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THE HINDU NEWSPAPER

01 JULY 2026

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PCS Special:	01 July
01J7	Germany and Netherlands achieve dubious distinction following exits बाहर होने के बाद जर्मनी और नीदरलैंड्स ने एक अवांछित रिकॉर्ड बनाया



Germany and Netherlands achieve dubious distinction following exits



PCS AFP
For the first time ever, two top-10 ranked teams were eliminated in the first round of the knockout stage of the FIFA World Cup. Germany (ranked No. 10) and the Netherlands (No. 8) achieved the dubious distinction after losing on penalties to Paraguay and Morocco, respectively, in the round of 32 on Monday.

01J7. Germany and Netherlands achieve dubious distinction following exits

बाहर होने के बाद जर्मनी और नीदरलैंड्स ने एक अवांछित रिकॉर्ड बनाया

- For the first time ever, two top-10 ranked teams were eliminated in the first round of the knockout stage of the FIFA World Cup.

पहली बार, फीफा विश्व कप के नॉकआउट चरण के पहले दौर में शीर्ष-10 रैंकिंग वाली दो टीमों बाहर हो गईं।

- Germany (ranked No. 10) and the Netherlands (No. 8) achieved the dubious distinction after losing on penalties to Paraguay and Morocco, respectively, in the round of 32 on Monday.**

जर्मनी (विश्व रैंकिंग 10) और नीदरलैंड्स (विश्व रैंकिंग 8) ने राउंड ऑफ 32 में सोमवार को क्रमशः पराग्वे और मोरक्को से पेनल्टी शूटआउट में हारने के बाद यह अवांछित रिकॉर्ड अपने नाम किया।

GS Paper 1: History	01 July 2026
TOPICS COVERED	
01J7	Etruscan tomb now on public display after over 160 years एट्रस्कन मकबरा अब सार्वजनिक प्रदर्शन पर, 160 वर्षों से अधिक समय के बाद

Etruscan tomb now on public display after over 160 years

GS 1: History: WH
Reuters
ROME

One of the most important surviving pieces of ancient Etruscan artwork went on permanent display at Rome's National Etruscan Museum of Villa Giulia on Tuesday, after the state stepped in to buy the frescoed tomb.

Named after the archaeologist who unearthed it in 1857, the François Tomb was a richly decorated burial chamber in the ancient city of Vulci, a centre of power for the Etruscan civilisation.

The Italian state spent €15 million (\$17 million) on a series of celebrated frescoes found in the central hall of the tomb, which were painted between 340 and 320 BC, combining scenes from Greek mythology with episodes from Etruscan history.

"The François Tomb is one of the great treasures of archaeology, in particular, of Etruscan culture. It tells the story of families, heroes, gods, and warriors of the Etruscan time," said Luana Toniolo, head of the Villa Giulia museum.

The Etruscans dominated large swathes of central Italy before the rise of ancient Rome and helped shape early Roman culture. The François Tomb offers a rare glimpse of the conflict between the local foes. Among the best-known scenes are the sacrifice of Trojan prisoners by Achilles and the liberation of an Etruscan nobleman by Mastarna, a warrior whom the Roman emperor Claudius later identified as Servius Tullius, the sixth king of Rome. "This is the only portrait of a Roman king that we actually have," said Ms. Toniolo.

The tomb was found on land that belonged to the aristocratic Torlonia family and the frescoes remained in their private collection until now. European museums loaned Villa Giulia artefacts of the tomb which are now being shown alongside the frescoes for the first time in over 160 years.

01J7. Etruscan tomb now on public display after over 160 years

एट्रस्कन मकबरा अब सार्वजनिक प्रदर्शन पर, 160 वर्षों से अधिक समय के बाद

- One of the most important surviving pieces of ancient **Etruscan artwork** went on permanent display at **Rome's National Etruscan Museum of Villa Giulia** on Tuesday, after the state stepped in to buy the frescoed tomb.

प्राचीन एट्रस्कन कला की सबसे महत्वपूर्ण संरक्षित कृतियों में से एक को रोम के नेशनल एट्रस्कन म्यूजियम ऑफ विला जूलिया में मंगलवार को स्थायी प्रदर्शन के लिए रखा गया, जब राज्य ने हस्तक्षेप कर भित्तिचित्रों से सुसज्जित इस मकबरे को खरीद लिया।

- The Italian state spent **€15 million (\$17 million)** on a series of celebrated **frescoes** found in the central hall of the tomb, **which were painted between 340 and 320 BC, combining scenes from Greek mythology with episodes from Etruscan history.**

इतालवी राज्य ने मकबरे के केंद्रीय कक्ष में मिले प्रसिद्ध भित्तिचित्रों (फ्रेस्को) की श्रृंखला पर **€15 मिलियन (17 मिलियन डॉलर)** खर्च किए, जिन्हें 340 से 320 ईसा पूर्व के बीच चित्रित किया गया था और जिनमें यूनानी पौराणिक कथाओं के दृश्य एट्रस्कन इतिहास की घटनाओं के साथ संयोजित हैं।

- The **Etruscans** dominated large swathes of **central Italy** before the rise of **ancient Rome** and helped shape early **Roman culture.**

एट्रस्कनों ने प्राचीन रोम के उदय से पहले मध्य इटली के विशाल क्षेत्रों पर प्रभुत्व स्थापित

किया और प्रारंभिक रोमन संस्कृति को आकार देने में सहायता की।



- The **François Tomb** offers a rare glimpse of the conflict between the local foes.
 फ्रांस्वा मकबरा स्थानीय प्रतिद्वंद्वियों के बीच हुए संघर्ष की एक दुर्लभ झलक प्रस्तुत करता है।
- Among the best-known scenes are the **sacrifice of Trojan prisoners by Achilles** and the liberation of an **Etruscan nobleman by Mastarna**, a warrior whom the **Roman emperor Claudius** later identified as **Servius Tullius**, the **sixth king of Rome**.
 सबसे प्रसिद्ध दृश्यों में अकिलीस द्वारा ट्रोजन बंदियों का बलिदान तथा मास्टार्ना द्वारा एक एट्रस्कन कुलीन व्यक्ति की मुक्ति का दृश्य शामिल है, जिसे बाद में रोमन सम्राट क्लॉडियस ने सर्वियस टुलियस, अर्थात रोम के छठे राजा, के रूप में पहचाना।

Etruscan History

- The **Etruscans** were an ancient people of **central Italy** who created one of the earliest urban civilizations of the northern Mediterranean.
- Their homeland was called **Etruria**, roughly covering modern **Tuscany**, parts of **Lazio**, and **Umbria**.
- They flourished mainly from around the **9th century BCE to the 1st century BCE**.
- They existed before the rise of Rome and deeply influenced early Roman culture, religion, engineering, architecture, political symbols, and urban life.
- The **Greeks** called them **Tyrrhenians**, and the sea west of Italy is still called the **Tyrrhenian Sea**.

GS Paper 1: Geography

01 July 2026

TOPICS COVERED

01J7 One dead, 17 injured as naphtha pipeline catches fire in Bengal
 पश्चिम बंगाल में नैफ्था पाइपलाइन में आग लगने से एक की मृत्यु, 17 घायल

One dead, 17 injured as naphtha pipeline catches fire in Bengal

GS I: Geography
 The Hindu Bureau
 HALDIA

One person died and 17 were injured after a fire broke out in a naphtha pipeline of Haldia Petrochemicals Ltd. in Purba Medinipur district of West Bengal early on Tuesday morning.

Efforts to contain the fire continued till late in the evening. The fire broke out around 4 a.m., and within moments, spread to Chiranjeevpur in Ward No. 13 of Haldia Municipality.

Several houses in the vicinity caught fire. Since areas surrounding railway

tracks were also affected by the fire, railway services were temporarily affected.

The company, in a statement, said, "Preliminary information suggests that the incident may have occurred in the vicinity of an unauthorized naphtha theft point located in the plant vicinity. Naphtha is a highly combustible and extremely flammable hydrocarbon, and the company has consistently cautioned local communities against any unauthorized access to or handling of petroleum products due to the serious safety risks involved," it said.

01J7. One dead, 17 injured as naphtha pipeline catches fire in Bengal

पश्चिम बंगाल में नैफ्था पाइपलाइन में आग लगने से एक की मृत्यु, 17 घायल

- Naphtha** is a highly combustible and extremely flammable hydrocarbon, and the company has consistently cautioned local communities against any unauthorized access to or handling of petroleum products due to the serious safety risks involved," it said.

कंपनी ने कहा कि नैफ्था एक अत्यधिक दहनशील

हाइड्रोकार्बन है तथा इससे गंभीर सुरक्षा जोखिम जुड़े हुए हैं। इसलिए कंपनी

लगातार स्थानीय समुदायों को पेट्रोलियम उत्पादों तक किसी भी प्रकार की

अनधिकृत पहुँच अथवा उनके अनुचित उपयोग से दूर रहने की चेतावनी देती रही



Firefighters try to control the blaze that broke out in a Haldia Petrochemicals pipeline in West Bengal on Tuesday. PTI

है।



Haldia

- **Haldia** is an important **river-port based industrial town** in **Purba Medinipur district** of **West Bengal**.
- It is **located near the meeting zone of the Hooghly River and the Haldi River**, close to the northern approach of the **Bay of Bengal**.
- Haldia is important in geography because it shows how **port location, river transport, industrial raw materials, market access, and planned industrial development** together create an industrial hub.

GS Paper II: Polity		01 July 2026
TOPICS COVERED		
01J7	Even the 'wicked' have the right to a lawyer, SC had said in a judgment उच्चतम न्यायालय ने निर्णय में कहा था कि 'दुष्ट' व्यक्ति को भी वकील पाने का अधिकार है	
01J7	Venugopal moves privilege notice against Rajnath over Operation Sindoor casualties वेणुगोपाल ने ऑपरेशन सिंदूर में हताहतों के मुद्दे पर राजनाथ सिंह के विरुद्ध विशेषाधिकार हनन का नोटिस दिया	
01J7	Study breaks down reasons for low gram sabha turnout अध्ययन में ग्राम सभा में कम उपस्थिति के कारणों का विश्लेषण	



Even the 'wicked' have the right to a lawyer, SC had said in a judgment

CS II: Polity

NEWS ANALYSIS

Krishnadas Rajagopal
NEW DELHI

The Faizabad Bar's resolution to deny legal representation to the accused in the Ram Temple embezzlement case transgresses a Supreme Court judgment that even a "wicked" person has a fundamental right to a competent advocate.

The Supreme Court judgment that clearly enunciates this highest of the traditions of the Bar is based on a case originating in Tamil Nadu regarding a confrontation between a lawyer and local policeman in Coimbatore. The local Bar Association had passed a resolution that no lawyer would represent the accused policeman.

A Division Bench of Justices Markandey Katju and

A 2010 judgment had declared that such resolutions by Bar bodies were 'wholly illegal, against all traditions and professional ethics'

Gyan Sudha Misra (both retired now), in a 2010 judgment in *A.S. Mohammed Rafi versus State of Tamil Nadu*, declared that such resolutions by Bar bodies were "wholly illegal, against all traditions and professional ethics".

'Duty of a lawyer'

"Every person, however wicked, depraved, vile, degenerate, perverted, loathsome, execrable, vicious or repulsive he may be regarded by society has a right to be defended in a court of law, and correspondingly, it is the duty of the lawyer to defend him,"

Justice Katju famously observed in a short judgment.

The judgment referred to Article 22(1) of the Constitution, which mandates that an arrested person should not be "denied the right to consult, and to be defended by, a legal practitioner of his choice".

Again, the 'Standards of Professional Conduct and Etiquette' chapter of the Bar Council of India Rules require that an advocate is bound to accept any brief unless special circumstances justify refusal.

"Professional ethics requires that a lawyer cannot refuse a brief, provided a client is willing to pay his fee, and the lawyer is not otherwise engaged," the court said.

A boycott of an accused, even if he is a suspected terrorist, rapist, or mass murderer, was against all norms of the Constitution.

The judgment is remembered for giving historical examples of lawyers, real and fictional, standing up for professional values.

Reference to Erskine

Justice Katju referred to Thomas Erskine's defence of Thomas Paine, facing treason charges for his pamphlet "The Rights of Man" on the French Revolution, even at the cost of losing his position as the Attorney-General for the Prince of Wales.

The Bench had quoted the "ringing words" of the fictional Atticus Finch in Harper Lee's book *To Kill a Mockingbird* about courage in profession: "Courage is not a man with a gun in his hand. It is knowing you are licked before you begin, but you begin anyway and you see it through no matter what. You rarely win, but sometimes you do."

01J7. Even the 'wicked' have the right to a lawyer, SC had said in a judgment उच्चतम न्यायालय ने निर्णय में कहा था कि 'दुष्ट' व्यक्ति को भी वकील पाने का अधिकार है

- The judgment referred to **Article 22(1)** of the **Constitution**, which mandates that an arrested person should not be "denied the right to consult, and to be defended by, a **legal practitioner** of his choice".

निर्णय में संविधान के अनुच्छेद 22(1) का उल्लेख किया गया, जिसके अनुसार किसी गिरफ्तार व्यक्ति को अपनी पसंद के विधिक अभिकर्ता (Legal Practitioner) से परामर्श करने तथा उसके द्वारा अपना बचाव कराने के अधिकार से "वंचित नहीं किया जा सकता"।

Venugopal moves **privilege notice** against Rajnath over Operation Sindoor casualties

GS II: Polity

The Hindu Bureau
NEW DELHI

Congress general secretary K.C. Venugopal on Tuesday moved a privilege notice against Defence Minister Rajnath Singh in the Lok Sabha, accusing him of misleading Parliament by stating during the Operation Sindoor debate last year that no Indian soldier had been killed.

In a letter to Lok Sabha Speaker Om Birla, Mr. Venugopal sought initiation of privilege proceedings against the Defence Minister under Rule 223 of the Rules of Procedure and Conduct of Business in the Lok Sabha.

The Congress leader said that during the discussion held in July 2025 on the Pahalgam terror attack



K.C. Venugopal

and Operation Sindoor, Mr. Singh had told the House that no harm had come to Indian soldiers.

However, he noted that the government had since acknowledged that six personnel of the armed forces died during the military operation.

"The Minister's statement on the floor of the House that there had been

no casualties during Operation Sindoor was clearly misleading and incorrect," Mr. Venugopal said in the notice, adding that misleading Parliament or withholding information amounted to a breach of privilege and contempt of the House.

"How could he, in July 2025, say that no Indian soldier was martyred, and then a year later the forces announce that we have lost six jawans?" he asked in a post on X.

'Insult to the families'

He said withholding information about the deaths was an insult to the families of the personnel and the armed forces, adding that they had laid down their lives in defence of the nation.

01J7. Venugopal moves privilege notice against Rajnath over Operation Sindoor casualties

वेणुगोपाल ने ऑपरेशन सिंदूर में हताहतों के मुद्दे पर राजनाथ सिंह के विरुद्ध विशेषाधिकार हनन का नोटिस दिया

- Congress general secretary **K.C. Venugopal** on Tuesday moved a **privilege notice** against **Defence Minister Rajnath Singh** in the **Lok Sabha**, accusing him of **misleading Parliament** by stating during the **Operation Sindoor** debate last year that no Indian soldier had been killed.

