff removed any article, currency or cash in any form".  
The published records show different stands on whether the storeroom, located adjacent to the Central Reserve Police Force guard room, was "used to be kept locked", as stated in the Police Commissioner's report.  
Justice Varma has countered that the storeroom "has been generally by Delhi High Court Chief Justice" published report. The report also does not mention if there is an investigation under way into

### Kashmir's bounty



Sheep's buffet: A flock of sheep in an almond orchard in Pulwama as Kashmiri basks in spring sunshine on Sunday. (NISAR NISSAN)

## President of Sambhal mosque's managing committee arrested over violence in 2024

**Mayank Kumar**  
LUCKNOW  
The Uttar Pradesh Police on Sunday arrested Zafar Ali, president of the managing committee of Shaahi Jama Masjid in Sambhal, in connection with the violence that erupted during the survey of the mosque on November 24, 2024.  
"We had gathered evidence that he played an incendiary role during the violence last year. He was arrested up by the Sambhal police in Sambhal Sunday morning and was interrogated at Kotwali police station by senior officials before being finally arrested," said Krishna Kumar, Superintendent of

ary (PAC) and Rapid Action Force (RAF) were stationed around the 16th-century mosque and near Mr. Ali's home, which are hardly 100 metres apart.  
Mr. Ali has been at the forefront of the dispute since last year's violence. During a press conference, he had also said that the Sambhal police had fired shots to contain the crowd and killed a few people in the process.  
Sambhal witnessed violence on November 24, the second day of the Shaahi Jama Masjid survey that was being carried out upon orders by a local court. Protesters who had gathered around the mosque clashed with the police,

## Turkish court formalises the arrest of Erdogan rival over 'corruption charges'

**Associated Press**  
ISTANBUL  
A court formally arrested the Mayor of Istanbul, a key rival to President Recep Tayyip Erdogan, on Sunday and ordered him jailed pending the outcome of a trial on corruption charges.  
Mayor Ekrem Imamoglu was detained following a raid on his residence earlier this week, sparking the latest wave of street demonstrations in Turkey in more than a decade.  
His imprisonment is widely regarded as a political move to remove a major opponent from the next presidential race, currently scheduled for 2028.  
The prosecutor's office said the court decided to jail Mr. Imamoglu on suspicion of running a criminal organisation, accepting bribes, extortion, illegally recording personal data and bid-rigging. A request for him to be imprisoned on terror-related charges being so easily usurped, "We will fight until the end."  
The Interior Ministry later announced that Mr. Imamoglu had been suspended from duty as a "temporary measure." The municipality had previously appointed an acting mayor from its governing council.  
Alongside Mr. Imamoglu, 47 others were also jailed pending trial, including a key aide and two district Mayors from Istanbul.  
Interior Minister Ali Yerlikaya said Sunday that 323 people were arrested on the previous evening over disturbances at protests.  
"The district authorities have undertaken several anti-encroachment drives in the town and adjoining parts.  
ing human rights and democracy, slammed the decision and demanded Mr. Imamoglu's immediate release.  
The German government called the mayor's imprisonment "a serious setback for democracy in Turkey" adding that "political competition must not be conducted with courts and prisons."  
Before his detention, Mr. Imamoglu had already faced multiple criminal cases that could result in prison sentences and a political ban. He was also appealing a 2022 conviction for insulting members of Turkey's Supreme Electoral Council.  
Earlier in the week, a university nullified his diploma, citing alleged irregularities in his transfer by appointment to a private university in northern Cyprus some 30 years ago. The decision effectively bars him from running for President.  
Mr. Imamoglu was elected mayor of Turkey's largest city in March 2019, in a major blow to Mr. Erdogan and the President's Justice and Development Party, which had controlled Istanbul for a quarter-century.  
Mr. Erdogan's party pushed to void the municipal election results in the city of 16 million, alleging irregularities.



Turkiye's Republican People's Party (CHP) candidate for Istanbul mayor Ekrem Imamoglu in Istanbul. FILE PHOTO

## 'Social stigma is a reality even today'

**H**imani Verma from Chhattisgarh, Kallash Chandra Mishra from Odisha, G. Poongodi from Tamil Nadu (T.N.), and Sudeshwar Kumar Singh from Bihar are all Tuberculosis (TB) survivors-turned-champions, which means they are actively working to support communities affected by TB. They are founding members of their respective State-level TB survivor-led networks. These are excerpts from interviews with them:

### Tell us your experience with TB. How did it affect your life?

**Himani:** I had TB when I was in Class 12. I stopped meeting my friends, and my family did not share my TB status with others. In 2018, when I first attended the TB survivor to TB Champion training, my perspective changed.

**Kallash:** When I was diagnosed with TB, I was studying in school. TB impacted my studies a lot.

**Sudeshwar:** I was working in the social sector and thought of TB as just another disease. But things changed when my family learnt about my condition. At home the social pressure was overwhelming.

**Poongodi:** I'm from a village in Vellore, T.N. My father is a farmer. I found out I had TB after three pregnancies, all of which ended in loss. When my husband and his family came to know that I had TB, I faced constant verbal and physical abuse. In 2013, I was diagnosed with TB for the third time and it was drug-resistant.

**Who is a TB Champion, what do TB Champions do, and why do we need them?**

**Himani:** A TB survivor is one who has defeated TB. A TB Champion is one who helps others fight TB. The TB Programme provides free diagnosis and treatment, but people with TB need counselling. They need someone to listen to them and confidentially answer their questions. Our

### Anupama Srinivasan

is Deputy Director, REACH and a member of the 2024-25 India Women's LI Health cohort

personal stories give confidence to those who are seeking TB care.

**Kallash:** A person with TB is vulnerable and anxious and wonders 'what will happen to me and my family, and how will I complete such a long treatment?' As TB Champions, we provide psychosocial support to them.

### Do people with TB experience stigma today?

**Sudeshwar:** Social stigma is a reality even today. Recently, a doctor in Patna called me. His household help was diagnosed with TB and he wanted to send her back to her village. Whenever we do a community awareness programme, we share our phone numbers because they don't ask us anything during the meeting. Sometimes they stay back and talk to us alone. People call up and enquire about the facilities and how to initiate diagnosis.

**Poongodi:** Even today, when I eat, my father is the only one who sits with me and shares a meal. My sister either eats at a distance or skips meals with me altogether. Two years ago, a woman in my village was diagnosed with TB and became severely ill. Her family built a small hut for her outside their home. She died soon after.

**Tell us a little about your work has done so far.**

**Himani:** We have grown from 30 people to over 400 in the TB Mukh Chhattisgarh Foundation network. We do advocacy work for improvement in TB care and services.

**Kallash:** The Kalinga TB Survivors Network in Odisha began working in 2018. We have 14 district chapters and more than 800 members. We recently mobilised funds and set up a grocery store for the family of a person with TB who was paralysed. His son who had left school was able to start

A TB survivor is one who has defeated TB. A TB Champion is one who helps others fight TB.

studying again.

**Sudeshwar:** Currently, as TB Mukh Vahini, we are active in 35 districts of Bihar. We became the first registered network in India and have been able to support over 80,000 people with TB.

**Poongodi:** We launched our network in 2022 with a small group of TB survivors from six districts of Tamil Nadu. Today, we are 2,000-strong. We identify that many people with TB were malnourished. Through local donors, we mobilised nutritional supplements for those who needed it most.

### If you were in-charge of the TB programme for a day, what are the policy changes that you would change or introduce?

**Himani:** We still use smear microscopy for TB testing which delays the diagnosis and rapid diagnosis like CBNAAT must be offered upfront. I would also like to add transportation costs in the Nikshay Poshan Yojana.

**Kallash:** Nutrition support is given to the person with TB. If, unfortunately, TB makes some policy-level changes here. For the diagnosis of TB, several tests have to be done and they are all in different places in the facility. If all of them can be done in one place at the hospital, it will be a game changer.

**Sudeshwar:** I will strengthen the turnaround time for various aspects from diagnosis to treatment initiation. Like COVID-19, TB needs a campaign with multi-sectoral action.

**Poongodi:** I will appoint one male and one female TB Champion in each block. There is no proper space for the TB programme in most hospitals, and no privacy. I will construct a separate building for TB in each district.



## Towards better TB control

Re-imagining public-private partnerships for TB

### V. Ramasubramanian

**W**ith an estimated 2.7 million new TB cases a year, India contributes to more than 25% of the world's Tuberculosis (TB) burden. More than half the TB patients in India receive private medical care. The current system of treatment of TB is confined to either public hospitals where treatment is given free but in an ambience which may not be welcoming, or in private hospitals where affordability is a major concern but the ambience is more welcoming.

**Public and private care:** Government hospitals can offer a standardised clinical algorithm and facilities for contact tracing. Yet, the patients feel that free treatments may not be of optimal quality both with regard to the drug bio-availability and the testing processes. On the other hand, private practitioners may offer a better ambience and better comforts during treatment, but may not adhere to standardised protocols for treatment. Also, patient monitoring may also be compromised in private hospitals, which do not have the bandwidth to ensure compliance and follow-up.

As we stride towards the World Health Organization's goals of ending TB, we need to think of innovations in TB care — that is, with regard to diagnosis as well as treatment. To balance the faults of the system, we need a strong and sustained drive to encourage public-private partnerships in the management of TB patients. This not only helps the patients by giving them a choice in treatment options, but also ensures better outcomes as the patients are more engaged with the process. There is a shared responsibility between the public and



private health agencies to ensure compliance and follow-up.