कांग्रेस के महासचिव के.सी. वेणुगोपाल ने मंगलवार को लोकसभा में रक्षा मंत्री राजनाथ सिंह के विरुद्ध विशेषाधिकार हनन का नोटिस (Privilege Notice) दिया। उन्होंने आरोप लगाया कि ऑपरेशन सिंदूर पर पिछले वर्ष हुई चर्चा के दौरान मंत्री ने यह कहकर संसद को गुमराह किया कि किसी भी भारतीय सैनिक की मृत्यु नहीं हुई थी।

- In a letter to **Lok Sabha Speaker Om Birla**, Mr. Venugopal sought initiation of **privilege proceedings** against the **Defence Minister** under **Rule 223 of the Rules of Procedure and Conduct of Business in the Lok Sabha**.

लोकसभा अध्यक्ष ओम बिरला को लिखे पत्र में श्री वेणुगोपाल ने लोकसभा के प्रक्रिया एवं कार्य संचालन नियमों के नियम 223 के अंतर्गत रक्षा मंत्री के विरुद्ध विशेषाधिकार हनन की कार्यवाही प्रारंभ करने का अनुरोध किया।

- However, he noted that the **government** had since acknowledged that **six personnel of the armed forces died during the military operation**.
हालाँकि, उन्होंने कहा कि बाद में सरकार ने स्वीकार किया कि इस सैन्य अभियान के दौरान सशस्त्र बलों के छह जवानों की मृत्यु हुई थी।
- "The Minister's statement on the floor of the House that there had been no **casualties** during **Operation Sindoor** was clearly **misleading** and **incorrect**," Mr. Venugopal said in the notice, adding that **misleading Parliament or withholding information amounted to a breach of privilege and contempt of the House**.
नोटिस में श्री वेणुगोपाल ने कहा, "ऑपरेशन सिंदूर के दौरान किसी भी हताहत के न होने संबंधी मंत्री का सदन में दिया गया वक्तव्य स्पष्ट रूप से भ्रामक और गलत था।" उन्होंने कहा कि संसद को गुमराह करना अथवा सूचना छिपाना, विशेषाधिकार का उल्लंघन तथा सदन की अवमानना के समान है।

Study breaks down reasons for low gram sabha turnout

Survey finds work constraints the biggest barrier to participation, with transparency concerns, limited outcomes, repetitive meetings, and weak grievance resolution among the other obstacles

GS II: Polity

The Hindu Bureau
NEW DELHI

Livelihood and occupational pressures are the biggest barriers preventing people from participating in gram sabhas, but a new study commissioned by the Union government found that another key factor behind low engagement is "participation fatigue", when repeated meetings are held without visible outcomes.

The study, conducted by the National Institute of Rural Development & Panchayati Raj (NIRDPR), Hyderabad, for the Ministry of Panchayati Raj, covered about 7,790 respondents across 400 gram panchayats in 213 districts spanning 26 States and Union Territories.

While the report does not provide a nationwide attendance rate, it found that nearly half of the res-



Livelihood and work pressures emerged as the main barrier, with many skipping meetings for this reason. FILE PHOTO

pondents (47%) attended only one or two meetings in the previous year. Awareness levels were high but uneven. Almost 94% of respondents reported being aware of gram sabha meetings and 83% were aware of their participation rights. However, only 59% understood quorum and procedural requirements, indicating that

awareness does not necessarily translate into informed engagement.

Daily wagers

Livelihood and occupational pressures emerged as the dominant barrier, with over 55% of respondents citing them as the reason for skipping meetings. A more detailed examination found that most

respondents who were unable to attend gram sabha meetings were daily wage labourers or migrants who had moved in search of livelihood. The report also warned that "participation fatigue" caused by "repeated meetings held without visible outcomes" reduces public interest and dilutes the significance of gram sabha processes.

However, it was a lack of transparency that emerged as the top concern, cited by 45% of respondents, ahead of the lack of visible outcomes (42%), repetitive or formal meetings (33%), trust issues (33%), political interference (28%), and weak grievance resolution (16%).

The report identified the gap between grievances being heard and being resolved as a factor undermining long-term trust and willingness to continue attending meetings.

01J7. Study breaks down reasons for low gram sabha turnout

अध्ययन में ग्राम सभा में कम उपस्थिति के कारणों का विश्लेषण

- Livelihood and occupational pressures** are the biggest barriers preventing people from participating in **gram sabhas**, but a new study commissioned by the **Union government** found that another key factor behind low engagement is "**participation fatigue**", when repeated meetings are held without visible outcomes.

आजीविका एवं व्यावसायिक दबाव लोगों को ग्राम सभाओं में भाग लेने से रोकने वाली सबसे बड़ी बाधाएँ हैं। इसके अतिरिक्त, केंद्र सरकार द्वारा कराए गए एक नए अध्ययन में यह भी पाया गया कि कम भागीदारी का एक प्रमुख कारण "भाग्यदारी थकान (Participation Fatigue)" है, जो तब उत्पन्न होती है जब बार-बार बैठकें आयोजित की जाती हैं, लेकिन उनके कोई स्पष्ट परिणाम दिखाई नहीं देते।
- The study, conducted by the **National Institute of Rural Development & Panchayati Raj (NIRDPR), Hyderabad**, for the **Ministry of Panchayati Raj**, covered about **7,790 respondents** across **400 gram panchayats** in **213 districts** spanning **26 States and Union Territories**.

पंचायती राज मंत्रालय के लिए राष्ट्रीय ग्रामीण विकास एवं पंचायती राज संस्थान (NIRDPR), हैदराबाद द्वारा किए गए इस अध्ययन में 26 राज्यों एवं केंद्र शासित प्रदेशों के 213 जिलों की 400 ग्राम पंचायतों के लगभग 7,790 उत्तरदाताओं को शामिल किया गया।
- While the report does not provide a nationwide **attendance rate**, it found that nearly half of the respondents (**47%**) attended only **one or two meetings** in the previous year.

यद्यपि रिपोर्ट में देशव्यापी उपस्थिति दर का उल्लेख नहीं किया गया है, लेकिन इसमें पाया गया कि लगभग आधे उत्तरदाताओं (47%) ने पिछले वर्ष केवल एक या दो बैठकों में ही भाग लिया।
- Awareness levels** were high but uneven.

जागरूकता का स्तर उच्च था, किन्तु समान रूप से वितरित नहीं था।
- Almost 94% of respondents reported being aware of gram sabha meetings and 83% were aware of their participation rights.**

लगभग 94% उत्तरदाताओं ने बताया कि उन्हें ग्राम सभा की बैठकों की जानकारी थी तथा 83% अपने भागीदारी अधिकारों से परिचित थे।
- However, only 59% understood quorum and procedural requirements, indicating that awareness does not necessarily translate into informed engagement.**

हालाँकि, केवल 59% उत्तरदाता ही कोरम (Quorum) तथा प्रक्रियागत आवश्यकताओं को समझते थे, जिससे यह स्पष्ट होता है कि केवल जागरूकता का होना आवश्यक रूप से प्रभावी एवं सूचित भागीदारी में परिवर्तित नहीं होता।

Daily wagers

दैनिक वेतनभोगी श्रमिक

- However, it was a **lack of transparency** that emerged as the top concern, cited by **45%** of respondents, ahead of the **lack of visible outcomes (42%)**, **repetitive or formal meetings (33%)**, **trust issues (33%)**, **political interference (28%)**, and **weak grievance resolution (16%)**.

हालाँकि, पारदर्शिता की कमी सबसे बड़ी चिंता के रूप में सामने आई, जिसे 45% उत्तरदाताओं ने प्रमुख समस्या बताया। इसके बाद स्पष्ट परिणामों का अभाव (42%), बार-बार अथवा औपचारिक बैठकों का आयोजन (33%), विश्वास की कमी (33%), राजनीतिक हस्तक्षेप (28%), तथा कमजोर शिकायत निवारण व्यवस्था (16%) का स्थान रहा।
- The report identified the gap between **grievances** being heard and being **resolved** as a factor undermining long-term **trust** and willingness to continue attending meetings.

रिपोर्ट में शिकायतों को सुनने और उनके समाधान के बीच मौजूद अंतर को दीर्घकालिक विश्वास तथा बैठकों में निरंतर भाग लेने की लोगों की इच्छा को कमजोर करने वाला एक प्रमुख कारण बताया गया।



TOPICS COVERED	
01J7	Amit Shah launches new FCRA portal and e-OCI card अमित शाह ने नया FCRA पोर्टल और ई-ओसीआई कार्ड लॉन्च किया
01J7	Indian and foreign भारतीय और विदेशी
01J7	NCLAT upholds order to pay PF dues to Jet Airways staff एनसीएलएटी ने जेट एयरवेज़ कर्मचारियों के पीएफ बकाया के भुगतान के आदेश को बरकरार रखा
01J7	FinMin panel clears Budget proposal of ₹1.25 lakh cr. for ISM 2.0 वित्त मंत्रालय के पैनल ने ISM 2.0 के लिए ₹1.25 लाख करोड़ के बजट प्रस्ताव को मंजूरी दी।

Amit Shah launches new FCRA portal and e-OCI card

CS II: Governance
The Hindu Bureau
NEW DELHI

Union Home Minister Amit Shah on Tuesday launched a new portal that, apart from reducing paperwork, will speed up clearance of applications for registration under the Foreign Contribution (Regulation) Act, 2010 (FCRA) and also enable real-time monitoring of foreign fund inflows.

Mr. Shah launched the FCRA 2.0 Portal and an e-Overseas Citizen of India (e-OCI) card initiative in the presence of Union Home Secretary Govind Mohan, Foreign Secretary Vikram Misri, Director of Intelligence Bureau (IB)

Maresh Dixit, and several other senior officials.

At present, around 14,500 organisations with FCRA registrations are working across the country. FCRA registration is mandatory for an NGO or association to receive foreign donations. The Ministry of Home Affairs (MHA) said that, under the Act, approximately 15,000 to 20,000 applications are made each year and about 17,000 annual returns are filed. The portal, hosted on the National Government Cloud (MeghRaj), includes features such as process re-engineering, an integrated dashboard, Aadhaar-based authentication, e-Sign facility, and OCR-based document analysis.



Amit Shah launches FCRA 2.0 Portal in New Delhi. IB chief Maresh Dixit (right) and Home Secretary Govind Mohan are seen. ANI

Unlikely the old website, the new FCRA portal has removed the section on year-wise fresh registrations under the Act. In

2022, the MHA had dropped sections listing NGOs whose registrations were cancelled and the page detailing the annual returns filed by each NGO. The Union Home Minister said the Centre's policy is to ensure transparency and embrace technology so that governance becomes easy for honest people and a strict surveillance system is put in place for wrongdoers, making the country increasingly secure. He said that, prior to 2014, the FCRA system was entangled in files and procedures and was beyond proper oversight, which is critical for both national security and development. In the past few years, there had been a significant increase in the number of applications and the flow of foreign donations, he added.

The new portal would lead to effective monitoring of foreign contributions made with wrong intentions and end physical submission of documents, Mr. Shahe said. He said the e-OCI card would bring great convenience to more than 50 lakh OCI cardholders. After 20 years, when a new passport is issued, there will be no need to re-issue the OCI booklet, and the cardholder's registration number will also become unique, he said. The e-OCI card will eliminate the problem of loss or damage of the document, and cardholders will be able to carry out real-time verification themselves.

01J7. Amit Shah launches new FCRA portal and e-OCI card

अमित शाह ने नया FCRA पोर्टल और ई-ओसीआई कार्ड लॉन्च किया

- **Union Home Minister Amit Shah** on Tuesday launched a new **portal** that, apart from reducing **paperwork**, will speed up clearance of applications for registration under the **Foreign Contribution (Regulation) Act, 2010 (FCRA)** and also enable **real-time monitoring of foreign fund inflows**.

केंद्रीय गृह मंत्री अमित शाह ने मंगलवार को एक नया पोर्टल लॉन्च किया, जो कागजी कार्यवाही को कम करने के साथ-साथ विदेशी अंशदान (विनियमन) अधिनियम, 2010 (FCRA) के अंतर्गत पंजीकरण संबंधी आवेदनों के निस्तारण में तेजी लाएगा तथा विदेशी धन के प्रवाह की रीयल-टाइम निगरानी भी सुनिश्चित करेगा।

- **At present, around 14,500 organisations with FCRA registrations** are working across the country.

वर्तमान में देशभर में FCRA पंजीकरण प्राप्त लगभग 14,500 संगठन कार्यरत हैं।

- The **Ministry of Home Affairs (MHA)** said that, under the Act, approximately **15,000 to 20,000 applications** are made each year and about **17,000 annual returns** are filed.

गृह मंत्रालय (MHA) के अनुसार, इस अधिनियम के अंतर्गत प्रतिवर्ष लगभग 15,000 से 20,000 आवेदन प्राप्त होते हैं तथा लगभग 17,000 वार्षिक विवरणियाँ (Annual Returns) दाखिल की जाती हैं।

- The portal, hosted on the **National Government Cloud (MeghRaj)**, includes features such as **process reengineering**, an **integrated dashboard**, **Aadhaar-based authentication**, **e-Sign facility**, and **OCR-based document analysis**.

राष्ट्रीय सरकारी क्लाउड (MeghRaj) पर संचालित इस पोर्टल में प्रक्रिया पुनर्रचना (Process



Reengineering), एकीकृत डैशबोर्ड, आधार-आधारित प्रमाणीकरण, ई-हस्ताक्षर (e-Sign) सुविधा, तथा OCR आधारित दस्तावेज़ विश्लेषण जैसी सुविधाएँ उपलब्ध हैं।

- Unlike the old website, the new **FCRA Portal** has removed the section on **year-wise fresh registrations** under the Act.
पुरानी वेबसाइट के विपरीत, नए **FCRA पोर्टल** से अधिनियम के अंतर्गत वर्षवार नए पंजीकरणों से संबंधित अनुभाग हटा दिया गया है।
- In **2022**, the **MHA** had dropped sections listing **NGOs** whose registrations were cancelled and the page detailing the **annual returns** filed by each **NGO**.

2022 में गृह मंत्रालय ने उन गैर-सरकारी संगठनों (NGOs) की सूची वाला अनुभाग तथा प्रत्येक NGO द्वारा

दाखिल की गई वार्षिक विवरणियों का पृष्ठ भी हटा दिया था, जिनका पंजीकरण निरस्त किया गया था।

- In the past few years, there had been a significant increase in the number of applications and the flow of **foreign donations**, he added.

उन्होंने कहा कि पिछले कुछ वर्षों में आवेदनों की संख्या तथा विदेशी अनुदानों के प्रवाह में उल्लेखनीय वृद्धि हुई है।

- He said the **e-OCI Card** would bring great convenience to more than **50 lakh OCI cardholders**.

उन्होंने कहा कि ई-ओसीआई कार्ड से 50 लाख से अधिक OCI कार्डधारकों को बड़ी सुविधा मिलेगी।

- After **20 years**, when a new **passport** is issued, there will be no need to re-issue the **OCI booklet**, and the cardholder's **registration number** will also become **unique**, he said.

उन्होंने बताया कि 20 वर्ष बाद नया पासपोर्ट जारी होने पर OCI पुस्तिका को पुनः

जारी कराने की आवश्यकता नहीं होगी तथा प्रत्येक कार्डधारक का पंजीकरण संख्या भी अद्वितीय (Unique) होगी।

- The **e-OCI Card** will eliminate the problem of **loss or damage of the document**, and cardholders will be able to carry out **real-time verification** themselves.

ई-ओसीआई कार्ड दस्तावेज़ के खो जाने अथवा क्षतिग्रस्त होने की समस्या को समाप्त करेगा तथा कार्डधारक स्वयं रीयल-टाइम सत्यापन कर सकेंगे।

01J7. Indian and foreign भारतीय और विदेशी

- At the same time, it advocates the **three-language formula**, with **two languages** required to be native to **India**, one of them ideally the **mother tongue**, in effect relegating **English** to the status of a **foreign language**.

साथ ही, यह त्रिभाषा सूत्र का समर्थन करती है, जिसके अंतर्गत दो भाषाओं का भारत की मूल भाषाएँ होना आवश्यक है, जिनमें से एक आदर्श रूप से मातृभाषा होनी चाहिए। इससे व्यवहार में अंग्रेज़ी को विदेशी भाषा के स्तर पर पहुँचा दिया जाता है।

- While introducing **three languages** from **Class 6**, it said students in **Classes 7, 8 and 9** should also study **three languages**, of which **two** should be "**Bharatiya**".

कक्षा 6 से तीन भाषाएँ लागू करते हुए, बोर्ड ने कहा कि कक्षा 7, 8 और 9 के विद्यार्थियों को भी तीन भाषाओं का अध्ययन करना होगा, जिनमें से दो "भारतीय" भाषाएँ होनी चाहिए।

GS II: Governance

Indian and foreign

Forcing students to learn at least two Indian languages is not ideal

The controversy over introducing a third language from Class 6 stems from an unresolved contradiction in the National Education Policy (NEP) 2020. At several places, the NEP, rightly, extols the special importance of English, especially in mathematics, science and even legal education, and does not club it with other "foreign" languages such as French or Spanish. At the same time, it advocates the three-language formula, with two languages required to be native to India, one of them ideally the mother tongue, in effect relegating English to the status of a foreign language. The Central Board of Secondary Education (CBSE) has implemented this aspect of the NEP, ignoring other welcome observations that the policy makes on language learning. While introducing three languages from Class 6, it said students in Classes 7, 8 and 9 should also study three languages, of which two should be "Bharatiya". Thus, if a student had taken French as a second language along with English, they would have had to forego French and switch to two Bharatiya languages, one of which would be entirely new to them. This could adversely affect their Class 10 Board examination performance, and render redundant the teaching capacity and resources schools had built in those languages. Following backlash, the CBSE has said that students in Classes 7, 8 and 9 need take only one additional Bharatiya language if they had taken English and, say, Spanish. The third language, moreover, will not be tested in the Class 10 examinations. These are, however, temporary arrangements and the CBSE is going ahead with the three language policy with two Bharatiya languages from Class 6.

Prudence demands that if the NEP is to guide the Union government's decisions, it should ensure language learning that serves the best interests of students. The policy speaks of the need for "high-quality bilingual textbooks and teaching-learning materials for science and mathematics, so that students are enabled to think and speak about the two subjects both in their home language/mother tongue and in English". Here, the NEP places the mother tongue and English on an equal footing if STEM is to be central to India's progress. In the same breath, it speaks of the importance of learning languages such as Japanese and German at the secondary level to enhance students' "mobility". The government's vision is to skill Indians for cutting-edge jobs worldwide, building the human capital needed to drive India's development. Instead of atavistic relapses, education initiatives should look ahead to serve at least this vision, even if that model is open to question. Given that the CBSE often becomes the template for much of India, the better course would be to teach the mother tongue and English and, where resources permit and students desire, offer a third language of their choice.



- Thus, if a student had taken **French** as a **second language** along with **English**, they would have had to forego **French** and switch to **two Bharatiya languages**, one of which would be entirely new to them.

इस प्रकार, यदि किसी विद्यार्थी ने अंग्रेज़ी के साथ फ्रेंच को द्वितीय भाषा के रूप में चुना था, तो उसे फ्रेंच छोड़कर दो भारतीय भाषाएँ अपनानी पड़तीं, जिनमें से एक उसके लिए पूर्णतः नई होती।

- This could adversely affect their **Class 10 Board examination** performance, and render redundant the **teaching capacity** and **resources** schools had built in those languages.

इससे उनके कक्षा 10 की बोर्ड परीक्षा के प्रदर्शन पर प्रतिकूल प्रभाव पड़ सकता था तथा उन भाषाओं के लिए विद्यालयों द्वारा विकसित शिक्षण क्षमता और संसाधन भी निरर्थक हो जाते।

- Following backlash, the **CBSE** has said that students in **Classes 7, 8 and 9** need take only **one additional Bharatiya language** if they had taken **English** and, say, **Spanish**.

विरोध के बाद **CBSE** ने कहा कि यदि कक्षा 7, 8 और 9 के विद्यार्थियों ने अंग्रेज़ी तथा, उदाहरणार्थ, स्पेनिश का चयन किया है, तो उन्हें केवल एक अतिरिक्त भारतीय भाषा पढ़नी होगी।

- The **third language**, moreover, will not be tested in the **Class 10 examinations**.

इसके अतिरिक्त, तीसरी भाषा की कक्षा 10 की परीक्षाओं में परीक्षा नहीं होगी।

- These are, however, **temporary arrangements** and the **CBSE** is going ahead with the **three-language policy** with **two Bharatiya languages** from **Class 6**. हालाँकि, ये अस्थायी व्यवस्थाएँ हैं और **CBSE** कक्षा 6 से दो भारतीय भाषाओं सहित त्रिभाषा नीति को आगे बढ़ा रहा है।

- Prudence demands that if the NEP is to guide the Union government's decisions, it should ensure language learning that serves the best interests of students.**

विवेकपूर्ण दृष्टिकोण यह अपेक्षा करता है कि यदि **NEP** केंद्र सरकार के निर्णयों का मार्गदर्शन करती है, तो उसे विद्यार्थियों के सर्वोत्तम हितों की पूर्ति करने वाली भाषा-अधिगम व्यवस्था सुनिश्चित करनी चाहिए।

- The **policy speaks of the need for "high-quality bilingual textbooks and teaching-learning materials" for science and mathematics**, so that students are enabled to think and speak about the two subjects both in their **home language/mother tongue** and in **English**.

यह नीति विज्ञान और गणित के लिए "उच्च गुणवत्ता वाली द्विभाषी पाठ्यपुस्तकों तथा शिक्षण-अधिगम सामग्री" की आवश्यकता पर बल देती है, ताकि विद्यार्थी इन दोनों विषयों पर अपनी घरेलू भाषा/मातृभाषा तथा अंग्रेज़ी दोनों में सोच और अभिव्यक्त कर सकें।

- In the same breath, it speaks of the importance of learning languages such as **Japanese** and **German** at the **secondary level** to enhance students' "**mobility**". इसी संदर्भ में यह माध्यमिक स्तर पर जापानी और जर्मन जैसी भाषाओं के अध्ययन के महत्व का भी उल्लेख करती है, ताकि विद्यार्थियों की "गतिशीलता" बढ़ सके।

- Given that the **CBSE** often becomes the template for much of **India**, the better course would be to teach the **mother tongue** and **English** and, where **resources** permit and **students** desire, offer a **third language** of their choice.

यह देखते हुए कि **CBSE** अक्सर भारत के अधिकांश भागों के लिए एक आदर्श मॉडल बन जाता है, अधिक उपयुक्त मार्ग यह होगा कि मातृभाषा और अंग्रेज़ी का शिक्षण अनिवार्य रूप से कराया जाए तथा जहाँ संसाधन उपलब्ध हों और विद्यार्थी इच्छुक हों, वहाँ उन्हें अपनी पसंद की तीसरी भाषा सीखने का अवसर प्रदान किया जाए।

01J7. FinMin panel clears Budget proposal of ₹1.25 lakh cr. for ISM 2.0

वित्त मंत्रालय के पैनल ने ISM 2.0 के लिए ₹1.25 लाख करोड़ के बजट प्रस्ताव को मंजूरी दी।

FinMin panel clears Budget proposal of ₹1.25 lakh cr. for ISM 2.0

GS II: Governance
Press Trust of India
NEW DELHI

The expenditure department under the Finance Ministry has cleared a Budget proposal entailing an allocation of ₹1.25 lakh crore for India Semiconductor Mission 2.0, as the country looks to advance global chip-making ambitions and cement its position as a semiconductor destination for the world, according to sources.

The approval is significant as it is higher than the outlay of ₹76,000 crore earmarked for ISM 1.0.

Sources said that the Expenditure Finance Committee has greenlit the ₹1.25 lakh crore outlay for ISM 2.0, and that the same will be placed before the Union Cabinet.

The Budget, in February, had sought to give a big boost to the country's manufacturing prowess announcing, among various measures, the second edition of India Semiconductor Mission with a broad objective to promote chip manufacturing ecosystem in the country covering equipment, materials, indigenous designs and related components.

The Centre has maintained that Semiconductor Mission 2.0 announced in the Union Budget signals India's deep commitment to chip manufacturing, with a focus on semiconductor equipment, materials, indigenous intellectual property and resilient supply chains.



- The expenditure department under the Finance Ministry has cleared a Budget proposal entailing an allocation of **₹1.25 lakh crore for India Semiconductor Mission 2.0**, as the country looks to advance global chip-making ambitions and cement its position as a semiconductor destination for the world, according to sources.
वित्त मंत्रालय के व्यय विभाग ने इंडिया सेमीकंडक्टर मिशन 2.0 के लिए ₹1.25 लाख करोड़ के आवंटन वाले बजट प्रस्ताव को मंजूरी दे दी है, क्योंकि देश वैश्विक चिप निर्माण महत्वाकांक्षाओं को आगे बढ़ाने और स्वयं को विश्व के सेमीकंडक्टर गंतव्य के रूप में स्थापित करने का प्रयास कर रहा है, सूत्रों के अनुसार।
- The approval is **significant** as it is higher than the outlay of **₹76,000 crore** earmarked for **ISM 1.0**.
यह मंजूरी महत्वपूर्ण है क्योंकि यह ISM 1.0 के लिए निर्धारित ₹76,000 करोड़ के परिव्यय से अधिक है।
- Sources said that the **Expenditure Finance Committee** has **greenlit** the **₹1.25 lakh crore** outlay for **ISM 2.0**, and that the same will be placed before the **Union Cabinet**.
सूत्रों ने कहा कि व्यय वित्त समिति (Expenditure Finance Committee) ने ISM 2.0 के लिए ₹1.25 लाख करोड़ के परिव्यय को मंजूरी दे दी है और इसे केंद्रीय मंत्रिमंडल के समक्ष प्रस्तुत किया जाएगा।
- The **Budget**, in **February**, had sought to give a big boost to the country's **manufacturing prowess** announcing, among various measures, the **second edition of India Semiconductor Mission** with a broad objective to promote **chip manufacturing ecosystem** in the country covering **equipment, materials, indigenous designs** and related components.
फरवरी में प्रस्तुत बजट में देश की विनिर्माण क्षमता को बड़ा प्रोत्साहन देने का प्रयास किया गया था और विभिन्न उपायों के साथ इंडिया सेमीकंडक्टर मिशन के दूसरे संस्करण की घोषणा की गई थी, जिसका व्यापक उद्देश्य देश में चिप निर्माण पारिस्थितिकी तंत्र को बढ़ावा देना है, जिसमें उपकरण, सामग्री, स्वदेशी डिज़ाइन और संबंधित घटक शामिल हैं।
- The **Centre** has maintained that **Semiconductor Mission 2.0** announced in the **Union Budget** signals India's deep commitment to **chip manufacturing**, with a focus on **semiconductor equipment, materials, indigenous intellectual property** and **resilient supply chains**.
केंद्र सरकार ने कहा है कि केंद्रीय बजट में घोषित सेमीकंडक्टर मिशन 2.0 चिप निर्माण के प्रति भारत की गहरी प्रतिबद्धता को दर्शाता है, जिसमें सेमीकंडक्टर उपकरण, सामग्री, स्वदेशी बौद्धिक संपदा तथा लचीली आपूर्ति शृंखलाओं पर विशेष ध्यान केंद्रित किया गया है।

GS Paper II: International Relations		01 July 2026
TOPICS COVERED		
01J7	India's 'Israel habit' meets West Asian realities भारत की 'इज़राइल-आदत' का सामना पश्चिम एशिया की वास्तविकताओं से	
01J7	'The wait is like torture': Turks in despair as Schengen visa delays mount 'इंतज़ार किसी यातना जैसा है': शेंगेन वीज़ा में देरी बढ़ने से तुर्की के लोग निराश	

The border between Spain and the **British territory of Gibraltar** seen in la Linea de la Concepcion in the country's south on Monday. Works to remove the border controls between **Spain and Gibraltar** are expected to finish in soon, all

Last fence



The border between Spain and the British territory of Gibraltar seen in la Linea de la Concepcion in the country's south on Monday. Works to remove the border controls between Spain and Gibraltar are expected to finish in soon, allowing free movement between the two. AFP



India's 'Israel habit' meets West Asian realities

GS II: IR

When leaders make foreign policy decisions, each may appear reasonable in isolation. However, their cumulative impact can be strikingly different from what was originally intended. As Iranian President Masoud Pezeshkian invited Prime Minister Narendra Modi to the funeral of former Supreme Leader Ayatollah Ali Khamenei, India's deepening engagement with Israel perhaps falls into that category. What was once a mutually beneficial partnership between New Delhi and Tel Aviv seems to have become more of a habit than the product of serious strategic deliberation. Yet, sound policy cannot be guided by the momentum of habit, for habit and strategy often pull in opposite directions.

A reconfigured region

For one thing, it is important to acknowledge the gains from the partnership between India and Israel. India has received considerable military technology and know-how from Israel, as well as expertise in intelligence gathering derived from their extensive counter-insurgency experience. However, the more important question is not only what this relationship provides today, but also what it forecloses over time. Judged on those terms, the picture is not particularly encouraging.

West Asia has been undergoing one of its most intense geopolitical reconfigurations in years, and this one is different in scale. For the past decade, the region's regional arithmetic has rested on the assumption that Iran was a wounded, sanctions-strangled actor whose reach could be curtailed and ambitions contained. That assumption has now been tested and found wanting. American and Israeli military strikes on Iranian facilities have not produced the strategic calm that Tel Aviv had hoped for at the outset of this costly campaign. Iran responded with retaliatory missile and drone salvos and, more importantly, demonstrated that any blockade of the Strait of Hormuz could not be easily overcome by the rhetoric of carrier groups. Once again, the geography of energy has become the geography of coercion. The terms of the final agreement quietly confirm that Iran was not broken.

The last three months have made it clear that the United States-Iran confrontation is not a distant geopolitical contest for New Delhi. It has had a direct impact on India's economy. Most of India's oil imports pass through routes vulnerable to any prolonged conflict in the Gulf. Whenever the Strait of Hormuz becomes a flashpoint, the consequences are felt directly in Indian households. It is here that the strategic canvas becomes more complicated, with every diplomatic choice carrying economic consequences. Strategic flexibility requires shunning comfortable alignments.

Many strategic analysts have long believed that Washington's policy towards Israel is fixed and



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unchanging – a constant around which all regional policy revolves. That assumption now needs to be revised. The public differences between Washington and Tel Aviv, reflected in U.S. President Donald Trump's frequent outbursts against Israeli Prime Minister Benjamin Netanyahu, are no mere diplomatic squall. They appear to be genuine, notwithstanding Mr. Trump's well-known idiosyncrasies, because Washington's strategic calculus in West Asia has changed faster than expected.

The U.S. urgently needs off-ramps, while Mr. Netanyahu, whose political survival is bound up with escalation, has little interest in de-escalation without achieving his maximalist objectives. The friction becomes evident when the patron and the client are at odds, and the once-blank cheque starts to float.