This modified paradigm of healthcare delivery, which incorporates the best of both worlds, is probably the answer to TB elimination. This offers a choice in services for the patient without compromising on the outcomes. Diagnostic pathways should be clearly defined through evidence-based protocols, limiting individual variations and compromised conclusions. This can be applied in both public and private health care delivery.

**Availability of medicines:** Certain anti-TB medicines for drug-resistant TB are available only in government hospitals, to limit misuse and prevent resistance development to these novel drugs. To ensure strict adherence to treatment protocols, public health policies insist on admission to hospitals for two weeks at initiation of this treatment for drug-resistant cases. This can be cumbersome for patients who would benefit from the use of these novel medicines but are not willing to be admitted in government hospitals. Follow-up of patients is optimal in government hospitals where free medicines are given and

patients can access social workers when in need. Hence, a collaboration between the two systems with flexibility in care pathways and access to medicines, while retaining that the basic diagnostic and treatment tenets are not compromised, will benefit patients.

### The way forward

The problems of establishing contact and ensuring smooth transition of patient care should be addressed. Issues on accountability have to be established. The logistics of cooperation need to be better defined to ensure that patients do not slip through the cracks in the system. There are issues of unregistered practitioners treating TB. We need a system that warrants that the diagnosis is made based on standard definitions and testing methods. There must be regulation of supply of drugs, adherence to drug administration protocols, and optimal follow-up.

The future of TB treatment should involve the regulation of laboratories. Clinical details should accompany submission of specimens for TB testing. All TB diagnostic test results should be reported to a cell which can coordinate and monitor the results. There should also be systems to monitor pharmacies which sell TB medicines and give feedback to treating doctors through an expert committee.

There is no single way for success. Re-imagining partnerships, disrupting accepted norms, and reframing problems can all offer better directions and pathways for success in TB control.

V. Ramasubramanian is Consultant, Infectious Diseases, Apollo Hospitals

## TB treatment success rates are improving gradually in India

Among major States Himachal Pradesh, Odisha and Gujarat are performing better in the fight against TB

### DATA POINT

#### The Hindu Data Team

**T**uberculosis incidence in India was below the 200 per lakh mark in 2022 compared to over 237 per lakh in 2015 — a 16% decline (Chart 1). Similarly, TB mortality was 23 per lakh population — an 18% decline compared to 2015 (Chart 2). The treatment success rate for severely drug-resistant TB — forms of TB resistant to isoniazid, rifampicin, any fluoroquinolone, and at least one second-line injectable drug — was the lowest among all types of TB at 45% in India in 2022. The treatment rate for MDR-RB-TB — resistant to rifampicin, the most powerful first-line drug, with or without resistance to isoniazid — was 74%.

The success rate for Pre-XDR-TB — a form of MDR-TB that is also resistant to any fluoroquinolone, an important class of second-line drugs — was 68% in 2022. Chart 3 shows the treatment success rates of various types of TB. As the graph shows, treatment success rates have improved over time.

The TB index (Map 4), which measures the performance of States in the fight against TB, shows that among major States, Himachal Pradesh, Odisha and Gujarat are on top. Among major States, Punjab, Bihar and Karnataka are at the bottom.

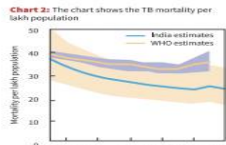
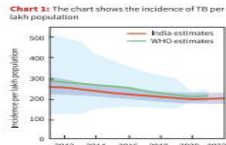
In India, over 10% of the population faces catastrophic health expenditure — the third highest among lower-middle-income countries with a high TB burden. Health spending is termed catastrophic if it exceeds 10% of household's income or consumption.

In India, just over 60% of the population has health coverage the third highest among lower-middle-income countries. Yet, a larger share of households still faces steep health costs (Chart 5).

## A marked improvement

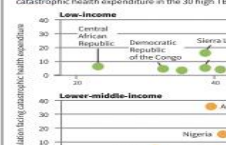
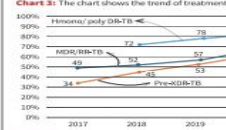
The charts were sourced from Central Tuberculosis Division's 'India TB Report 2024' and World Health Organisation's 'Global tuberculosis report 2024'

Charts 1 and 2 compare the estimates from WHO's Global Tuberculosis Report 2022 for India (interim) and the in-country model (final) — (2015-2022)



**1** Tuberculosis incidence in India has declined below the 200 per lakh mark in 2022, compared to over 237 per lakh in 2015 — a 16% decline

**2** The TB mortality was 23 per lakh population with 18% decline as compared to 2015 (28 per lakh population)



**3** The chart shows the trend of treatment success rate of M/DR-TB patients

**5** The chart shows the universal health coverage service index and percentage of the general population facing catastrophic health expenditure in the 30 high TB burden countries, stratified by income groups

### FROM THE ARCHIVES

## The Farakka barrage to be commissioned soon

FIFTY YEARS AGO MARCH 24, 1975

### Farakka barrage to be commissioned soon

New Delhi, March 23: The Union Government has tentatively decided to commission "soon" the Farakka Barrage, notwithstanding some doubts raised by the Bangladesh team at the talks here in February last.

Sources close to the Union Irrigation Ministry do not foresee any difficulty in implementing the decision and they do not think that Bangladesh will put any obstacles.

The Barrage has taken nearly 12 years to complete and over Rs.150 crores have been spent on its construction. The doubts, raised by the Bangladesh team headed by the Minister for Flood Control and Water Resources during the recent Delhi discussions in which Mr. Jagjivan Ram, Union Minister for Agriculture and Irrigation, took part for the first time are not new. It has been the endeavour of the Union Government all along to remove the suspicions of the erstwhile East Pakistan Government and now the Bangladesh Government, that the Farakka Barrage will harm the interests of their country.

There is no question of the recent talks on the Ganga waters between the two countries having failed to produce an acceptable solution.

A HUNDRED YEARS AGO MARCH 24, 1925

## Publications prohibited in India

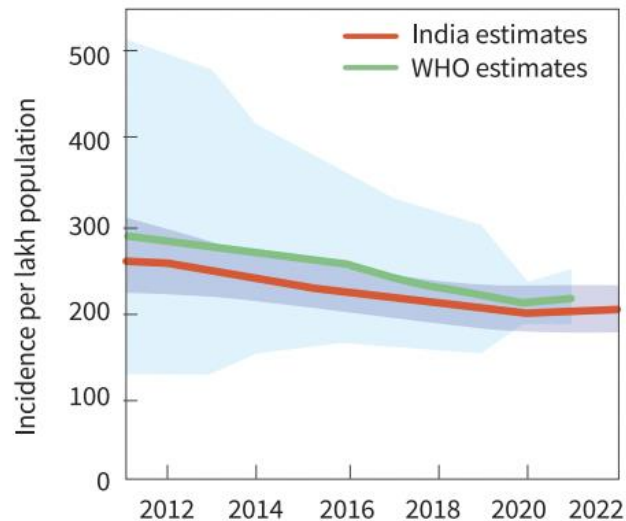
Karl Winterton, Under-Secretary for India, in reply to a question in the House of Commons by Mr. Lansbury, said that Hyndman's "The Awakening of Asia", Bryan's "British Rule in India", Mr. M.N. Roy's "Evolution of Economic Organisation of India", and Lala Lajpat Rai's "England's debt to India", had been prohibited entry into India by notifications under the Sea Customs Act. The reason in the case of three of them was that the publications contained false and malicious misrepresentations of the British Administration in India. Roy's book was proscribed because all his writings and those of his wife here were prohibited. In view of the complicity in a foreign organised conspiracy to overthrow British rule in India.

# A marked improvement

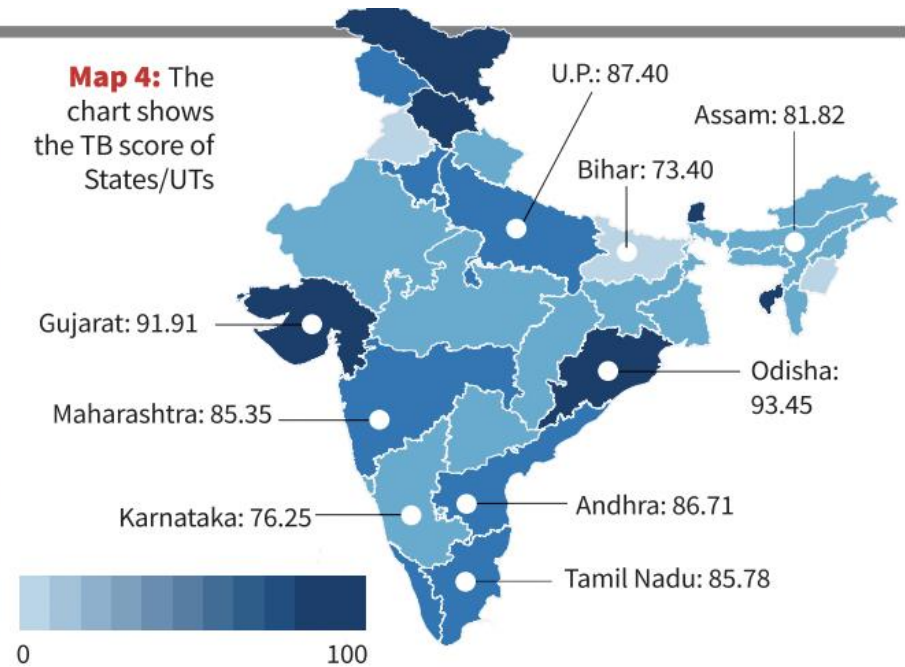
The charts were sourced from Central Tuberculosis Division's 'India TB Report 2024' and World Health Organisation's 'Global tuberculosis report 2024'