Iran cannot be ignored

Thus, the perception of a shift towards Israel, reflected in Mr. Modi's unexpected visit to Tel Aviv (February 25-26, 2026) just before the U.S. and Israel launched their coordinated attack on Iran (February 28, 2026), becomes riskier when it is made more explicit, as it could place India on the wrong side of a regional reconfiguration that neither Israel nor any third party can control. While Mr. Modi's personal absence from Ayatollah Ali Khamenei's funeral is unsurprising, the choice of India's representatives is itself a deliberate signal. Pairing Minister of State for External Affairs Pabitra Margherita with Bihar Governor Lt. Gen. Syed Ata Hasnain (retired) – himself a soldier-scholar shaped by counter-insurgency experience – may be read as a calibrated posture of political reassurance, while also subtly reflecting India's religious pluralism.

In other words, it reflects a posture that has internalised the war's central lessons without yet being willing to say aloud that Tehran's coercive capacity, demonstrated through the Strait of Hormuz and the missile exchanges, cannot be managed through the optics of Tel Aviv alone. This choice conveys an important diplomatic message of reassurance to Iran, which has demonstrated that it remains a regional heavyweight.

Moreover, Iran is a civilisational state with deep-rooted political and ideological networks across Iraq, Lebanon, Syria, and Yemen, as well as the proven capacity to generate economic pressure that can bypass conventional military deterrence.

A nation that can dictate ceasefire terms to Mr. Trump after absorbing punitive strikes from the U.S. and Israel is not a nation that can be casually discounted. China also appears poised to expand its strategic and economic footprint in Iran, making it imperative for India to exercise greater caution. Greater alignment with Israel risks pushing Tehran further into the China-Pakistan strategic embrace.

There is also the matter of Europe, an underutilised and undervalued element in India's economic planning. India must recognise that Europe's political landscape has turned against Israel's actions in Gaza and Lebanon in ways, and at a pace, that would have been unimaginable two years ago.

More than sentiment, electoral arithmetic is at work. And electoral arithmetic often shapes trade policy and, eventually, the tone of bilateral negotiations. India's status-seeking desire to be seen as a responsible international actor, rather than merely a vast market, and its economic ambitions in Europe – including the operationalisation of the India-European Union Free Trade Agreement – may come under closer scrutiny in the context of its West Asia policy than New Delhi anticipates.

What is unusual about the present moment is that India has no option but to act strategically, independently, and decisively. It has leverage because it has maintained good relations with many Arab Gulf states, from which millions of Indian workers send remittances home. Although Saudi Arabia may once again have found tactical reasons to accommodate Rawalpindi (Pakistan), India's relationship with the United Arab Emirates has grown even stronger.

New Delhi's historical ties with Tehran, though constrained by shifting regional dynamics, have not been completely severed. More fundamentally, India's sheer size combined with its geostrategic attributes makes it an indispensable stakeholder in any emerging regional order. What India needs now is the political will to wield its leverage effectively in pursuit of clearly defined national objectives.

Beyond binary choices

India needs a sufficiently ambitious strategic imagination. But that does not mean choosing between Israel and Iran, for that would be far too simplistic, and history rarely rewards such simplifications. Herein lies the distinction between an adaptive, alignment-driven foreign policy – the kind that follows and adapts to alignments forged by others – and an architectonic foreign policy, which seeks to shape its own strategic environment.

For a country that claims to be 'Vishwabandhu', it is important to recognise that the credibility of such a claim will be tested in moments such as these, when the world is watching India's words and actions. New Delhi's most valuable strategic asset in the coming multipolar decade is its authentic voice as a champion of the Global South, and every visible alignment with Israel in a conflict in which the Global South overwhelmingly sympathises with the Palestinians risks putting that precious capital in jeopardy. The defence technologies provided by Tel Aviv are undeniably valuable. But the strategic price of appearing aligned in a conflict that has reshaped West Asia is no less real.

01J7. India's 'Israel habit' meets West Asian realities

भारत की 'इज़राइल-आदत' का सामना पश्चिम एशिया की वास्तविकताओं से

- India has received considerable military technology and know-how from Israel, as well as expertise in intelligence gathering derived from their extensive counter-insurgency experience.

भारत को इज़राइल से पर्याप्त सैन्य प्रौद्योगिकी, तकनीकी विशेषज्ञता तथा उनके व्यापक विद्रोह-रोधी

अभियानों के अनुभव से विकसित खुफिया जानकारी एकत्र करने की विशेषज्ञता प्राप्त हुई है।

- Iran responded with retaliatory missile and drone salvos and, more importantly, demonstrated that any blockade of the Strait of Hormuz could not be easily overcome by the rhetoric of carrier groups.

ईरान ने जवाबी मिसाइल और ड्रोन हमलों से प्रतिक्रिया दी और, इससे भी अधिक महत्वपूर्ण रूप से, यह प्रदर्शित किया कि हॉर्मुज़ जलडमरूमध्य की किसी भी नाकाबंदी को केवल विमानवाहक युद्धपोत समूहों की शक्ति के दावों से आसानी से समाप्त नहीं किया जा सकता।

- Pairing **Minister of State for External Affairs Pabitra Margherita** with **Bihar Governor Lt. Gen. Syed Ata Hasnain (retired)** — himself a soldier-scholar shaped by **counter-insurgency** experience — may be read as a calibrated posture of **political reassurance**, while also subtly reflecting **India's religious pluralism**.
विदेश राज्य मंत्री पबित्रा मार्गेरिता के साथ बिहार के राज्यपाल लेफ्टिनेंट जनरल सैयद अता हसनैन (सेवानिवृत्त) — जो स्वयं विद्रोह-रोधी अभियानों के अनुभव से विकसित एक सैनिक-विद्वान हैं — को भेजना राजनीतिक आश्वासन की एक संतुलित रणनीति के रूप में देखा जा सकता है, जो साथ ही भारत की धार्मिक बहुलता को भी सूक्ष्म रूप से प्रतिबिंबित करता है।
- Moreover, **Iran is a civilisational state** with deep-rooted **political and ideological networks** across **Iraq, Lebanon, Syria, and Yemen**, as well as the proven capacity to generate **economic pressure** that can bypass conventional **military deterrence**.
इसके अतिरिक्त, ईरान एक सभ्यतागत राष्ट्र है, जिसके इराक, लेबनान, सीरिया और यमन में गहरे राजनीतिक तथा वैचारिक नेटवर्क हैं, साथ ही उसमें ऐसा आर्थिक दबाव उत्पन्न करने की सिद्ध क्षमता भी है जो पारंपरिक सैन्य प्रतिरोध को अप्रभावी बना सकती है।
- China also appears poised to expand its strategic and economic footprint in Iran**, making it imperative for **India** to exercise greater caution.
चीन भी ईरान में अपनी रणनीतिक तथा आर्थिक उपस्थिति का विस्तार करने की स्थिति में दिखाई देता है, जिससे भारत के लिए अधिक सावधानी बरतना अनिवार्य हो जाता है।
- Greater alignment with Israel risks pushing Tehran further into the China-Pakistan strategic embrace**.
इज़राइल के साथ अधिक निकटता तेहरान को और अधिक चीन-पाकिस्तान के रणनीतिक गठजोड़ की ओर धकेलने का जोखिम उत्पन्न करती है।
- India must recognise that Europe's political landscape** has turned against **Israel's actions** in **Gaza** and **Lebanon** in ways, and at a pace, that would have been unimaginable two years ago.
भारत को यह स्वीकार करना चाहिए कि यूरोप का राजनीतिक परिदृश्य, गाज़ा और लेबनान में इज़राइल की कार्रवाइयों के विरुद्ध जिस प्रकार और जिस गति से बदला है, उसकी दो वर्ष पहले कल्पना भी नहीं की जा सकती थी।
- And electoral arithmetic often shapes trade policy** and, eventually, the tone of **bilateral negotiations**.
और चुनावी गणित प्रायः व्यापार नीति तथा अंततः द्विपक्षीय वार्ताओं के स्वरूप को प्रभावित करता है।
- What is unusual about the present moment is that India has no option but to act strategically, independently, and decisively**.
वर्तमान समय की असामान्य विशेषता यह है कि भारत के पास रणनीतिक, स्वतंत्र तथा निर्णायक ढंग से कार्य करने के अतिरिक्त कोई विकल्प नहीं है।
- It has leverage** because it has maintained good relations with many **Arab Gulf states**, from which millions of **Indian workers** send remittances home.
भारत के पास पर्याप्त रणनीतिक प्रभाव है क्योंकि उसने अनेक अरब खाड़ी देशों के साथ अच्छे संबंध बनाए रखे हैं, जहाँ से लाखों भारतीय श्रमिक अपने परिवारों को विदेशी मुद्रा प्रेषण भेजते हैं।

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TOPICS COVERED		
01J7	What is the Centre's new EPFO upgrade? केंद्र का नया EPF उन्नयन (Upgrade) क्या है?	
01J7	Data doubts आँकड़ों पर संदेह	
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	भारत के रणनीतिक भविष्य के लिए संप्रभु कृत्रिम बुद्धिमत्ता की पुनर्कल्पना
01J7	The fiscal tightrope for State govts. राज्य सरकारों के लिए राजकोषीय संतुलन की चुनौती

What is Centre's new EPFO upgrade?

GS III: Economy

EXPLAINER

A. M. Jigeesh

The Employees Provident Fund Organisation (EPFO) recently sent a text message to its subscribers that it is undertaking a "planned database consolidation and upgradation of software applications".

As part of this transition, it said, member services such as claim submission and download of passbooks are temporarily unavailable from June 26 to July 1. As part of the Centralised IT-Enabled System (CITES) project, the EPFO's effort is to modernise its service delivery mechanism through automation and rule-based processing.

Designed by the Centre for Development of Advanced Computing, the project aims to improve operational efficiency. The EPFO is hopeful that the revised mechanism will make the services more transparent, and subscribers will receive seamless services.

Current services

The EPFO is facing several technical and procedural



CITES project aims to improve EPFO's operational efficiency with one national database.

delays in member services, such as the submission of claims for deceased members and the presentation of life certificates for pensioners. At present, the EPFO has a decentralised system with separate databases in each field and regional office. The members are tied to one regional office.

In many cases, even retired beneficiaries had to go to the regional offices in jurisdictions where they had worked to submit claims or clear technical problems. Nominees of deceased members also had to approach the respective regional offices for pension or other claims. The operations are primarily done by more than 120 decentralised databases at present, with no central visibility. There have been com-

plaints that the account operations are "employer-centric" as for the majority of the claims, authorisation of the employer was necessary.

CITES provides a single centralised system architecture with one national database. Now, any PF office can process a member's service request. Members or beneficiaries will now be able to approach any PF office across the country for the redress of their queries and for seeking clarifications. Most of the services, including KYC updates, can be done online using the new platform. The current Universal Account Number (UAN) and password created by the member can be used to access the new system. Functional from 2023, CITES has so far implemented several reforms in the EPFO system, including a centralised pension payment system.

Senior officials say the centralisation process included the migration of several lakh crore data records to the centralised system.

The process

The process started on June 26 and was to be com-

pleted by June 30. The EPFO expects a downtime, due to which the services will be affected. On logging in to the EPFO Member portal using the UAN and password, the members will have access to a unified digital interface. Members can view their membership details, provident fund balances, claim status, pensionable service records, and benefits availed in this interface. EPFO offices can process the claims and can raise queries electronically through the system. Members can respond to these queries online, leading to faster resolution, minimising physical visits to EPFO offices, and thus reducing claim rejections.

Benefits for members

For EPFO members, the centralised system allows them to see all their previous member IDs under the UAN linked with a single KYC (Aadhaar). The status of the PF accumulations, service records and requests will be displayed to the member. The new interface simplifies transfers, helps maintain an accurate service history, and enables faster settlements, according to the EPFO.

01J7. What is the Centre's new EPFO upgrade?

केंद्र का नया EPF उन्नयन (Upgrade) क्या है?

- The **Employees' Provident Fund Organisation (EPFO)** recently sent a text message to its subscribers that it is undertaking a "planned database consolidation" and **upgradation of software applications**.

कर्मचारी भविष्य निधि संगठन (EPFO) ने हाल ही में अपने अंशधारकों को एक संदेश भेजकर सूचित किया कि वह "नियोजित डेटाबेस एकीकरण (Planned Database Consolidation)" तथा सॉफ्टवेयर अनुप्रयोगों के उन्नयन का कार्य कर रहा है।

- As part of this transition, it said, **member services** such as **claim submission** and **download of passbooks** are temporarily unavailable from **June 26 to July 1**. इस संक्रमण प्रक्रिया के अंतर्गत 26 जून से 1 जुलाई तक दावा प्रस्तुत करने (Claim Submission) तथा पासबुक डाउनलोड जैसी सदस्य सेवाएँ अस्थायी रूप से उपलब्ध नहीं रहेंगी।

- As part of the **Centralised IT-Enabled System (CITES)** project, the **EPFO's** effort is to modernise its **service delivery mechanism** through **automation** and **rule-based processing**.
केंद्रीकृत आईटी-सक्षम प्रणाली (CITES) परियोजना के अंतर्गत EPFO का उद्देश्य स्वचालन (Automation) तथा नियम-आधारित प्रसंस्करण (Rule-Based Processing) के माध्यम से अपनी सेवा वितरण प्रणाली का आधुनिकीकरण करना है।
- Designed by the **Centre for Development of Advanced Computing (C-DAC)**, the project aims to improve **operational efficiency**.
सेंटर फॉर डेवलपमेंट ऑफ एडवांस्ड कंप्यूटिंग (C-DAC) द्वारा विकसित इस परियोजना का उद्देश्य संचालन दक्षता (Operational Efficiency) में सुधार करना है।
- The **EPFO** is hopeful that the revised mechanism will make the services more **transparent**, and subscribers will receive **seamless services**.
EPFO को आशा है कि संशोधित प्रणाली सेवाओं को अधिक पारदर्शी बनाएगी तथा अंशधारकों को निर्बाध सेवाएँ (Seamless Services) प्राप्त होंगी।

Current services

वर्तमान सेवाएँ

- The **EPFO** is facing several **technical** and **procedural delays** in member services, such as the submission of claims for **deceased members** and the presentation of **life certificates** for **pensioners**.
EPFO को दिवंगत सदस्यों के दावों के निपटान तथा पेंशनभोगियों के जीवन प्रमाण-पत्र (Life Certificate) प्रस्तुत करने जैसी सदस्य सेवाओं में कई तकनीकी एवं प्रक्रियागत विलंबों का सामना करना पड़ रहा है।
- At present, the **EPFO** has a **decentralised system** with separate databases in each **field office** and **regional office**.
वर्तमान में EPFO के पास एक विकेंद्रीकृत प्रणाली है, जिसमें प्रत्येक फील्ड कार्यालय तथा क्षेत्रीय कार्यालय का अलग-अलग डेटाबेस है।
- The members are tied to one **regional office**.
सदस्य केवल एक क्षेत्रीय कार्यालय से संबद्ध रहते हैं।
- In many cases, even retired beneficiaries had to go to the **regional offices** in jurisdictions where they had worked to submit claims or clear technical problems.
अनेक मामलों में सेवानिवृत्त लाभार्थियों को भी दावे प्रस्तुत करने अथवा तकनीकी समस्याओं के समाधान हेतु उस क्षेत्रीय कार्यालय में जाना पड़ता था, जहाँ उन्होंने कार्य किया था।
- Nominees of **deceased members** also had to approach the respective **regional offices** for **pension** or other claims.
दिवंगत सदस्यों के नामांकित व्यक्तियों को भी पेंशन अथवा अन्य दावों के लिए संबंधित क्षेत्रीय कार्यालयों का संपर्क करना पड़ता था।
- CITES** provides a single **centralised system architecture** with one **national database**.
CITES एक राष्ट्रीय डेटाबेस पर आधारित एकीकृत केंद्रीकृत प्रणाली संरचना उपलब्ध कराता है।
- The current **Universal Account Number (UAN)** and password created by the member can be used to access the new system.
सदस्य अपने वर्तमान यूनिवर्सल अकाउंट नंबर (UAN) तथा पासवर्ड का उपयोग करके नई प्रणाली तक पहुँच सकते हैं।
- For **EPFO members**, the centralised system allows them to see all their previous **Member IDs** under the **UAN** linked with a single **KYC (Aadhaar)**.
EPFO सदस्यों के लिए केंद्रीकृत प्रणाली एक ही KYC (आधार) से जुड़े UAN के अंतर्गत उनके सभी पुराने सदस्य आईडी (Member IDs) देखने की सुविधा प्रदान करती है।



- The status of the **PF accumulations**, **service records**, and **requests** will be displayed to the member.
सदस्य अपने भविष्य निधि संचय (PF Accumulations), सेवा अभिलेखों, तथा अनुरोधों की स्थिति देख सकेंगे।
- The new interface simplifies **transfers**, helps maintain an accurate **service history**, and enables **faster settlements**, according to the **EPFO**.
EPFO के अनुसार, नया इंटरफ़ेस खाता अंतरण (Transfers) को सरल बनाता है, सही सेवा इतिहास बनाए रखने में सहायता करता है तथा दावों के शीघ्र निपटान को संभव बनाता है।

GS III: Economy

Data doubts

The latest IIP dataset raises more questions than it answers

India's latest industrial growth figures show that, contrary to global trends and overall perception, the country's industrial output is getting stronger. Notably, the data show a quick bounce-back in industrial performance after the initial hit from the West Asia crisis. However, the new data also raise some important concerns about the composition of the growth, the systems behind the recent data upgrades, and the need for further improvements. Growth in the Index of Industrial Production hit a five-month high of 5.1% in May 2026, up from the 4.9% growth seen in April, which itself was a substantial improvement over the performance in March – the first full month after the West Asia crisis began. Within this, the manufacturing sector grew at a relatively robust 5.5% in May, albeit slower than in April. One view is that this is due to a revival in domestic consumption, since the consumer durables and non-durables sectors also grew at multi-month highs. Consumer durables, especially, have done well in April and May. However, the contrary argument is that domestic demand is in fact not doing well, and it is export growth that is leading to higher production. This is bolstered by the fact that GST revenues from domestic transactions have grown slower over the last six months than in 2025-26 and the year before that. Merchandise exports, on the other hand, hit a four-year high in April followed by an all-time high in May. It would certainly be welcome if India's industry has global demand to fill, but the fact that more of this demand is not coming from within the country is a cause for concern. The economy is already hostage to world events.

The May IIP data were also accompanied by a note from the Ministry of Statistics and Programme Implementation (MoSPI) stating that it had made a major change to the methodology for computing growth for some sectors. It had abandoned the Wholesale Price Index as its chosen deflator to estimate the value of production in favour of the new Producer Price Index. This is a more accurate approach. But it did not, however, answer why this change was implemented belatedly and not when the new series of data was introduced on June 1. It suggests an unusually unsystematic approach by MoSPI. The strong growth in the IIP also does not reconcile with the fact that the Index of Eight Core Sectors – a separate government measure of industrial growth – grew at its second-lowest rate in 21 months in May. The core sector index is still outdated while the other major indices have been recently updated, but such a discrepancy nevertheless raises questions about what exactly is being measured.

01J7. Data doubts

आँकड़ों पर संदेह

- Growth in the **Index of Industrial Production (IIP)** hit a **five-month high** of 5.1% in May 2026, up from the 4.9% growth seen in April, which itself was a substantial improvement over the performance in March — the first full month after the West Asia crisis began.

औद्योगिक उत्पादन सूचकांक (IIP) की वृद्धि मई 2026 में 5.1% के साथ पाँच माह के उच्चतम स्तर पर पहुँच गई, जो अप्रैल के 4.9% की वृद्धि से अधिक थी। अप्रैल का प्रदर्शन भी मार्च की तुलना में उल्लेखनीय रूप से बेहतर था, जो पश्चिम एशिया संकट शुरू होने के बाद का पहला पूर्ण महीना था।

- One view is that this is due to a revival in **domestic consumption**, since the **consumer durables** and **non-durables** sectors also grew at **multi-month highs**.

एक मत यह है कि इसका कारण घरेलू उपभोग में पुनरुद्धार है, क्योंकि उपभोक्ता टिकाऊ वस्तुओं तथा गैर-टिकाऊ वस्तुओं के क्षेत्रों में भी कई महीनों के उच्चतम स्तर की वृद्धि दर्ज की गई।

- However, the **contrary argument is that domestic demand is in fact not doing well**, and it is **export growth** that is leading to higher production.

हालाँकि, इसके विपरीत यह तर्क दिया जाता है कि घरेलू मांग वास्तव में मजबूत नहीं है, बल्कि निर्यात वृद्धि ही अधिक उत्पादन का प्रमुख कारण है।

- This is bolstered by the fact that **GST revenues from domestic transactions** have grown slower over the last six months than in 2025-26 and the year before that.

इस तर्क को इस तथ्य से बल मिलता है कि घरेलू लेन-देन से प्राप्त जीएसटी राजस्व की वृद्धि पिछले छह महीनों में 2025-26 तथा उससे पूर्व के वर्ष की तुलना में धीमी रही है।

- Merchandise exports**, on the other hand, hit a **four-year high** in April followed by an **all-time high** in May.

दूसरी ओर, वस्तु निर्यात अप्रैल में चार वर्षों के उच्चतम स्तर पर पहुँचा और मई में अब तक के सर्वाधिक स्तर पर पहुँच गया।

- It would certainly be welcome if **India's industry** has **global demand** to fill, but the fact that more of this demand is not coming from within the country is a cause for concern.

यदि भारत के उद्योग के पास पूरा करने के लिए वैश्विक मांग है, तो यह



निश्चित रूप से स्वागतयोग्य है, किन्तु यह तथ्य कि इस मांग का बड़ा भाग देश के भीतर से नहीं आ रहा है, चिंता का विषय है।

- The May IIP data were also accompanied by a note from the **Ministry of Statistics and Programme Implementation (MoSPI)** stating that it had made a major change to the methodology for computing growth for some sectors.
मई के IIP आँकड़ों के साथ सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय (MoSPI) का एक नोट भी जारी किया गया, जिसमें बताया गया कि कुछ क्षेत्रों की वृद्धि की गणना की पद्धति में महत्वपूर्ण परिवर्तन किया गया है।
- It had abandoned the **Wholesale Price Index (WPI)** as its chosen deflator to estimate the value of production in favour of the new **Producer Price Index (PPI)**.
उत्पादन के मूल्य का अनुमान लगाने के लिए उसने थोक मूल्य सूचकांक (WPI) को डिफ्लेटर के रूप में त्यागकर नए उत्पादक मूल्य सूचकांक (PPI) को अपनाया है।
- But it did not, however, answer why this change was implemented belatedly and not when the new series of data was introduced on **June 1**.
किन्तु इसने यह स्पष्ट नहीं किया कि यह परिवर्तन 1 जून को नई आँकड़ा-श्रृंखला प्रस्तुत किए जाने के समय करने के बजाय बाद में क्यों लागू किया गया।
- The strong growth in the IIP also does not reconcile with the fact that the **Index of Eight Core Sectors — a separate government measure of industrial growth — grew at its second-lowest rate in 21 months in May**.
IIP में दर्ज मजबूत वृद्धि इस तथ्य से भी मेल नहीं खाती कि आठ प्रमुख क्षेत्रों का सूचकांक, जो औद्योगिक वृद्धि का एक पृथक सरकारी मापदंड है, मई में 21 महीनों की दूसरी सबसे निम्न वृद्धि दर पर रहा।



Reimagining sovereign AI for India's strategic future

GS III: Economy

The United States government recently directed American Artificial Intelligence (AI) behemoth Anthropic to suspend access to its most advanced Fable 5 and Mythos 5 models for foreign nationals on national security grounds. A U.S. Presidential order also creates a voluntary mechanism for the U.S. federal government to access such models up to 30 days before trusted partners can. The Trump administration is simultaneously considering equity stakes in leading AI companies, ostensibly to redistribute the supernormal profits expected from technological advances.

These policy shifts are the latest and most dramatic in a series of sovereign actions demonstrating that governments are increasingly shaping AI policy around national advantage. Europe is moving away from its "regulate first, ask questions later" approach by investing in AI compute and promoting "Buy European" public procurement. Meanwhile, in keeping with President Javier Milei's swashbuckling style, even Argentina aims to attract AI investment by offering a regulatory safe harbour.

Navigating AI geopolitics

Aggressive AI policy is the new normal. As a large IT services economy that does not have its own frontier AI systems – those requiring upwards of ten septillion floating-point operations to train – India must review global developments and articulate a coherent policy response that allows it to benefit from frontier technology without letting its economic capabilities depend on policy decisions made elsewhere.

India's IT and app companies are well positioned to scale the everyday use of AI, raising domestic productivity and competitiveness. But rapid diffusion and model dependence pull in opposite directions: using foreign AI models today is the only way to build the economic surpluses needed to depend on them less in the future. Businesses must use the best AI available



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India must leverage global AI while reducing strategic technological dependence over time

to outcompete rivals. They cannot, however, manage the geopolitical risks that accompany dependence on those technologies. This is where public policy must step in. India's discourse is stuck in a false binary between globalisation and industrial policy. India's industries must benefit from both at the same time.

The lesson is already visible in another strategic industry: Indian pharma is deeply dependent on ingredients from China, and at the same time, navigates wavering policy regimes for market access in the U.S. A Production-Linked Incentive promotes domestic manufacturing of bulk drugs but NITI Aayog's latest assessment finds that India still sources 65% of critical ingredients from China. Industrial policies can create footholds, not instant resilience.

Building strategic AI linkages

Frontier AI presents the same strategic dilemma, but on a much larger scale. India's spends 0.6% of GDP on research and development, and the private sector accounts for a third of this. OpenAI alone projects its compute spending at \$50 billion this year, over six times India's annual private R&D spend. The implication is straightforward.

India cannot outspend frontier AI investment, so it must instead deepen its backward linkages to frontier AI through government action while strengthening its forward linkages to global markets for its products and services. This starts with a whole-of-government approach, in which ministries such as external affairs coordinate closely with commerce and it, and perhaps even defence, energy, and telecom, to better serve the technology industry.

Coordination alone, however, is insufficient. Firms can manage commercial risk through contracts and diversified supply chains. They cannot insure themselves against geopolitical risk or concentrated technological dependence; that is the sovereign's role. Like export credit and hybrid-annuity infrastructure models, the

government should help underwrite risks that private firms cannot efficiently bear alone. Export credit recognises that firms cannot shoulder geopolitical risks on their own and insures them against disruption. Hybrid-annuity contracts do the same for long-gestation infrastructure by having the state fund part of a project and make fixed payments over time, rather than leaving private capital to bear the full risk.

Industry must step up

And while the government can create the conditions for success, competitiveness must ultimately come from firms themselves. For its part, the Indian tech ecosystem needs to pay attention to quality and innovation that makes services and products valuable to the world.

There is less room for complacency than India's technology industry often assumes. The Philippines generates \$40 billion in IT exports – already nearly a sixth of India's IT exports – and is growing faster than the global industry.

Similarly, Indian app companies have barely made a dent abroad. No Indian app features among the top 10 by downloads, in-app purchase revenue, or monthly active users. This calls for greater ambition from the industry itself.

Indian technology also needs a more coherent strategic voice. Incumbent IT firms remain preoccupied with visas and market access, while start-ups are consumed by regulatory frictions and fundraising. Yet, both ultimately share the same interest: ensuring that India remains deeply connected to the world's leading AI ecosystems while steadily building greater domestic capability.

The real contest in AI is not simply over who builds the best models. It is about who captures the economic and strategic advantages they create. India's objective should be clear: remain deeply integrated with global AI ecosystems while steadily reducing the strategic vulnerabilities that such integration creates.

01J7. Reimagining sovereign AI for India's strategic future

भारत के रणनीतिक भविष्य के लिए संप्रभु कृत्रिम बुद्धिमत्ता की पुनर्कल्पना

- As a large **IT services** economy that does not have its own **frontier AI systems** — those requiring upwards of **ten septillion floating-point operations** to train — **India** must review global developments and articulate a coherent **policy response** that allows it to benefit from **frontier technology** without letting its economic capabilities depend on **policy decisions made elsewhere**.

एक बड़े आईटी सेवा आधारित अर्थतंत्र के रूप में, जिसके पास अपने अग्रणी AI सिस्टम नहीं हैं — जिन्हें प्रशिक्षित करने के लिए दस सेप्टिलियन से अधिक फ्लोटिंग-पॉइंट ऑपरेशनों की आवश्यकता होती है — भारत को वैश्विक घटनाक्रमों की समीक्षा करते हुए ऐसी सुसंगत नीतिगत प्रतिक्रिया विकसित करनी चाहिए, जिससे वह अग्रणी प्रौद्योगिकी का लाभ उठा सके, बिना अपनी आर्थिक क्षमताओं को अन्य देशों के नीतिगत निर्णयों पर निर्भर बनाए।

- A **Production-Linked Incentive** promotes domestic manufacturing of **bulk drugs** but **NITI Aayog's** latest assessment finds that **India** still sources **65%** of critical ingredients from **China**.

उत्पादन-आधारित प्रोत्साहन (Production-Linked Incentive) योजना बल्क ड्रग्स के घरेलू विनिर्माण को बढ़ावा देती है, किन्तु नीति आयोग के नवीनतम आकलन के अनुसार भारत अब भी अपने 65% महत्वपूर्ण औषधीय अवयव चीन से प्राप्त करता है।

- India** spends **0.6% of GDP** on **research and development**, and the **private sector** accounts for a third of this.

भारत अपने सकल घरेलू उत्पाद (GDP) का 0.6% अनुसंधान एवं विकास (R&D) पर व्यय करता है, जिसमें निजी क्षेत्र का योगदान लगभग एक-तिहाई है।

- OpenAI** alone projects its **compute spending** at **\$50 billion** this year, over six times **India's** annual **private R&D** spend.