Charts 1 and 2 compare the estimates from WHO's Global Tuberculosis Report 2022 for India (interim) and the in-country model (India) – (2015–22)

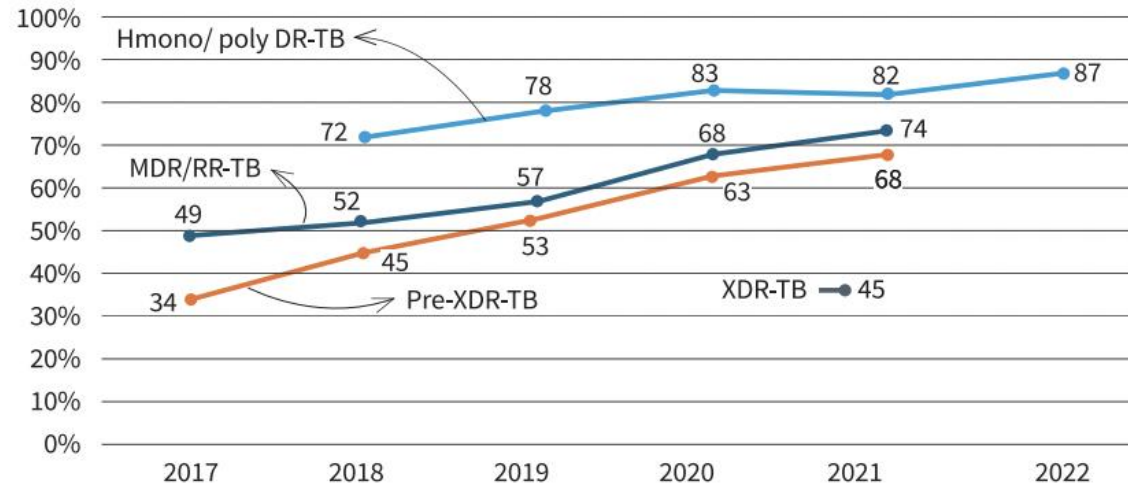
**Chart 1:** The chart shows the incidence of TB per lakh population



**Map 4:** The chart shows the TB score of States/UTs



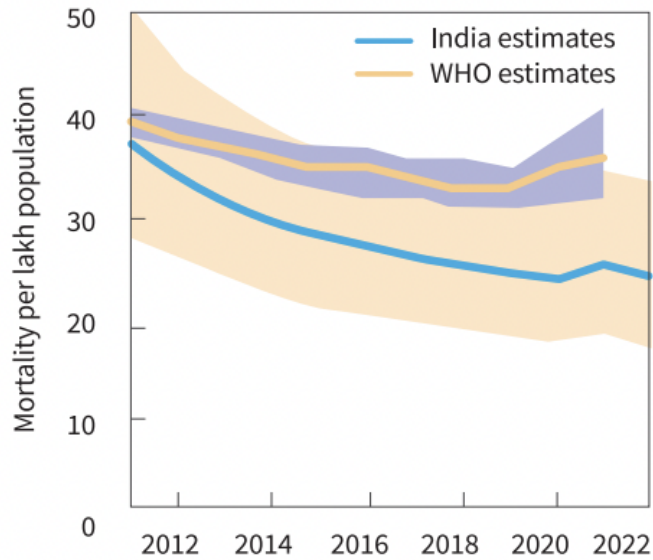
**Chart 3:** The chart shows the trend of treatment success rate of M/XDR-TB patients



XDR-TB: Extensively Drug-Resistant TB, MDR/RR-TB: Multidrug-Resistant/Rifampicin-Resistant TB

Treatment success rate for XDR-TB — forms of tuberculosis resistant to isoniazid, rifampicin, any fluoroquinolone, and at least one second-line injectable drug — is the lowest at 45% in India in 2021

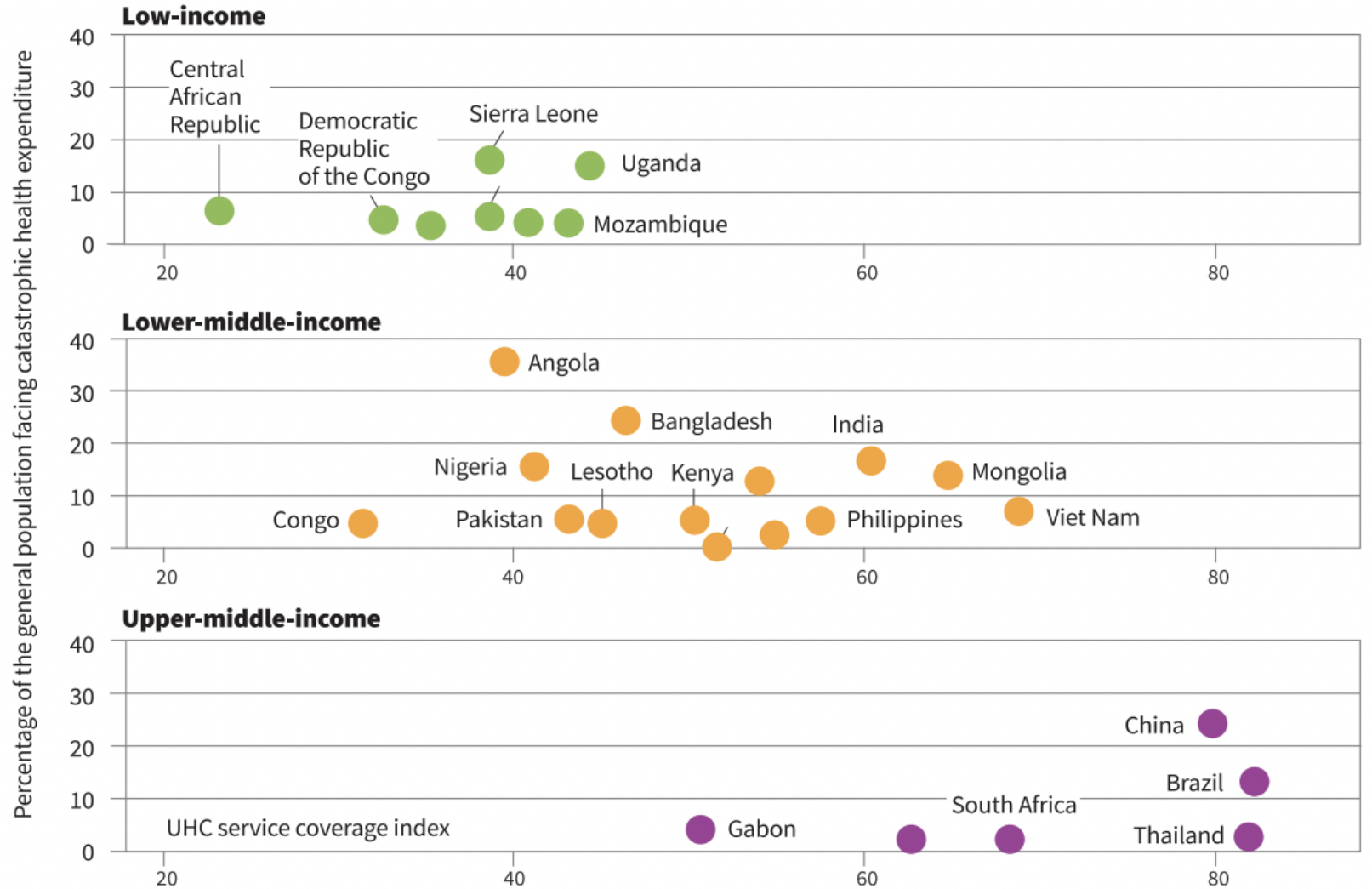
**Chart 2:** The chart shows the TB mortality per lakh population



**1** Tuberculosis incidence in India has declined below the 200 per lakh mark in 2022, compared to over 237 per lakh in 2015 — a 16% decline

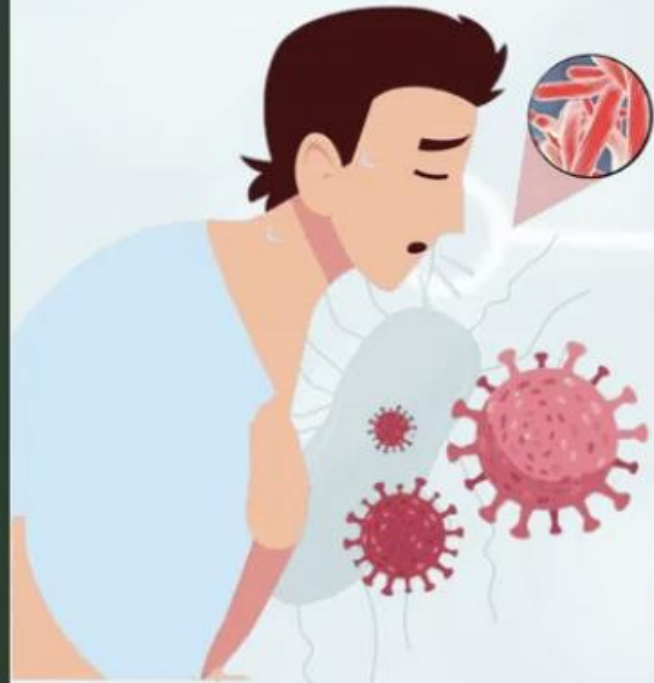
**2** The TB mortality was 23 per lakh population with 18% decline as compared to 2015 (28 per lakh population)

**Chart 5:** The chart shows the universal health coverage service index and percentage of the general population facing catastrophic health expenditure in the 30 high TB burden countries, stratified by income groups.