केवल OpenAI ने इस वर्ष अपने कंप्यूटर व्यय को 50 अरब अमेरिकी डॉलर तक पहुँचने का अनुमान व्यक्त किया है, जो भारत के वार्षिक निजी अनुसंधान एवं विकास व्यय से छह गुना से भी अधिक है।

- This starts with a **whole-of-government approach**, in which ministries such as **external affairs** coordinate closely with **commerce** and **IT**, and perhaps even **defence**, **energy**, and **telecom**, to better serve the **technology industry**.
इसकी शुरुआत **समग्र सरकारी दृष्टिकोण** से होती है, जिसके अंतर्गत **विदेश मंत्रालय** जैसे मंत्रालय **वाणिज्य** और **आईटी** के साथ, तथा आवश्यकता पड़ने पर **रक्षा**, **ऊर्जा** और **दूरसंचार** मंत्रालयों के साथ भी घनिष्ठ समन्वय स्थापित करें, ताकि **प्रौद्योगिकी उद्योग** को बेहतर समर्थन मिल सके।
- Like **export credit** and **hybrid-annuity infrastructure models**, the state should absorb risks that **private firms** cannot efficiently bear alone.
निर्यात ऋण तथा **हाइब्रिड-एन्युटी अवसंरचना मॉडल** की भाँति, राज्य को उन जोखिमों को वहन करना चाहिए जिन्हें **निजी कंपनियाँ** अकेले प्रभावी ढंग से वहन नहीं कर सकतीं।
- **Export credit** recognises that firms cannot shoulder **geopolitical risks** on their own and insures them against disruption.
निर्यात ऋण यह स्वीकार करता है कि कंपनियाँ **भू-राजनीतिक जोखिमों** का भार अकेले नहीं उठा सकतीं और इसलिए उन्हें संभावित व्यवधानों के विरुद्ध सुरक्षा प्रदान करता है।
- **Hybrid-annuity contracts** do the same for **long-gestation infrastructure** by having the state fund part of a project and make **fixed payments** over time, rather than leaving **private capital** to bear the full risk.
इसी प्रकार, **हाइब्रिड-एन्युटी अनुबंध दीर्घकालिक अवसंरचना परियोजनाओं** के लिए भी कार्य करते हैं, जिनमें राज्य परियोजना के एक भाग का वित्तपोषण करता है तथा समय-समय पर **निश्चित भुगतान** करता है, जिससे **निजी पूंजी** पर संपूर्ण जोखिम का भार नहीं पड़ता।

Industry must step up

उद्योग को आगे बढ़कर भूमिका निभानी होगी

- And while the **government** can create the conditions for success, **competitiveness** must ultimately come from **firms** themselves.
यद्यपि **सरकार** सफलता के लिए अनुकूल परिस्थितियाँ निर्मित कर सकती है, किन्तु वास्तविक प्रतिस्पर्धात्मकता अंततः स्वयं कंपनियों से ही आनी चाहिए।
- Similarly, **Indian app companies** have barely made a dent abroad.
इसी प्रकार, **भारतीय ऐप कंपनियाँ** अंतरराष्ट्रीय बाज़ार में अभी तक उल्लेखनीय प्रभाव नहीं डाल सकी हैं।
- No **Indian app** features among the **top 10** by **downloads**, **in-app purchase revenue**, or **monthly active users**.
डाउनलोड, **इन-ऐप खरीद राजस्व** अथवा **मासिक सक्रिय उपयोगकर्ताओं** के आधार पर **शीर्ष 10** में कोई भी **भारतीय ऐप** शामिल नहीं है।
- **Incumbent IT firms** remain preoccupied with **visas** and **market access**, while **start-ups** are consumed by **regulatory frictions** and **fundraising**.
स्थापित **आईटी कंपनियाँ** अभी भी **वीज़ा** और **बाज़ार तक पहुँच** जैसे मुद्दों में व्यस्त हैं, जबकि **स्टार्ट-अप** **नियामकीय बाधाओं** और **पूँजी जुटाने** की चुनौतियों में उलझे हुए हैं।
- It is about who captures the **economic** and **strategic advantages** they create.
यह इस बात पर निर्भर करती है कि उनसे उत्पन्न होने वाले **आर्थिक** और **रणनीतिक लाभों** को कौन प्राप्त करता है।



The fiscal tightrope for State govts.

Most State government expenditure is on social sectors, such as health and education, and economic sectors, such as agriculture and irrigation. In Kerala, such spending has driven social progress since the 1960s. The gap between expenditure and receipts is usually financed through market borrowings.

ECONOMY

ECONOMIC NOTES

Jayan Jose Thomas

Kerala and Tamil Nadu are among the most socially and economically advanced States in India. Yet, the finances of both governments, like those of most other States, are under stress. The White Papers recently released by the two governments described their outstanding debt as alarming. State government debt is often vilified as the result of fiscal mismanagement, but it may, in fact, reflect a mismatch between development aspirations and the limited fiscal capacity of State governments.

The fiscal dilemma

Debt build up over the years with deficits, which arise when the government's expenditure overshoots its tax and other receipts. In India, while the power to raise taxes rests largely with the Union government, a larger share of overall government spending is borne by the State governments. A majority of the State government expenditure is on social sectors, such as health and education, and economic sectors, such as agriculture and irrigation, all of which have a direct impact on people's lives and livelihoods. In Kerala, the high levels of State government spending on social sectors since the 1960s have been a central constituent of the public action driving social progress. Compared with the corresponding average for all Indian States, per capita State government social expenditure was higher in Kerala and Tamil Nadu (by 30% and 20%, respectively). In contrast, it was markedly lower in Bihar and Uttar Pradesh (by 35% and 40%) for the period 2020-23, according to an analysis based on State Finances: A Study of Budgets, Reserve Bank of India.

States meet their expenditures partly through their own revenues – which mainly include State Goods and Services Tax (SGST) and sales tax – and through fiscal transfers, grants, and loans from the Union government. Kerala has a sufficiently good record of utilising own-tax revenues, which, on a per capita basis, are 1.5 times the average for all Indian States and Union Territories. However, its share in the Union government's tax devolution to States was 1.52%, lower than its 2.6% share of India's population in 2023-24. The excess of expenditures over receipts has been met through market borrowings by the States, on which the States pay interest (Charts 1 and 2).

Of the limited financial resources at its disposal, Kerala has been able to direct only 10% towards capital expenditure to enhance future production capabilities. The rest was spent on revenue, or day-to-day expenditure. Approximately a fifth of the State's budget expenditure was on the salaries of government employees, mainly teachers, nurses, doctors, and police personnel. Pensions accounted for 15.3%, while interest on market borrowings accounted for 16.5% of the total budget expenditure (Chart 2).

The investment challenge faced by Kerala

Kerala is thus caught in a fiscal dilemma. If it tries to create more fiscal space by reducing revenue expenditures – cutting pensions, retrenching employees – it risks eroding its strengths in the social sector. At the same time, Kerala urgently requires large-scale, State-directed investments in infrastructure, higher education and research, and public transport, if it is to realise its potential in modern, knowledge-intensive economic sectors. Educated young people are leaving Kerala in large numbers because the State is unable to create educational and employment opportunities that meet their aspirations.

In Kerala, the government's weak fiscal capacity contrasts with unmistakable signs of private affluence: lavishly built houses, expensive cars, and a high density of gold shops, threatening to exacerbate inequalities.

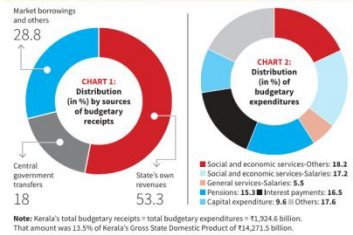
The ratio of credit to deposits of scheduled commercial banks in Kerala is only around 66%, compared with the national average of 76% and ratios exceeding 100% in Maharashtra and Tamil Nadu (2023). The excess of bank deposits over bank credit is one indicator of the volume of unutilised savings in Kerala. Between 2016 and 2026, the State government's capital expenditure could have been at least doubled if Kerala had been able to channel at least part of its surplus savings into investment (Charts 3 and 4).

The borrowing opportunity for China's local governments

In China, the bigger chunk of the massive investments that have boosted economic growth has been undertaken by provinces and lower-level local governments. Local governments borrow heavily to finance these investments, drawing on the large pool of domestic savings held by Chinese banks, while their efforts are coordinated through central government planning. China's local governments raise resources through the sale of local government bonds (LGBs), land sales, and off-budget

The fiscal dilemma

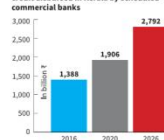
While the power to raise taxes rests largely with the Union government, States bear much of the spending on key social and economic sectors. The debt burden of States may reflect the gap between development needs and limited fiscal capacity.



Note: Kerala's total budgetary receipts = total budgetary expenditures = ₹1,924.6 billion. That amount was 13.5% of Kerala's Gross State Domestic Product of ₹14,271.5 billion.

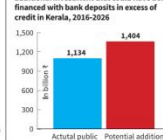
Source: Revised Budget in Brief 2024-25, Finance Department, Government of Kerala.

Chart 3: Deposits mobilised in excess of credit disbursed in Kerala by scheduled commercial banks



Source: Economic Survey, Government of India; Budget documents, Government of Kerala.

Chart 4: Actual investment and potential additional investment that could have been financed with bank deposits in excess of credit in Kerala, 2016-2026



Source: Economic Survey, Government of India; Budget documents, Government of Kerala.

THE GIST

State government debt builds up over the years when expenditure exceeds tax and other receipts. While the Union government raises most taxes, States bear a large share of public spending.

States meet their expenditures partly through their own revenues, including State Goods and Services Tax (SGST) and sales tax, and through fiscal transfers, grants, and loans from the Union government.

The excess of expenditures over receipts has been met through market borrowings by the States, on which the States pay interest.



borrowing via local government financing vehicles (LGFVs), supplementing fiscal transfers by the central government.

In India, not only have there been limits on borrowing by State governments, but the cost of their debt has also been markedly high. State governments pay interest of 6.5% to 7.5% on the securities they issue, known as State Development Loans (SDLs), to borrow from the market. This is 0.25 to 0.75 percentage points higher than the rate at which the Union government borrows and significantly more expensive than the cost of borrowing by Chinese local governments from their banking system (around 2%).

The high interest burden further tightens the debt noose around State governments.

The State and Union government bonds issued in India are largely purchased by domestic financial institutions, including commercial banks

and insurance companies, which deploy the savings they mobilise from the public to support government finances. In effect, the debt the government owes is a debt to its own people. A government that borrows to fund projects that expand welfare and opportunities is serving a far greater cause than a tight-fisted government.

A family would prefer that its savings, rather than being wiped out to send their child to study in a distant land, be used to establish a public university in their district.

We need fiscal structures that enable State governments to access domestic savings more easily and at a lower cost to fund meticulously planned development projects.

(Jayan Jose Thomas is a Professor of Economics at the Indian Institute of Technology (IIT) Delhi and a visiting researcher at the South Asia Institute of the Heidelberg University.)

01J7. The fiscal tightrope for State govts.

राज्य सरकारों के लिए राजकोषीय संतुलन की चुनौती

- In India, while the power to raise taxes rests largely with the Union government, a larger share of overall government spending is borne by the State governments.

भारत में, जहाँ कर लगाने की शक्ति मुख्यतः केंद्र सरकार के पास है, वहीं कुल सरकारी व्यय का बड़ा भाग राज्य सरकारों द्वारा वहन किया जाता है।

- A majority of the State government expenditure is on social sectors, such as health and education, and economic sectors, such as agriculture and irrigation, all of which have a direct impact on people's lives and livelihoods.

अधिकांश राज्य सरकारी व्यय सामाजिक क्षेत्रों, जैसे स्वास्थ्य और शिक्षा, तथा आर्थिक क्षेत्रों, जैसे कृषि और सिंचाई, पर होता है, जिनका लोगों के जीवन और आजीविका पर प्रत्यक्ष प्रभाव पड़ता है।

- In Kerala, the high levels of State government spending on social sectors since the 1960s have been a central constituent of the public action driving social progress.

केरल में 1960 के दशक से सामाजिक क्षेत्रों पर उच्च स्तर के राज्य सरकारी व्यय ने सामाजिक प्रगति को आगे बढ़ाने वाली सार्वजनिक नीति का प्रमुख आधार बनाया है।

- Compared with the corresponding average for all Indian States, per capita State government social expenditure was higher in Kerala and Tamil Nadu (by 30% and 20%,



respectively).

सभी भारतीय राज्यों के औसत की तुलना में प्रति व्यक्ति राज्य सरकारी सामाजिक व्यय केरल और तमिलनाडु में क्रमशः 30% और 20% अधिक था।

- **States meet their expenditures partly through their own revenues — which mainly include State Goods and Services Tax (SGST) and sales tax — and through fiscal transfers, grants, and loans from the Union government.**

राज्य अपने व्यय की पूर्ति आंशिक रूप से अपने राजस्व — जिनमें मुख्यतः राज्य वस्तु एवं सेवा कर (SGST) तथा बिक्री कर शामिल हैं — और केंद्र सरकार से प्राप्त राजकोषीय हस्तांतरण, अनुदान, तथा ऋण के माध्यम से करते हैं।

- **Of the limited financial resources at its disposal, Kerala has been able to direct only 10% towards capital expenditure to enhance future production capabilities.**

अपने सीमित वित्तीय संसाधनों में से केरल केवल 10% को भविष्य की उत्पादन क्षमता बढ़ाने हेतु पूंजीगत व्यय पर खर्च कर पाया है।

- **The rest was spent on revenue, or day-to-day expenditure.**

शेष राशि राजस्व व्यय, अर्थात् दैनिक संचालन व्यय, पर खर्च की गई।

- **Approximately a fifth of the State's budget expenditure was on the salaries of government employees, mainly teachers, nurses, doctors, and police personnel.**

राज्य के बजटीय व्यय का लगभग पाँचवाँ भाग सरकारी कर्मचारियों के वेतनों पर व्यय हुआ, जिनमें मुख्यतः शिक्षक, नर्स, डॉक्टर, तथा पुलिस कर्मी शामिल हैं।

- **Pensions accounted for 15.3%, while interest on market borrowings accounted for 16.5% of the total budget expenditure.**

पेंशन पर कुल बजटीय व्यय का 15.3% खर्च हुआ, जबकि बाज़ार से ली गई उधारी पर ब्याज भुगतान का हिस्सा 16.5% था।

The investment challenge faced by Kerala केरल के समक्ष निवेश की चुनौती

- **Kerala is thus caught in a fiscal dilemma.**

इस प्रकार केरल एक राजकोषीय दुविधा में फँसा हुआ है।

- **If it tries to create more fiscal space by reducing revenue expenditures — cutting pensions, retrenching employees — it risks eroding its strengths in the social sector.**

यदि वह राजस्व व्यय में कमी करके — जैसे पेंशन में कटौती तथा कर्मचारियों की छुट्टी करके — अधिक राजकोषीय गुंजाइश बनाने का प्रयास करता है, तो इससे सामाजिक क्षेत्र में उसकी प्रमुख उपलब्धियाँ कमजोर पड़ने का जोखिम है।

- **At the same time, Kerala urgently requires large-scale, State-directed investments in infrastructure, higher education and research, and public transport, if it is to realise its potential in modern, knowledge-intensive economic sectors.**

साथ ही, आधुनिक ज्ञान-आधारित आर्थिक क्षेत्रों में अपनी क्षमता का पूर्ण उपयोग करने के लिए केरल को अवसंरचना, उच्च शिक्षा एवं अनुसंधान, तथा सार्वजनिक परिवहन में बड़े पैमाने पर राज्य-निर्देशित निवेश की तत्काल आवश्यकता है।

- **Educated young people are leaving Kerala in large numbers because the State is unable to create educational and employment opportunities that meet their aspirations.**

शिक्षित युवा बड़ी संख्या में केरल छोड़ रहे हैं क्योंकि राज्य उनकी आकांक्षाओं के अनुरूप शैक्षिक एवं रोज़गार के अवसर सृजित करने में सक्षम नहीं है।

- **In Kerala, the government's weak fiscal capacity contrasts with unmistakable signs of private affluence (lavishly built houses, expensive cars, and a high density of gold shops), threatening to exacerbate inequalities.**

केरल में सरकार की कमजोर राजकोषीय क्षमता, निजी समृद्धि के स्पष्ट संकेतों — जैसे भव्य मकान, महँगी

कारें, तथा सोने की दुकानों की अधिक संख्या — के विपरीत दिखाई देती है, जिससे असमानताओं के बढ़ने का खतरा उत्पन्न होता है।

- The ratio of **credit to deposits** of **scheduled commercial banks** in **Kerala** is **only around 66%**, compared with the national average of **76%** and ratios exceeding **100%** in **Maharashtra** and **Tamil Nadu (2023)**.