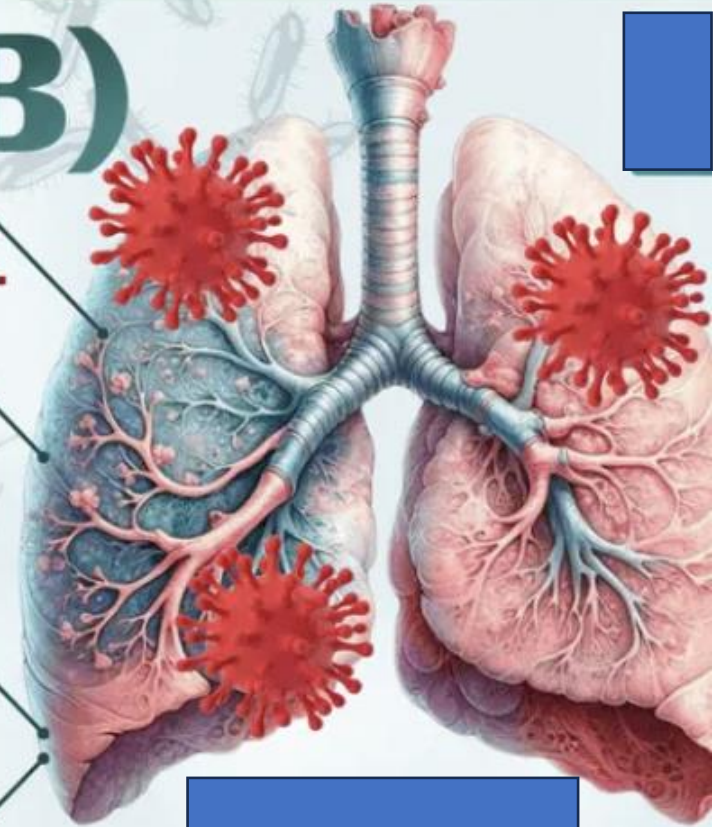
# TUBERCULOSIS (TB)



Caused by **Mycobacterium tuberculosis**.

Commonly impacts the **lungs (pulmonary TB)** but can also affect **other areas (extrapulmonary TB)**.

Leading cause of death for people with HIV and a major factor in **antimicrobial resistance**.



**Transmission** occurs through the air when an infected person coughs, sneezes, or speaks. Individuals with **latent TB**, who show no symptoms, do not spread the disease.

- It is a curable disease. Treatment depends on whether it is **drug-resistant** or **simple** tuberculosis.



## **BPaLM Regimen for MDR-TB**

- It consists of a four-drug combination - **Bedaquiline, Pretomanid, Linezolid and Moxifloxacin.**
- It is a **highly effective** and **shorter** treatment option than the previous MDR-TB treatment procedure.

# Prevalence

## Global TB-related Deaths in 2022 and 2023

2022

1.32 M

Every day, **3500 People** die from TB worldwide

2023

1.25 M



India (26%)

Low- and middle-income countries carry **87%** of the global TB burden



Indonesia



China



Philippines



Pakistan

56%

### Primary risk factors



# Government Strategies to end TB

**National Tuberculosis Elimination Program (NTEP)**: Aims to eradicate TB in India by 2025.

**Community Engagement Initiatives** like **the Mantri TB Mukh Bharat Abhiyan**

**Project Axshya Plus** involves contact tracing, testing, and managing latent TB infections.



**TB Preventive Therapy** to individuals at high risk of developing active TB.

**Ni-kshay Mitras** encourage public involvement in TB care and awareness.

## Eliminating TB

**UN** aims to end the TB epidemic by **2030**. **India** aims to eliminate TB by **2025**.



IN BRIEF



Farmers' body seeks policy solution for duty on onions

After Centre scrapped 20% export duty on onion effective from April 1, the Maharashtra government on Sunday welcomed the move, but the Kisan Sabha said it was too late and sought a policy solution. The Kisan called it "unfortunate" as export restrictions had impacted onion producers adversely. "We welcome the move if this will bring comfort to our onion farmers; however, it can't recover the losses the farmers have faced," a member of the Sabha said. Against this backdrop, the Sabha has urged the government to avoid irregular export bans and export restrictions, not to increase export duty and instead take steps to formulate long-term export policy for onion producers at the international level.

Operation on to flush out militants from Kathua forests

A major anti-militancy operation was launched on Sunday evening after a group of militants were engaged in a gunfight in a forest area of Jammu's Kathua district. Preliminary reports suggested the security forces had received a tip-off about the movement of militants at Sanyal village, close to the India-Pakistan border in the Hiranagar sector of Kathua district. "During the ongoing operation, a group of militants was spotted in a jungle area. The militants took cover of the undulating topography and dense green cover inside the forests," an official said. Reinforcements were rushed to throw a multi-tier cordon around the area where militants opened fire on the security forces. There were reports of attempts to take civilians as hostages.

Human creativity will retain potential despite AI disruption, says Vempati

Nistula Irbabbar NEW DELHI

The increasing use of artificial intelligence (AI), especially in the media space, will remain in the long term human-led rather than machine-led despite apprehensions that automation may take over, according to Shashi Shekhar Vempati, co-founder of A4India.org and Chairperson of the Apex Advisory Committee at the Department of Science and Technology.

Speaking to The Hindu on a range of issues, Mr. Vempati said there were several "sticky" issues with regard to AI in the media space. "The first is, of course, of creative copyright. There are several cases in the courts questioning the manner in which models have been trained, and how they are

likely [to] impact the rights of creators, especially if AI can generate creative content that is indistinguishable from the works of the humans. We may need regulatory guardrails on this front," he said.

The second and more sticky issue is, ultimately, the essence of creativity is human. A fact that even Prime Minister Narendra Modi alluded to in his conversation with podcaster Lex Fridman. I believe that sticky creative content that will be treated and consumed as a matter of habit requires the human touch. It cannot be fully automated," he said.

"The advent of AI is of course going to change the workforce and nature of jobs, especially in IT companies, but not in the way many feel," he added. "Despite the high levels of automation, many func-

'TB champions' join battle against the disease in Meghalaya

State govt. has roped them in to spread awareness of the free testing, treatment, and support programmes, says National Health Mission official

Bhinda Shaban Perapadon SHILLONG

The Meghalaya government is innovatively pushing for a tuberculosis-free State by roping in TB survivors and bringing them into TB-control programmes as "TB champions", advocating for early detection and treatment adherence among patients.

TB remains a significant public health challenge worldwide, with India bearing the highest disease burden in the world. In 2023, India had an estimated 26% of the global TB burden.

Meghalaya has been battling challenges, including a hilly terrain, poor road connectivity, the presence of many hamlets in hard-to-reach valleys and mountains, which leads to delays in patients seeking timely health interventions.

"The scheme is aimed at ensuring that no patient is left behind. The TB champions spread awareness about TB, advising people to test if they are symptomatic, tell them about the free testing, treatment and support programmes, and encourage them to go beyond on the Union go-



TB is a significant public health challenge worldwide with India bearing the highest TB disease burden in the world. GETTY IMAGES

vernment's 100-day campaign, which began in December last year," said Ranjankumar S., Secretary and Mission Director, National Health Mission (NHM), Shillong, said.

Speaking to The Hindu about her involvement with the State's TB programme, first as a patient and now as a TB champion, Ridalin Shullal, from East Khasi Hill district, said she wanted to become the "voice of the voiceless, who often don't seek treatment because of the fear associated with TB".

"Even with modern testing, treatment, and the support given by the State government, there is a lot of stigma, myths and fears associated with TB. This isn't a simple disease. It has a profound and long-lasting adverse impact on the financial and emotional well-being of the family, if not treated in a holistic manner," Shullal said.

"Testing is a must" "I am here to make a difference," another TB champion Request Star Kenubah said. "One day, I coughed blood, which was dismissed as food poisoning. Later, doctors found it was TB. I now motivate youngsters and those in far-flung villages to always test for TB, even if they have only mild symptoms. My aim is to ensure that testing should be 100%. Aggressive testing is a must to free the State of TB," he said.

Violinist R.K. Shriramkumar chosen for Sangita Kalamidhi award of the Music Academy

The Hindu Bureau CHENNAI

Violinist R.K. Shriramkumar has been selected for the Sangita Kalamidhi award of the Music Academy for 2025.

He has accompanied stalwarts of yesteryear, including Semmangudi Srinivasa Iyer, M.S. Subbulakshmi, D.K. Pattammal, D.K. Jayaraman, T. Hariprasad, T. Mukta, M. Balamuralikrishna, and K.V. Narayanaswamy, and present-day musicians such as Sudha Ragunathan, Vijay Siva, Bombay Jayashri, Sowmya, and T.M. Krishna.

In a press release, N. Murali, President, Music Academy, said the executive committee on Sunday decided to confer the award on Mr. Shriramkumar.

"In the past few decades, he has been acknowledged as an authority on the Sangita Sangeetaya Pradarshani of Subbarama Dikshitar, which remains one of the best-known compilations of Muthuswami Dikshitar's compositions. It is fitting that he has been chosen for this prestigious award in the year marking the 250th anniversary of the master composer," Mr. Murali said.