केरल में अनुसूचित वाणिज्यिक बैंकों का ऋण-से-जमा अनुपात केवल लगभग 66% है, जबकि राष्ट्रीय औसत 76% है और महाराष्ट्र तथा तमिलनाडु में यह अनुपात 100% से अधिक है (2023)।

GS Paper III: Science and Technology		01 July 2026
TOPICS COVERED		
01J7	Rescuing a space telescope एक अंतरिक्ष दूरबीन का बचाव	
01J7	QUIZ	

Rescuing a space telescope

GS III: S&T
Agence France Presse

On June 30, NASA launched a daring robotic rescue mission — a long shot to prevent one of its ageing telescopes from vanishing into dust. The \$30-million operation is set to last several months, kicking off with the launch of a robot designed to rescue the Swift space telescope, which is currently falling towards the earth.

At the time of writing, the rescue spacecraft developed by the U.S. startup Katalyst was slated to lift off on June 30 at 10:23 GMT from a Pacific Ocean atoll aboard a small rocket named Pegasus.

"Everything about this mission is so crazy," said NASA astrophysicist Regina Caputo. She projected the chances of success at "maybe 50-50."

After it reaches an orbit near that of the telescope, the robot must locate Swift, manoeuvre around it, and latch on with three 'arms'. It will then try to tow Swift into a stable orbit over at least a month.

NASA launched the Neil Gehrels Swift Observatory in 2004, originally for a two-year mission to study gamma-ray bursts. Ms. Caputo likened these bursts to a supercharged version of a supernova,



An artist's rendition of the Swift spacecraft observing a gamma-ray burst. FILE

which is the explosive death of a star.

Swift was placed at a roughly 600-km-high low earth orbit so it could remain in touch with researchers. At such an altitude, the device without its own propulsion would eventually drift closer to the earth and burn up in the atmosphere.

For feedback and suggestions for 'Science', please write to science@thehindu.co.in with the subject 'Daily page'

01J7. Rescuing a space telescope

एक अंतरिक्ष दूरबीन का बचाव

- On June 30, NASA launched a daring robotic rescue mission.

30 जून को NASA ने एक साहसिक रोबोटिक बचाव मिशन का प्रक्षेपण किया।

- A long shot to prevent one of its ageing telescopes from vanishing into dust.

यह उसके एक पुराने दूरबीन (टेलीस्कोप) को नष्ट होने से बचाने का एक अत्यंत कठिन प्रयास है।

- The \$30-million operation is set to last several months, kicking off with the launch of a robot designed to rescue the **Swift space telescope**, which is currently falling towards the earth.

30 मिलियन डॉलर की यह परियोजना कई महीनों तक चलेगी, जिसकी शुरुआत **Swift**

Space Telescope को बचाने के लिए तैयार किए गए एक रोबोट के प्रक्षेपण से हुई है, जो वर्तमान में पृथ्वी की ओर नीचे की ओर बढ़ रहा है।

- At the time of writing, the rescue spacecraft developed by the U.S. startup **Katalyst** was slated to lift off on **June 30** at **10:23 GMT** from a **Pacific Ocean** atoll aboard a small rocket named **Pegasus**.

लेखन के समय, अमेरिकी स्टार्टअप **Katalyst** द्वारा विकसित बचाव अंतरिक्षयान का **30 जून को 10:23 GMT** पर **प्रशांत महासागर** के एक एटोल से **Pegasus** नामक छोटे रॉकेट के माध्यम से प्रक्षेपित किया जाना निर्धारित था।

- "Everything about this mission is so crazy," said NASA astrophysicist **Regina Caputo**. NASA की खगोलभौतिकविद् **रेजिना कैपुटो** ने कहा, "इस मिशन की हर बात अत्यंत असाधारण है।"



- She projected the chances of success at “maybe 50-50.”
उन्होंने इसकी सफलता की संभावना “लगभग 50-50” बताई।
- After it reaches an orbit near that of the telescope, the robot must locate **Swift**, manoeuvre around it, and latch on with three ‘arms’.
दूरबीन की कक्षा के निकट पहुँचने के बाद, रोबोट को **Swift** का पता लगाना होगा, उसके चारों ओर संचालन करना होगा तथा अपनी तीन ‘भुजाओं’ की सहायता से उससे जुड़ना होगा।
- It will then try to tow **Swift** into a stable orbit over at least a month.
इसके बाद वह कम-से-कम एक महीने की अवधि में **Swift** को एक स्थिर कक्षा में ले जाने का प्रयास करेगा।
- **NASA** launched the **Neil Gehrels Swift Observatory** in 2004, originally for a two-year mission to study **gamma-ray bursts**.
NASA ने 2004 में **Neil Gehrels Swift Observatory** का प्रक्षेपण मूल रूप से **गामा-किरण विस्फोटों (Gamma-ray Bursts)** के अध्ययन हेतु दो वर्षीय मिशन के रूप में किया था।
- Ms. **Caputo** likened these bursts to a supercharged version of a **supernova**, which is the explosive death of a star.
सुश्री **कैपुटो** ने इन विस्फोटों की तुलना **सुपरनोवा** के अत्यधिक शक्तिशाली रूप से की, जो किसी तारे की विस्फोटक मृत्यु होती है।
- **Swift** was placed at a roughly 600-km-high **Low Earth Orbit** so it could remain in touch with researchers.
Swift को लगभग 600 किलोमीटर ऊँची **निम्न पृथ्वी कक्षा (Low Earth Orbit)** में स्थापित किया गया ताकि वह शोधकर्ताओं के संपर्क में बना रहे।
- At such an altitude, the device without its own propulsion would eventually drift closer to the earth and burn up in the atmosphere.
ऐसी ऊँचाई पर, अपनी स्वयं की **प्रणोदन प्रणाली** के बिना यह उपकरण अंततः पृथ्वी के निकट आ जाएगा और **वायुमंडल** में प्रवेश करने पर जलकर नष्ट हो जाएगा।

Questions and answers to the previous day's daily quiz:

1. Einstein's Special Relativity paper was first published in this journal. **Ans: Annalen der Physik**
 2. The original German title of Einstein's 1905 paper on Special Relativity. **Ans: Zur Elektrodynamik bewegter Körper (On the Electrodynamics of Moving Bodies)**
 3. According to Special Relativity, this physical quantity remains invariant for all inertial observers. **Ans: The speed of light in vacuum (c)**
 4. This paradox describes a travelling twin returning younger than the twin who remained on Earth. **Ans: The Twin Paradox.**
 5. This 1905 paper was published after his Special Relativity paper and is often regarded as completing the “miracle year”. **Ans: Does the Inertia of a Body Depend Upon Its Energy Content? (introducing mass-energy equivalence)**
- Visual: This interferometer was used in a landmark 1887 experiment which paved the way for Einstein's Special Theory of Relativity. **Ans: The Michelson-Morley experiment**
- Early birds: K.N. Viswanathan | Sukdev Shet | Bhavya Pandey | Prem Nath Tiwari

observers.

- The **speed of light in vacuum**, represented by **c**, is exactly **299,792,458 metres per second**, a value fixed by international standards.

01J7. QUIZ

2. The original German title of Einstein's 1905 paper on Special Relativity.

- Einstein originally wrote the paper in **German**, and its title translates into English as “**On the Electrodynamics of Moving Bodies**.”
- It introduced the **Special Theory of Relativity**, explaining how the laws of physics remain the same for all observers moving at constant velocity.
- Remarkably, the paper did **not mention the word “relativity”** in its title; the revolutionary concept became widely recognized only afterward.
- The paper fundamentally changed scientific understanding by showing that **space and time are interconnected**, laying the foundation for modern relativistic physics.

3. According to Special Relativity, this physical quantity remains invariant for all inertial



- Einstein's second postulate states that this speed remains **constant for every inertial observer**, regardless of the motion of the light source or the observer.
- This invariance explains phenomena such as **time dilation**, **length contraction**, and the **relativity of simultaneity**.
- It also forms the basis of modern technologies including the **Global Positioning System (GPS)**, whose satellite clocks require relativistic corrections for accurate positioning.
- The constant speed of light is now one of the **fundamental constants of nature** and underpins both Special and General Relativity.

4. This paradox describes a travelling twin returning younger than the twin who remained on Earth.

- The **Twin Paradox** is a famous thought experiment illustrating the effects of **time dilation** predicted by Special Relativity.
- One twin travels in a spacecraft at a speed close to the **speed of light**, while the other remains on Earth.
- When the travelling twin returns, **less time has passed** for the traveller than for the twin on Earth, making the traveller biologically younger.
- The apparent paradox is resolved because the travelling twin experiences **acceleration and deceleration**, changing reference frames, while the Earth-bound twin remains approximately in one inertial frame.
- Experimental evidence from **atomic clocks**, high-speed aircraft, and satellites has repeatedly confirmed the reality of relativistic time dilation.

5. This 1905 paper was published after his Special Relativity paper and is often regarded as completing the "Miracle Year".

- Einstein published this short paper in **September 1905**, shortly after his Special Relativity paper.
- It introduced the famous equation $E = mc^2$, showing that **mass and energy are equivalent** and can be converted into one another.
- According to the equation, even a very small amount of mass corresponds to an enormous amount of energy because it is multiplied by the square of the speed of light.
- This principle explains the energy released in **nuclear fission**, **nuclear fusion**, and many astrophysical processes such as the energy production inside the **Sun**.
- The concept of mass–energy equivalence remains one of the cornerstones of modern physics and has applications in nuclear energy, particle physics, and cosmology.

This interferometer was used in a landmark 1887 experiment which paved the way for Einstein's Special Theory of Relativity.

- The **Michelson–Morley Experiment** was conducted in **1887** by **Albert A. Michelson** and **Edward W. Morley** using a highly precise **interferometer**.
- The experiment attempted to detect the hypothetical **luminiferous ether**, which scientists then believed was the medium through which light travelled.
- The experiment produced a **null result**, finding no evidence of Earth's motion through such an ether.
- This unexpected result challenged classical physics and suggested that the speed of light remains constant regardless of Earth's motion.
- The findings became one of the most important experimental foundations that later supported Einstein's **Special Theory of Relativity**, eliminating the need for the ether hypothesis.

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TOPICS COVERED	
01J7	India adds 709 new species to its fauna database

	भारत ने अपने जीव-जंतु डेटाबेस में 709 नई प्रजातियाँ जोड़ीं
01J7	Centre exploring reintroduction of tigers in suitable landscapes in Bengal: Minister केंद्र पश्चिम बंगाल के उपयुक्त परिदृश्यों में बाघों के पुनर्प्रवेश की संभावना तलाश रहा है: मंत्री
01J7	India seeks clarity as 'tipping points' rock Bonn climate talks 'टिपिंग पॉइंट्स' को लेकर उत्पन्न विवाद के बीच भारत ने बॉन जलवायु वार्ताओं में स्पष्टता की मांग की

India adds 709 new species to its fauna database

GS III: Environment
Shiv Sahay Singh
KOLKATA

India added 709 species to its fauna in 2025, which includes 483 species new to science and 226 species recorded for the first time in India. The country also added 353 taxa to its flora, of which 14 are infraspecific taxa.

The details of new discoveries and new records by the Zoological Survey of India and Botanical Survey of India were released by Union Minister for Environment, Forest and Climate Change Bhupender Yadav in Kolkata on Tuesday.

Kerala highest in fauna
"India's total faunal biodiversity now stands at 1,05,953 species, reaffirming its status as one of the world's premier mega diverse nations," a press statement from Zoological Survey of India said.

A State-wise analysis of



Enriching data: Among the fauna discovered in 2025 is *Myotis himalaicus*, a new species of Himalayan bat. SPECIAL ARRANGEMENT

the new animal discoveries point out that Kerala recorded the highest 98 new species of animals, followed by West Bengal with 76 species, Karnataka 67 species and Arunachal Pradesh 65 species of fauna.

Among the animal groups added to the country's fauna database, Hymenoptera contributed the highest number of additions (106).

This was followed by Lepidoptera (65), Diptera

(64), Arachnida (64), Coleoptera (55) and Pisces (50), reflecting the remarkable diversity and continuing discovery of India's invertebrate fauna.

Among the crucial fauna discovered in 2025, *Myotis himalaicus*, a new species of Himalayan bat. *Ptyctolaemus mamdaphaensis* and *Ptyctolaemus siangensis* are two newly discovered species of green fan-throated lizard and *Lycodon irwini*, a species

commonly known as Irwin's wolf snake.

Of the 353 plant taxa added to the country's floral database, 221 taxa have been described as new to science, while 132 taxa represent new distributional records for India, thereby expanding the known geographical range of several plant groups and enriching the country's floristic inventory.

A State-wise analysis of the plant discoveries indicates that Arunachal Pradesh emerged as the leading contributor with 49 discoveries, followed by Uttarakhand (39) and Kerala (37).

Vascular plants

The Plant Discoveries, 2025 documents 154 angiosperms, three pteridophytes, 13 bryophytes, 62 lichens, 93 fungi, 22 algae, and six microbes. Among the most notable discoveries are several wild relatives of economically and

ecologically significant plant groups, including Begonia, Impatiens (balsams), legumes, and orchids.

"Approximately 43% of the newly described taxa belong to vascular plants, while the remaining discoveries comprise a wide array of non-vascular organisms, highlighting the growing scientific attention being accorded to these ecologically significant groups," a press statement by the Botanical Survey of India said.

Among the plants discovered *Polystichum siangense*, a recently discovered species of fern belonging to the family Dryopteridaceae found in Siang district of Arunachal Pradesh, *Miliusa beddomei*, and new wild member of the custard apple family discovered from Western Ghats and *Hericium indicum* is a recently discovered species of wild edible tooth-fungus.

01J7. India adds 709 new species to its fauna database

भारत ने अपने जीव-जंतु डेटाबेस में 709 नई प्रजातियाँ जोड़ीं

- India added 709 species to its fauna in 2025, which includes 483 species new to science and 226 species recorded for the first time in India.

भारत ने 2025 में अपने जीव-जंतु (Fauna) डेटाबेस में 709 नई प्रजातियाँ जोड़ीं, जिनमें 483 प्रजातियाँ विज्ञान के लिए पूर्णतः नई हैं तथा 226 प्रजातियाँ पहली बार भारत में दर्ज की गई हैं।

- A State-wise analysis of the new animal discoveries points out that Kerala recorded the highest 98 new species of animals, followed by West Bengal with 76 species, Karnataka with 67 species, and Arunachal Pradesh with 65 species of fauna.

नई पशु प्रजातियों के राज्यवार विश्लेषण के अनुसार, केरल में सर्वाधिक 98 नई पशु प्रजातियाँ दर्ज की गईं,

इसके बाद पश्चिम बंगाल (76 प्रजातियाँ), कर्नाटक (67 प्रजातियाँ) तथा अरुणाचल प्रदेश (65 प्रजातियाँ) का स्थान रहा।

- Among the animal groups added to the country's fauna database, Hymenoptera contributed the highest number of additions (106).

देश के जीव-जंतु डेटाबेस में जोड़े गए पशु समूहों में Hymenoptera का सर्वाधिक योगदान रहा, जिसमें 106 नई प्रविष्टियाँ शामिल हैं।

- This was followed by Lepidoptera (65), Diptera (64), Arachnida (64), Coleoptera (55), and Pisces (50), reflecting the remarkable diversity and continuing discovery of India's invertebrate fauna.