R.K. Shriramkumar is an authority on Dikshitar's composition. He has played with stalwarts of Carnatic music. B. VELJAYARAJAN

Mr. Shriramkumar belongs to the Rudrapattanam family of musicians. The 'R' in his name stands for Rudrapattanam, a village on the banks of the Cauvery in Karnataka. The grandson of violinist R.K. Venkatarama Shastry, who conducted the Thyagaraja Aradhana at Thiruvaiyaru and almost 40 years since the 1950s, he had his initial lessons in the violin from Savitri Sarayamurthy. He was also trained in violin and vocal music by Venkatarama Shastry. He later received guidance in violin in a manner," Mr. Shriramkumar said, expressing the award at the inauguration of the coveted award in the Carnatic music world. The Sangita Kalamidhi no-

minee will preside over the academic sessions of the 99th annual conference and concerts of the Music Academy to be held between December 15, 2025 and January 1, 2026.

Mr. Murali said dancer Urmila Satyanarayana had been selected for the Nritya Kalamidhi award. The award will go to Kathakali artist Madambi Subramania Nambuthari and veena players J.T. Jayaraj Krishnan and Jayarsi Jayaraj Krishnan.

The Sangita Kala Acharya awards and the TTK awards will be presented with the Sangita Kalamidhi award on January 1, 2026.

Ms. Urmila will receive the award at the inauguration of the Music Academy's 19th annual dance festival on January 3.

tions, including software code generation, will require a degree of human oversight," he added.

He said that as far as Indian IT industry was concerned, the biggest impact of automation would be felt in low-level tasks, including testing, quality assurance and so on, and with software code generation using AI becoming better, even software development would, to a large extent, be automated.

"It is also believed by some that with AI lowering the cost of software development and giving greater access to enterprises to evolve their software systems to suit their needs, we will see the natural evolution for Indian IT, building on earlier cycles of ITO (IT outsourcing), BPO (business process outsourcing) and KPO (knowledge process outsourcing)," he said.



Shashi Shekhar Vempati says the biggest impact of automation in the Indian IT industry will be felt in low-level tasks. IILX PWT0

would be around annotating and enriching large datasets to make them AI usable. As AI use cases become more and more specialised, requiring deep domain knowledge, these value-added data services will be the natural evolution for Indian IT, building on earlier cycles of ITO (IT outsourcing), BPO (business process outsourcing) and KPO (knowledge process outsourcing)," he said.

languages and dialects, was the basis for many of the early efforts focused on Indian models for AI. Bhashini by the MeitY (Ministry of Electronics and Information Technology), which is PM Modi has alluded to in his speeches during the 2024 elections, stands out, as well as the AI4All (All India Council for Technical Education) is being set up to translate textbooks across schools and universities. AI4All, which was launched at IIT-Madras has released a wide range of models and datasets based on Indian languages, encompassing text and voice. Saravali incubated out of IIT-Madras, has been roped in by the Union Education Minister for funding and access, and rightly so. Saravali mVaa out of IIT-Kanpur has built an audio/voice model leveraging AI in multiple Indian lan-

guages and dialects, was the basis for many of the early efforts focused on Indian models for AI. Bhashini by the MeitY (Ministry of Electronics and Information Technology), which is PM Modi has alluded to in his speeches during the 2024 elections, stands out, as well as the AI4All (All India Council for Technical Education) is being set up to translate textbooks across schools and universities. AI4All, which was launched at IIT-Madras has released a wide range of models and datasets based on Indian languages, encompassing text and voice. Saravali incubated out of IIT-Madras, has been roped in by the Union Education Minister for funding and access, and rightly so. Saravali mVaa out of IIT-Kanpur has built an audio/voice model leveraging AI in multiple Indian lan-

guages and dialects, was the basis for many of the early efforts focused on Indian models for AI. Bhashini by the MeitY (Ministry of Electronics and Information Technology), which is PM Modi has alluded to in his speeches during the 2024 elections, stands out, as well as the AI4All (All India Council for Technical Education) is being set up to translate textbooks across schools and universities. AI4All, which was launched at IIT-Madras has released a wide range of models and datasets based on Indian languages, encompassing text and voice. Saravali incubated out of IIT-Madras, has been roped in by the Union Education Minister for funding and access, and rightly so. Saravali mVaa out of IIT-Kanpur has built an audio/voice model leveraging AI in multiple Indian lan-

guages and dialects, was the basis for many of the early efforts focused on Indian models for AI. Bhashini by the MeitY (Ministry of Electronics and Information Technology), which is PM Modi has alluded to in his speeches during the 2024 elections, stands out, as well as the AI4All (All India Council for Technical Education) is being set up to translate textbooks across schools and universities. AI4All, which was launched at IIT-Madras has released a wide range of models and datasets based on Indian languages, encompassing text and voice. Saravali incubated out of IIT-Madras, has been roped in by the Union Education Minister for funding and access, and rightly so. Saravali mVaa out of IIT-Kanpur has built an audio/voice model leveraging AI in multiple Indian lan-

guages and dialects, was the basis for many of the early efforts focused on Indian models for AI. Bhashini by the MeitY (Ministry of Electronics and Information Technology), which is PM Modi has alluded to in his speeches during the 2024 elections, stands out, as well as the AI4All (All India Council for Technical Education) is being set up to translate textbooks across schools and universities. AI4All, which was launched at IIT-Madras has released a wide range of models and datasets based on Indian languages, encompassing text and voice. Saravali incubated out of IIT-Madras, has been roped in by the Union Education Minister for funding and access, and rightly so. Saravali mVaa out of IIT-Kanpur has built an audio/voice model leveraging AI in multiple Indian lan-

guages and dialects, was the basis for many of the early efforts focused on Indian models for AI. Bhashini by the MeitY (Ministry of Electronics and Information Technology), which is PM Modi has alluded to in his speeches during the 2024 elections, stands out, as well as the AI4All (All India Council for Technical Education) is being set up to translate textbooks across schools and universities. AI4All, which was launched at IIT-Madras has released a wide range of models and datasets based on Indian languages, encompassing text and voice. Saravali incubated out of IIT-Madras, has been roped in by the Union Education Minister for funding and access, and rightly so. Saravali mVaa out of IIT-Kanpur has built an audio/voice model leveraging AI in multiple Indian lan-

guages and dialects, was the basis for many of the early efforts focused on Indian models for AI. Bhashini by the MeitY (Ministry of Electronics and Information Technology), which is PM Modi has alluded to in his speeches during the 2024 elections, stands out, as well as the AI4All (All India Council for Technical Education) is being set up to translate textbooks across schools and universities. AI4All, which was launched at IIT-Madras has released a wide range of models and datasets based on Indian languages, encompassing text and voice. Saravali incubated out of IIT-Madras, has been roped in by the Union Education Minister for funding and access, and rightly so. Saravali mVaa out of IIT-Kanpur has built an audio/voice model leveraging AI in multiple Indian lan-

guages and dialects, was the basis for many of the early efforts focused on Indian models for AI. Bhashini by the MeitY (Ministry of Electronics and Information Technology), which is PM Modi has alluded to in his speeches during the 2024 elections, stands out, as well as the AI4All (All India Council for Technical Education) is being set up to translate textbooks across schools and universities. AI4All, which was launched at IIT-Madras has released a wide range of models and datasets based on Indian languages, encompassing text and voice. Saravali incubated out of IIT-Madras, has been roped in by the Union Education Minister for funding and access, and rightly so. Saravali mVaa out of IIT-Kanpur has built an audio/voice model leveraging AI in multiple Indian lan-

Crossword puzzle grid with clues and solutions. Clues include: 15. Say, China's enters in a mess are at fault (3,7); 17. Cassette played in legal actions as a precedent (4,5); 21. Career or Carrier (5); 22. Say, aggressive sales vets life surprisingly (6,9); 24. A space ultimately made wide open (5); 25. Increase support at one entrance (9); 26. Trade some soda and liquor (4); 27. People with time follow Insta luminaries primarily for payment (10).

Sudoku puzzle grid with numbers and solutions. The grid shows numbers 1-9 in various positions. Solutions are provided for the previous puzzle and yesterday's Sudoku.

FAITH section with the title 'As fate would have it' and a short story. The story discusses human nature, fate, and the grace of God, mentioning a snake charmer who made a living by exhibiting his snake in the town and village centres, making it dance to his tune.

# Violinist R.K. Shriramkumar chosen for Sangita Kalanidhi award of the Music Academy

**The Hindu Bureau**  
CHENNAI

Violinist R.K. Shriramkumar has been selected for the Sangita Kalanidhi award of the Music Academy for 2025.

He has accompanied stalwarts of yesteryear, including Semmangudi Srinivasa Iyer, M.S. Subbulakshmi, D.K. Pattammal, D.K. Jayaraman, T. Brinda and T. Mukta, M. Balamuralikrishna, and K.V. Narayanaswamy and present-day musicians such as Sudha Ragunathan, Vijay Siva, Bombay Jayashri, Sowmya, and T.M. Krishna.

In a press release, N. Murali, President, Music Academy, said the executive committee on Sunday decided to confer the award on Mr. Shriramkumar.

“In the past few decades, he has been acknowledged as an authority on the Sangita Sampradaya Pradarsani of Subbarama Dikshitar, which remains one of the best-known compilations of Muthuswami Dikshitar’s compositions. It is fitting that he has been chosen for this prestigious award in the year marking the 250th anniversary of the master composer,” Mr. Murali said.

Mr. Shriramkumar belongs to the Rudrapatnam family of musicians. The ‘R’ in his name stands for Rudrapattinam, a village



R.K. Shriramkumar is an authority on Dikshitar’s composition. He has played with stalwarts of Carnatic music. B. VELANKANNI RAJ

on the banks of the Cauvery in Karnataka. The grandson of violinist R.K. Venkatarama Shastry, who conducted the Tyagaraja Aradhana at Thiruvaiyaru for almost 40 years since the 1950s, he had his initial lessons in the violin from Savitri Satyamurthy. He was also trained in violin and vocal music by Venkatarama Shastry. He later received guidance in violin from V.V. Subrahmanyam and in vocal music from Sangita Kalanidhi Shri D.K. Jayaraman.

Sangita Kalanidhi R.K. Srikantan is his granduncle and vocalists R.N. Thyagarajan and R.N. Tharanathan, the Rudrapatnam Brothers, are his uncles.

## ‘Blessings of gurus’

“It is God’s grace and blessings of my gurus,” Mr. Shriramkumar said, expressing happiness on being selected for the coveted award in the Carnatic music world. The Sangita Kalanidhi no-

minee will preside over the academic sessions of the 99th annual conference and concerts of the Music Academy to be held between December 15, 2025 and January 1, 2026.

Mr. Murali said dancer Urmila Satyanarayana had been selected for the Nriya Kalanidhi award. The Sangita Kala Acharya awards will be presented to vocalist Shymala Venkateswaran and thavil maestro T.R. Govindarajan. The TTK awards will go to Kathakali artiste Madambi Subramania Namboothiri and veena players J.T. Jeyaraaj Krishnan and Jayasri Jeyaraaj Krishnan.

The Sangita Kala Acharya awards and the TTK awards will be presented with the Sangita Kalanidhi award on January 1, 2026.

Ms. Urmila will receive the award at the inauguration of the Music Academy’s 19th annual dance festival on January 3.

## About the Award | पुरस्कार के बारे में

- **Sangita Kalanidhi Award** is one of the highest honors in the **Carnatic music world**, awarded by the **Music Academy, Chennai**.  
संगीत कलानिधि पुरस्कार कर्नाटक संगीत की दुनिया में सर्वोच्च सम्मान में से एक है, जो चेन्नई स्थित म्यूजिक अकादमी द्वारा दिया जाता है।
- For the year **2025**, it has been conferred upon **violin maestro R.K. Shriramkumar**.  
2025 के लिए यह पुरस्कार प्रसिद्ध वायलिन वादक आर. के. श्रीरामकुमार को प्रदान किया गया है।

## Musical Legacy | संगीत विरासत

- He belongs to the **Rudrapatnam family** of musicians from Karnataka.  
वह कर्नाटक के रुद्रपट्टणम परिवार से हैं, जो संगीतज्ञों का प्रसिद्ध परिवार है।
- His grandfather **R.K. Venkatarama Shastry** conducted the **Thiruvaiyaru Tyagaraja Aradhana** for nearly 40 years.  
उनके दादा आर. के. वेंकटारामा शास्त्री ने लगभग 40 वर्षों तक त्यागराज आराधना समारोह का आयोजन किया।
- He received initial training in violin from **Savitri Satyamurthy**, later from **V.V. Subrahmanyam** and **vocal music** from **Sangita Kalanidhi D.K. Jayaraman**.  
उन्होंने वायलिन की प्रारंभिक शिक्षा सावित्री सत्यमूर्ति से ली और बाद में वी. वी. सुब्रह्मण्यम और डी. के. जयरामन से कर्नाटिक गायन सीखा।



---

## Recognition & Contributions | मान्यता और योगदान

- Acknowledged as an authority on **Muthuswami Dikshitar's compositions** and Sangita Sampradaya Pradarshani.  
उन्हें **मुथुस्वामी दीक्षितर की रचनाओं** और संगीत संप्रदाय प्रदर्शनिनी पर प्रामाणिक जानकार माना जाता है।
- Has accompanied legends such as:
  - **Semmangudi Srinivasa Iyer**
  - **M.S. Subbulakshmi**
  - **D.K. Pattammal, T. Brinda, T. Mukta**
  - Modern-day artists like **Sudha Ragunathan, Bombay Jayashri, T.M. Krishna**  
उन्होंने **सेम्मांगुडी श्रीनिवास अय्यर, एम.एस. सुब्बुलक्ष्मी, डी.के. पट्टम्माल, टी. एम. कृष्णा** जैसे कलाकारों के साथ संगति की है।

# US tariffs looming, India looks at easing non-trade barriers, relaxing Chinese FDI

Dialling down of border tensions has yielded space to promote trade, say officials

**SANDEEP SINGH & ANIL SASI**

MUMBAI, NEW DELHI, MARCH 23

WITH SOME dialling down of tensions between India and China along the border, policy makers are more open to upgrading bilat-

eral economic relationships now. It is being viewed as an opportune time, particularly when US President Donald Trump is push-

ing India to the corner on reducing tariffs and forcing it to agree to terms set by Washington, especially on tariffs.

According to sources aware of developments, discussions are on between departments to

**CONTINUED ON PAGE 2**

Year	India's export to China	Change in %	India's import from China	Change in %	Trade deficit	Total trade	Change in %
2020	18.95	10.69%	58.71	-14.1%	39.76	77.66	-9.14%
2021	23.05	21.64%	87.65	49.29%	64.6	110.7	42.54%
2022	15.15	-34.27%	102.63	17.09%	87.48	117.78	6.4%
2023	16.23	7.13%	99.59	-2.96%	83.36	115.82	-1.66%
2024*	8.46	-9.23%	50.35	-9.02%	41.89	58.81	-9.05%

\*Jan-Jul Source: Department of Commerce, Ministry of Commerce and Industry; Embassy of India in Beijing


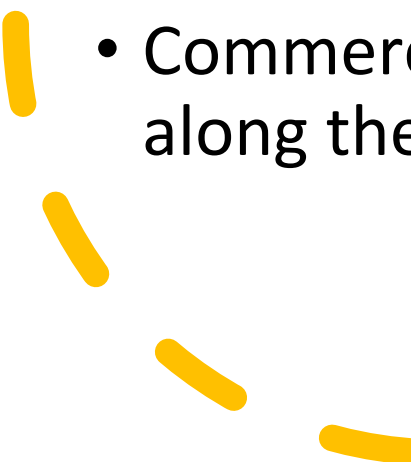
**EXPLAINED**

## E Signal to US

THERE IS a growing view in India that entering into a visibly closer dialogue with China on normalising business ties could send out a signal to the US and likely act as a potential hedge. Talks are on to consider diluting some of the restrictions on trade and investments put in place after the Galwan clashes in 2020.

# Coal Production in India



- 
- India has achieved a historic milestone by surpassing 1 billion tonnes of coal production in FY 2024–25, a feat hailed by Prime Minister as a proud moment reflecting energy security and self-reliance.
  - About Coal Production in India:
  - Historical Background:
  - Commercial coal mining in India began in 1774 at Raniganj Coalfields along the Damodar River.
- 

## Nationalisation of Coal:

- Coking coal mines **nationalised in 1972** under the Coking Coal Mines Act.
- Non-coking coal mines **nationalised in 1973** under the Coal Mines (Nationalisation) Act.

## Gondwana Coal:

**Age:** Formed around 250–300 million years ago (Permian period).

**Location:** Found in peninsular India.

**Major States:** Jharkhand, Odisha, Chhattisgarh, West Bengal, Madhya Pradesh, and Maharashtra.

### **Characteristics:**

- High carbon content and high calorific value.
- Contains moisture and volatile matter.
- Mostly bituminous and sub-bituminous in nature.

**Uses:** Primarily used for power generation, steel production, and industrial purposes.

## Tertiary Coal:

**Age:** Formed around 15–60 million years ago (Tertiary period).

**Location:** Found in northeastern states and parts of Jammu & Kashmir.

**Major States:** Assam, Meghalaya, Arunachal Pradesh, Nagaland, Jammu & Kashmir, and Rajasthan.

## **Characteristics:**

- Higher moisture content and lower carbon concentration.
- Mostly lignite or peat with lower calorific value.

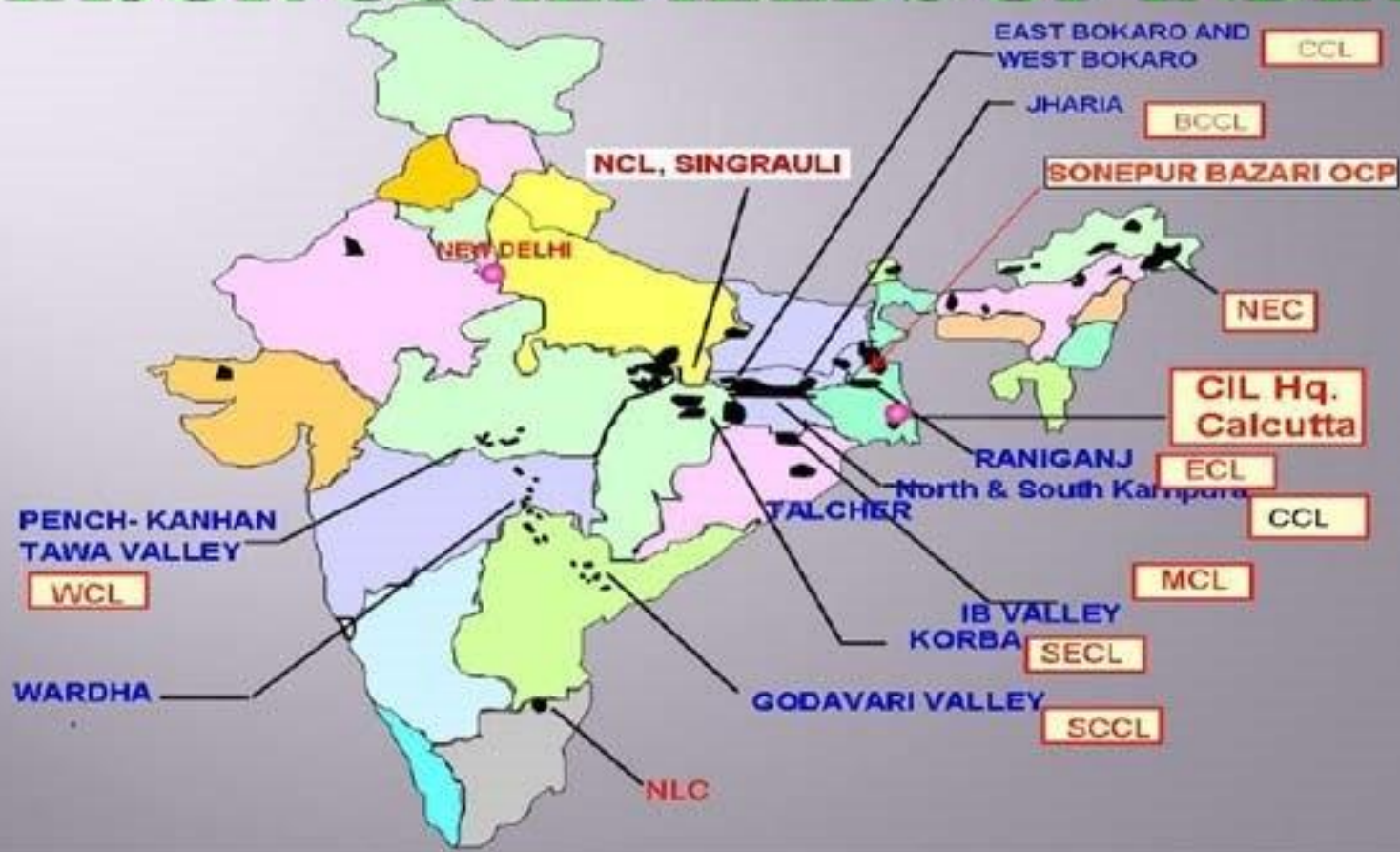
**Uses:** Used for power generation and domestic heating.

## Types of Coal in India:

- **Anthracite:** Highest carbon content (80-95%), found in Jammu & Kashmir.
- **Bituminous:** 60-80% carbon content, found in Jharkhand, Odisha, West Bengal, Chhattisgarh, and Madhya Pradesh.
- **Sub-bituminous:** Dull black coal, higher energy than lignite.
- **Lignite:** Low carbon content (40-55%), found in Tamil Nadu, Rajasthan, and Assam.



# MAJOR COALFIELDS OF INDIA



## Top Coal Producers in the World (Rank-wise):


**China** – Largest producer globally, contributing around 50% of world production.

**India** – Second-largest coal producer with over 1 billion tonnes produced in 2024-25.

**United States** – Major exporter and consumer, ranking third globally.



## Coal Producing States in India (Rank-wise):

- 1. Jharkhand** – Largest reserves and major coking coal source.
  - 2. Odisha** – Large contributor with major thermal coal mines.
  - 3. Chhattisgarh** – Key producer with some of the world's largest coal mines.
  - 4. West Bengal** – Historic coalfields such as Raniganj.
- 


<b><u>Coalfield</u></b>	<b><u>Location</u></b>	<b><u>Type</u></b>
<b>Jharia Coalfield</b>	Dhanbad, Jharkhand	Bituminous (coking)
<b>Raniganj Coalfield</b>	West Bengal	Bituminous (thermal)
<b>Korba Coalfield</b>	Chhattisgarh	Thermal coal
<b>Singrauli Coalfield</b>	Madhya Pradesh & Uttar Pradesh	Non-coking thermal coal
<b>Talcher Coalfield</b>	Odisha	Thermal coal
<b>Wardha Valley Coalfield</b>	Maharashtra	Thermal coal
<b>Neyveli Lignite Mines</b>	Tamil Nadu	Lignite

## Also in news:

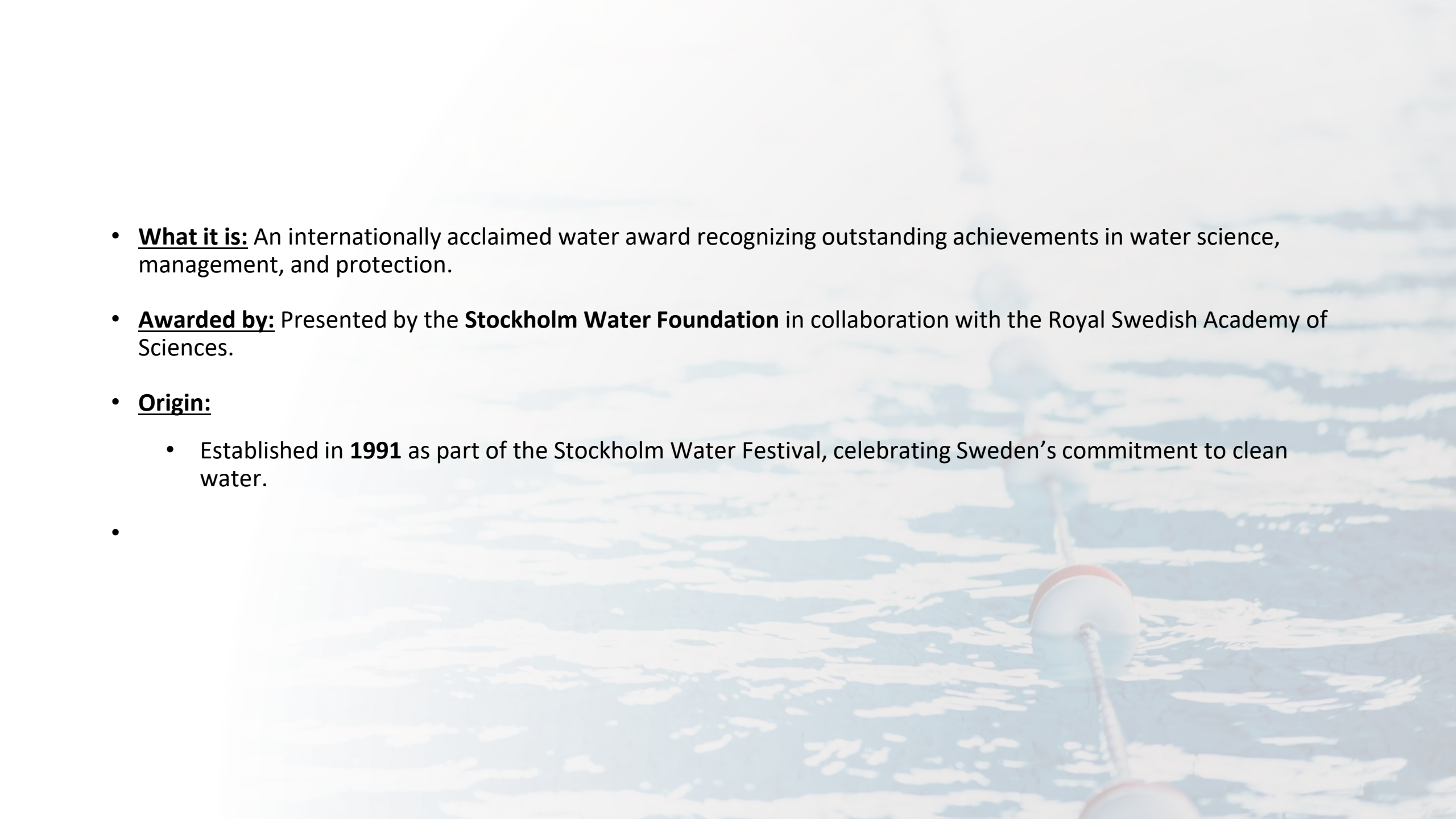
- Chhattisgarh-based Coal India subsidiary South Eastern Coalfields Limited's (SECL) **Gevra and Kusmunda coal mines** have secured the 2<sup>nd</sup> and 4<sup>th</sup> spot in the list of the World's 10 largest coal mines released by WorldAtlas.com in 2024.



Stockholm Water Prize 2025

- 
- Günter Blöschl, a renowned hydrologist, has been awarded the 2025 Stockholm Water Prize for his pioneering research on flood risks and climate change impacts globally.



- 
- **What it is:** An internationally acclaimed water award recognizing outstanding achievements in water science, management, and protection.
  - **Awarded by:** Presented by the **Stockholm Water Foundation** in collaboration with the Royal Swedish Academy of Sciences.
  - **Origin:**
    - Established in **1991** as part of the Stockholm Water Festival, celebrating Sweden's commitment to clean water.
  -



- **Features:**

- Presented annually by King Carl XVI Gustaf of Sweden during the World Water Week in August.
- Nominations can be made by anyone (except self-nominations or close relatives).
- The Prize Committee shortlists candidates, and final approval is done by the Board of the Stockholm Water Foundation.

- **First Winner:**

- Professor **David W. Schindler** (Canada, 1991), recognized for contributions to understanding pollution and climate impacts on lakes.

-

## Water

About World Water Day 2025:

## Date

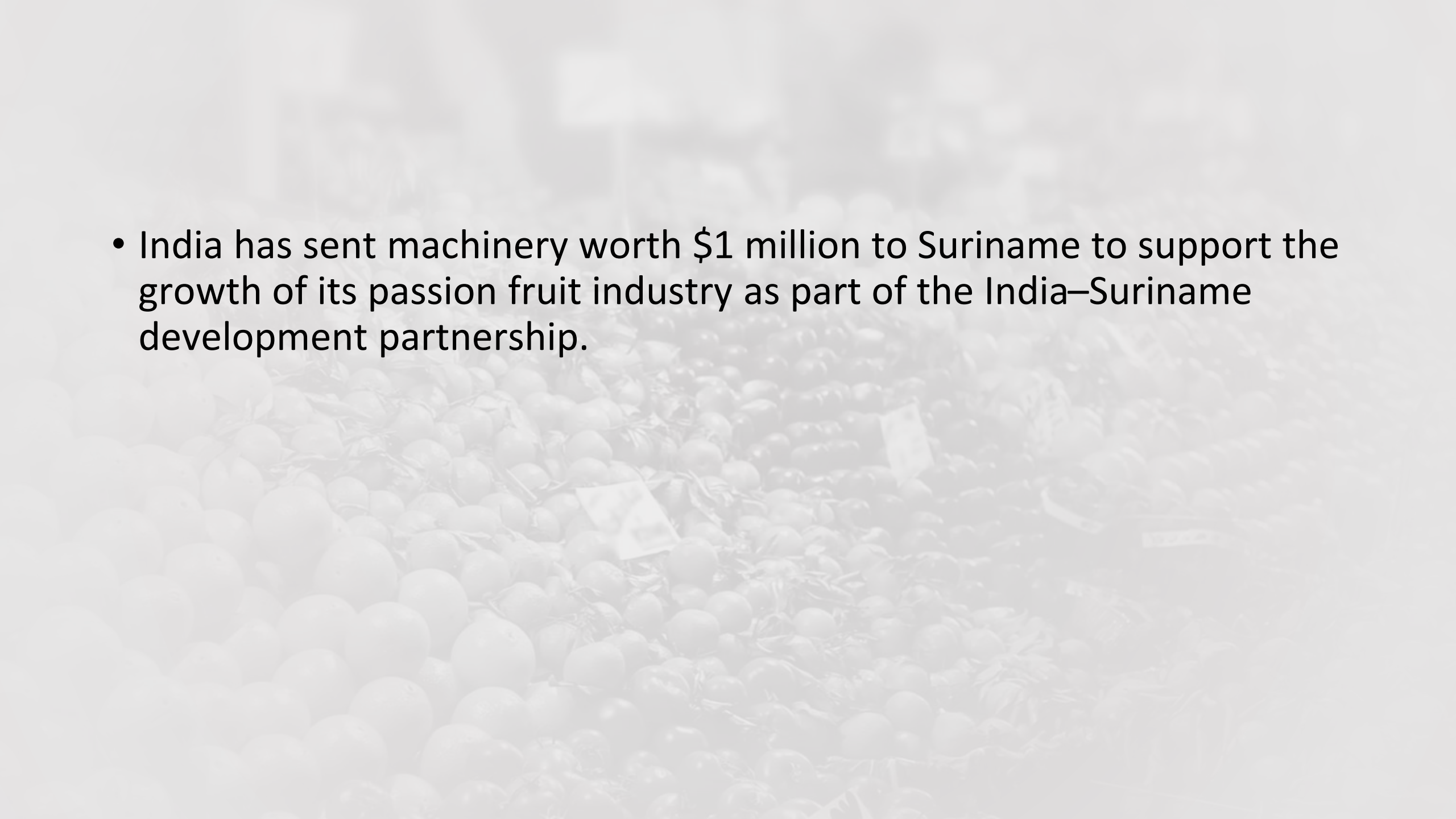
Date  
Celebrated: Annually  
on March 22.

## Theme

Theme for  
2025: “Glacier  
Preservation” –  
focusing on  
safeguarding glaciers  
as vital freshwater  
reserves.



Suriname

- 
- A large pile of fresh passion fruit, some with green leaves, is shown in a market setting. The background is slightly blurred, showing other market stalls and people. The text is overlaid on the left side of the image.
- India has sent machinery worth \$1 million to Suriname to support the growth of its passion fruit industry as part of the India–Suriname development partnership.





CARIBBEAN SEA

ATLANTIC OCEAN

VENEZUELA

GUYANA

PARAMARIBO

COLOMBIA

SURINAME

FRENCH  
GUIANA  
(FRANCE)

ECUADOR

PERU

BRAZIL

PACIFIC OCEAN

BOLIVIA



### Location:

- Suriname is located on the northern coast of South America.

### Capital:

### Neighbouring Nations:

- Borders the Atlantic Ocean (north), French Guiana (east), Brazil (south), and Guyana (west).



---

# Word of the day

## **Recuperate:**

regain or make up for; regain a former condition after a financial loss; restore to good health or strength; get over an illness or shock

---

**Synonym:** recover

---

**Usage:** *Her mother took a long time to recuperate from the operation.*

---

**Pronunciation:** newsth.live/  
recuperatepro

---

**International Phonetic Alphabet:** /rɪ'k(j)u:pə,ɪt/

---



10 MCQ from the session

**What is “Tavasya” in the context of Indian defence?**

**भारतीय रक्षा के संदर्भ में "तवस्या" क्या है?**

- A. A naval aircraft
- B. A submarine
- C. A stealth frigate built under Indo-Russia agreement
- D. A coastal radar system

**Which Indian shipyard is building the Tavasya frigate?**

**तवस्या फ्रिगेट का निर्माण किस भारतीय शिपयार्ड में किया जा रहा है?**

- A. Mazagon Dock Shipbuilders
- B. Cochin Shipyard
- C. Goa Shipyard Ltd. (GSL)
- D. Garden Reach Shipbuilders

**Who provides the engines for the Krivak-class frigates?**

**क्रिवाक-कलास फ्रिगेट्स के इंजन कौन प्रदान करता है?**

- A. France
- B. Russia
- C. Ukraine's Zorya-Mashproekt
- D. Israel

**Who is the first author from Chhattisgarh to win the Jnanpith Award?**

**ज्ञानपीठ पुरस्कार जीतने वाले छत्तीसगढ़ के पहले लेखक कौन हैं?**

- A. Gopal Das Neeraj
- B. Vinod Kumar Shukla
- C. Ashok Vajpeyi
- D. Uday Prakash

**What does the Jnanpith Award include?**

**ज्ञानपीठ पुरस्कार में क्या-क्या शामिल है?**

- A. ₹1 crore cash
- B. ₹11 lakh, Saraswati idol, and citation
- C. Only a certificate
- D. ₹25 lakh and gold medal

**At what age do infants begin encoding memories, as per fMRI studies?**

**fMRI अध्ययन के अनुसार, शिशु किस उम्र से स्मृतियाँ संचित करना शुरू करते हैं?**

- A. At birth
- B. 3 months
- C. 6 months
- D. 12 months



**What part of the brain is associated with memory formation in infants?**

**शिशुओं में स्मृति निर्माण से मस्तिष्क का कौन सा भाग जुड़ा होता है?**

- A. Amygdala
- B. Cerebellum
- C. Hippocampus
- D. Cortex

**Who won the 2025 Sangita Kalanidhi Award?**

**2025 का संगीत कलानिधि पुरस्कार किसे मिला?**

- A. T.M. Krishna
- B. Bombay Jayashri
- C. R.K. Shriramkumar
- D. M.S. Subbulakshmi

**Which state has the largest coal reserves in India?**

**भारत में सबसे बड़े कोयला भंडार वाला राज्य कौन सा है?**

- A. Odisha
- B. Chhattisgarh
- C. West Bengal
- D. Jharkhand

**Who won the 2025 Stockholm Water Prize?**

**2025 स्टॉकहोम वॉटर पुरस्कार किसे प्रदान किया गया?**

- A. David Schindler
- B. Sunita Narain
- C. Günter Blöschl
- D. Vandana Shiva

# CURRENT AFFAIRS

By Bhunesh Sir

- ✓ UPDATED CURRENT AFFAIRS
- ✓ COMPLETE 2 YEARS (2023 + 2024) CURRENT AFFAIRS
- ✓ COMPLETE NOTES (PDF)
- ✓ 360° DEGREE EXAMS COVERED

~~₹999/-~~ ₹750/-



CLASS24

# COMPLETE GK/GS COURSE

By Bhunesh Sir

- ✓ STATIC GK
- ✓ HISTORY
- ✓ POLITY
- ✓ GEOGRAPHY
- ✓ ECONOMICS
- ✓ SCIENCE

~~₹999/-~~ ₹750/-

USE CODE - B25

CALL FOR SUPPORT: +91-7414862047

USE CODE - B25



# SSC CGL



## SELECTION BATCH

10 Month

10%

I

- 2 Year Program
- 700+ Hours Classroom Content
- LIVE FROM CLASSROOM
- Bilingual
- TEST SERIES
- Classes by **India's Best Teachers**

**50% OFF**  
Use Code **SSC50**

~~₹12999/-~~ ₹6499/-


Selection



**START YOUR JOURNEY  
TO SUCCESS NOW.**

**CALL FOR SUPPORT- 7414862047**

Country with Has No Mosquitoes

A group of people are clapping in a dimly lit room. The focus is on the hands and forearms of several individuals, some in the foreground and some blurred in the background. The lighting is soft and moody, with a blueish tint. In the top left corner, there is a solid orange horizontal bar and a cluster of small, glowing red and blue dots. The text 'Thank you guys.' is overlaid on the left side of the image in a white, sans-serif font, with a thin white horizontal line underneath it.

Thank you  
guys.

---