इसके बाद Lepidoptera (65), Diptera (64), Arachnida (64), Coleoptera (55) तथा Pisces (50) का स्थान रहा, जो भारत के अकशेरुकी जीव-जंतुओं की उल्लेखनीय विविधता तथा निरंतर हो रही खोजों को दर्शाता है।

- Among the crucial fauna discovered in 2025, Myotis himalaicus, a new species of Himalayan bat; Ptyctolaemus mamdaphaensis and Ptyctolaemus siangensis, two newly discovered species of green fan-throated lizard; and Lycodon irwini, a species commonly known as Irwin's wolf snake.

2025 में खोजी गई महत्वपूर्ण जीव-जंतु प्रजातियों में Myotis himalaicus, जो हिमालयी चमगादड़ की नई प्रजाति है; Ptyctolaemus mamdaphaensis एवं Ptyctolaemus siangensis, जो हरे पंखे-गले वाली छिपकली (Green Fan-throated Lizard) की दो नई प्रजातियाँ हैं; तथा Lycodon irwini, जिसे सामान्यतः इरविन्स वुल्फ स्नेक कहा जाता है, शामिल हैं।

- A State-wise analysis of the plant discoveries indicates that Arunachal Pradesh emerged as the leading contributor with 49 discoveries, followed by Uttarakhand (39) and Kerala (37).

पादप खोजों के राज्यवार विश्लेषण से पता चलता है कि अरुणाचल प्रदेश 49 खोजों के साथ शीर्ष पर रहा, इसके बाद उत्तराखंड (39) तथा केरल (37) का स्थान रहा।

Vascular plants

संवहनी पादप

- The Plant Discoveries, 2025 documents 154 angiosperms, 3 pteridophytes, 13 bryophytes, 62 lichens, 93 fungi, 22 algae, and 6 microbes.

Plant Discoveries, 2025 में 154 आवृतबीजी (Angiosperms), 3 टेरिडोफाइट्स (Pteridophytes), 13 ब्रायोफाइट्स (Bryophytes), 62 लाइकेन, 93 कवक (Fungi), 22 शैवाल (Algae) तथा 6 सूक्ष्मजीव (Microbes) का दस्तावेजीकरण किया गया है।

- Among the most notable discoveries are several wild relatives of economically and ecologically significant plant groups, including Begonia, Impatiens (balsams), legumes, and orchids.

सबसे उल्लेखनीय खोजों में आर्थिक एवं पारिस्थितिक दृष्टि से महत्वपूर्ण पादप समूहों के कई जंगली संबंधी (Wild Relatives) शामिल हैं, जिनमें Begonia, Impatiens (Balsams), दलहनी पौधे (Legumes) तथा ऑर्किड (Orchids) प्रमुख हैं।

- "Approximately 43% of the newly described taxa belong to vascular plants, while the remaining discoveries comprise a wide array of non-vascular organisms, highlighting the growing scientific attention being accorded to these ecologically significant groups," a press statement by the Botanical Survey of India said.

भारतीय वनस्पति सर्वेक्षण (BSI) के प्रेस वक्तव्य के अनुसार, "नई वर्णित टैक्सा में से लगभग 43% संवहनी पादपों से संबंधित हैं, जबकि शेष खोजें विभिन्न प्रकार के असंवहनी जीवों से संबंधित हैं, जो इन पारिस्थितिकीय दृष्टि से महत्वपूर्ण समूहों पर बढ़ते वैज्ञानिक ध्यान को दर्शाती हैं।"

- Among the plants discovered, Polystichum siangense, a recently discovered species of fern belonging to the family Dryopteridaceae found in Siang district of Arunachal Pradesh;



Miliusa beddomei, a new wild member of the **custard apple family** discovered from the **Western Ghats**; and **Hericium indicum**, a recently discovered species of **wild edible tooth-fungus**.

खोजे गए प्रमुख पादपों में **Polystichum siangense**, जो **अरुणाचल प्रदेश** के **सियांग जिले** में पाया गया **Dryopteridaceae** कुल का एक नया फर्न है; **Miliusa beddomei**, जो **पश्चिमी घाट** से खोजा गया **सीताफल कुल (Custard Apple Family)** का नया जंगली सदस्य है; तथा **Hericium indicum**, जो हाल ही में खोजी गई जंगली खाद्य दूध-फंगस की एक नई प्रजाति है।

Centre exploring reintroduction of tigers in suitable landscapes in Bengal: Minister

GS III: Environment

Press Trust of India
KOLKATA

Union Minister of Environment, Forest and Climate Change Bhupender Yadav on Tuesday said the Centre is exploring the reintroduction of tigers in suitable landscapes across West Bengal through scientific planning, while asserting that conservation has become an integral part of India's development agenda.

Citing the success of tiger reintroduction in Sariska in Rajasthan, where the population has increased from zero in 2008 to 56 at present, Mr. Yadav said the government is exploring the possibility of reintroducing tigers in suitable habitats in West Bengal, the home of the Royal Bengal Tiger.



Lord of the forest: A tiger in Bengal's Sundarbans. FILE PHOTO

He also highlighted the country's conservation gains, saying the number of tiger reserves has risen from 47 to 58 since 2014, while the population of Asiatic lions has increased from 523 in 2015 to 891 in 2026. Referring to India's biodiversity, Mr. Yadav said that despite accounting for only 2.4% of the world's land area, the country is

home to 7% to 8% of all recorded species.

Highlighting the government's conservation initiatives, the Minister said India has shifted from a reactive approach to a proactive one to environmental governance since 2014.

"Conservation is no longer viewed as an isolated environmental concern. It is now an integral pillar of

our vision for sustainable development," he said.

Mr. Yadav said India is contributing to global environmental action through initiatives such as Mission LiFE, the International Solar Alliance, the International Big Cat Alliance and the Global Biofuel Alliance.

Ramsar sites

The number of Ramsar sites has expanded from 24 to 100 during the period, while the area notified as eco-sensitive zones has grown significantly.

Stressing the importance of scientific documentation in conservation, he said institutions such as the Zoological Survey of India and the Botanical Survey of India play a crucial role in protecting biodiversity.

01J7. Centre exploring reintroduction of tigers in suitable landscapes in Bengal: Minister

केंद्र पश्चिम बंगाल के उपयुक्त परिदृश्यों में बाघों के पुनर्प्रवेश की संभावना तलाश रहा है: मंत्री

- Citing the success of **tiger reintroduction in Sariska in Rajasthan**, where the population has increased from **zero in 2008 to 56 at present**, Mr. Yadav said the government is exploring the possibility of reintroducing tigers in suitable **habitats** in **West Bengal**, the home of the **Royal Bengal Tiger**.

राजस्थान के सरिस्का में बाघों के पुनर्प्रवेश की सफलता का उल्लेख करते हुए, जहाँ बाघों की संख्या 2008 में शून्य से बढ़कर वर्तमान में 56 हो गई है, श्री यादव ने कहा कि सरकार पश्चिम बंगाल, जो रॉयल बंगाल टाइगर का प्राकृतिक निवास है, के उपयुक्त आवासों (Habitats) में बाघों के पुनर्प्रवेश की संभावना का अध्ययन कर रही है।



- He also highlighted the country's **conservation gains**, saying the number of **tiger reserves** has risen from **47 to 58** since **2014**, while the population of **Asiatic lions** has increased from **523** in **2015** to **891** in **2026**.
उन्होंने देश की **संरक्षण संबंधी उपलब्धियों** का उल्लेख करते हुए कहा कि **2014** से **टाइगर रिज़र्वों** की संख्या **47** से बढ़कर **58** हो गई है, जबकि **एशियाई शेरों** की संख्या **2015** में **523** से बढ़कर **2026** में **891** हो गई है।
- Referring to **India's biodiversity**, Mr. Yadav said that **despite accounting for only 2.4% of the world's land area, the country is home to 7% to 8% of all recorded species**.
भारत की जैव-विविधता का उल्लेख करते हुए श्री यादव ने कहा कि विश्व के **स्थलीय क्षेत्रफल** का केवल **2.4%** हिस्सा होने के बावजूद, भारत में विश्व की दर्ज की गई कुल **प्रजातियों** का **7% से 8%** भाग पाया जाता है।
- Highlighting the government's **conservation initiatives**, the Minister said India has shifted from a **reactive approach** to a **proactive approach to environmental governance** since **2014**.
सरकार की **संरक्षण पहलों** का उल्लेख करते हुए मंत्री ने कहा कि **2014** के बाद भारत ने **पर्यावरणीय शासन** के क्षेत्र में **प्रतिक्रियात्मक दृष्टिकोण** से **सक्रिय दृष्टिकोण** की ओर परिवर्तन किया है।
- Mr. Yadav said India is contributing to **global environmental action** through initiatives such as **Mission LiFE, the International Solar Alliance, the International Big Cat Alliance, and the Global Biofuel Alliance**.
श्री यादव ने कहा कि भारत **वैश्विक पर्यावरणीय प्रयासों** में **Mission LiFE, अंतरराष्ट्रीय सौर गठबंधन (International Solar Alliance), अंतरराष्ट्रीय बिग कैट गठबंधन (International Big Cat Alliance)** तथा **वैश्विक जैव-ईंधन गठबंधन (Global Biofuel Alliance)** जैसी पहलों के माध्यम से योगदान दे रहा है।

Ramsar sites

रामसर स्थल

- The **number of Ramsar sites** has expanded from **24 to 100** during the period, while the area notified as **eco-sensitive zones** has grown significantly.
इस अवधि में **रामसर स्थलों** की संख्या **24** से बढ़कर **100** हो गई है, जबकि **पारिस्थितिकीय संवेदनशील क्षेत्रों (Eco-Sensitive Zones)** के रूप में अधिसूचित क्षेत्रफल में भी उल्लेखनीय वृद्धि हुई है।
- Stressing the importance of **scientific documentation in conservation**, he said institutions such as the **Zoological Survey of India (ZSI)** and the **Botanical Survey of India (BSI)** play a crucial role in protecting **biodiversity**.
संरक्षण में वैज्ञानिक प्रलेखन के महत्व पर बल देते हुए उन्होंने कहा कि **भारतीय प्राणी सर्वेक्षण (ZSI)** तथा **भारतीय वनस्पति सर्वेक्षण (BSI)** जैसी संस्थाएँ **जैव-विविधता** के संरक्षण में अत्यंत महत्वपूर्ण भूमिका निभाती हैं।



India seeks clarity as 'tipping points' rock Bonn climate talks

At the Bonn climate talks, when India urged caution on how the term 'tipping point' is defined and used, the European Union said that amounted to 'misinformation'

SS III: Environment
Rishika Pardikar

At the Bonn climate talks in Germany on June 8-18, alongside the usual laundry list of contested themes such as climate finance, tipping points became an unexpected source of debate and controversy.

According to the Earth Negotiations Bulletin, India urged care and clarity in using terms like "tipping points", which it said would present challenges around defining the idea and cautioned against miscommunicating or oversimplifying the science.

However, the European Union muddled the waters by raising concerns about "coordinated misinformation" and "obstruction".

Complexities, uncertainties

A climate tipping point is a threshold in the earth's climate system beyond which a part of it jumps into a new state.

Once such a tipping point has been crossed, changes can happen faster or harder to reverse on human timescales, even if the original cause of the change is removed.

For example, say warming in the Arctic melts enough sea ice to expose large areas of dark ocean. These waters could absorb more heat, causing more warming and even more melting. With enough heat, this cycle may be able to continue on its own, rendering recovery very difficult.

However, it is difficult to project tipping points in the climate because of complexities in the climate system and uncertainties in the input data.

Climate communicators also struggle with this concept: some see it as a catalyst for urgent action while others have argued that its inherent uncertainties undermine its value for policymaking.

In fact, climate-related drivers of directly experienced disasters, such as extreme rainfall or heatwaves, are sometimes seen as more effective for raising public awareness of climate change and the need for climate action than the relatively abstract concept of climate tipping points.

However, the risks that tipping points carry are significantly larger than routine climate-induced disasters, and thus raise larger questions about how people can adapt to the effects of a breached tipping point.

Multiple thresholds

Tipping points have non-linear behaviour. This means they don't increase at the same pace or intensity at which greenhouse gases accumulate in the environment. Instead, even small increases in temperature can trigger large, self-amplifying feedback loops.

Aside from warming in Arctic, potential climate tipping points include a 'dieback' of the Amazon rainforest (i.e. the risk of the forest reverting to being a savannah), the collapse of an ocean current called the Atlantic meridional overturning circulation (AMOC), the mass-bleaching of coral reefs, changes in the monsoons over India and West Africa, and the disintegration of the Greenland ice sheet.



Scientists study the Atlantic meridional overturning circulation, a movement of warm and cold waters that stretches from around Greenland to beyond the tip of Africa and into the Indian Ocean. The risks that tipping points carry are significantly larger than routine climate-induced disasters. AP

While human societies will be better off not threatening any of the climate tipping points, there are also positive social tipping points in the climate space – such as the adoption of renewable energy. Once these technologies win a critical adoption level, some experts have argued, they will be on track to large-scale adoption.

Contesting tipping points

That said, many experts have also said tipping points raise more questions than provide answers.

Scientists also still struggle to project when the AMOC will collapse or when the Amazon rainforest will transition into a savannah ecosystem.

One reason is that scientists have to work with projected emissions and temperature ranges in future and, based on that, they have returned with indications that certain climate systems will change slowly rather than suddenly to new states.

For example, one *Science Advances* paper in April noted that AMOC could slow down by 51%, rather than altogether collapse, by 2100 in a medium-emissions scenario.

This conclusion also depends on the model context because it is not a direct forecast: the paper only aimed to identify which model projections were more credible than others. In other words, uncertainties are implicit in the data and cannot be removed using more data alone.

In fact, research suggests that scientists may be able to identify fixed tipping points clearly only in *post facto* analysis from a historical lens. Meaning, in hindsight.

And in the case of complex ecosystems like the Amazon rainforest, whose fate is closely tied to millions of tribal and urban community members and numerous artisanal enterprises, a projection of

Many scientists and science communicators agree that clearly communicating scientific uncertainty is a good thing because it builds trust

tipping points based only on changes in the climate would miss influences due to, say, cattle-ranching and human deforestation – and underestimate the implications of a change to a savannah.

That said, some scientists have also contested whether tipping points will be abrupt. For example, ice sheets deplete over thousands of years – which is far from abrupt for human observers.

A faux threshold

There is a popular notion that the earth's surface warming beyond 1.5 degree Celsius is a tipping point. The confusion persists even among participants in climate negotiations, research published in 2019 found.

However, negotiators adopted this number as well as 2 degrees Celsius at the COP21 climate talks in 2015 as a political target based on scientific evidence that warming beyond 1 degrees Celsius, 1.5 degrees Celsius or 2 degrees Celsius will increasingly disrupt the climate. The temperature goals are not tipping points in and of themselves.

At the Bonn climate talks, when India urged caution on how the term 'tipping point' is defined and used, the European Union said that amounted to "misinformation".

Specifically, India argued that the term 'tipping point' entails "definitional challenges". This much has been acknowledged in independent scientific research and in state-led efforts. For instance, the U.K.'s national meteorological office is working on a project titled 'An Up-HILL Battle: Building

consensus on terminology for high impact climate events and tipping point risks'.

According to a project document: "Unclear and inconsistent terminology for high impact climate phenomena, including concepts such as tipping points, irreversibility, 'collapse' and 'shutdown', presents a substantial barrier to clear understanding of Earth system risks."

Way from here

Many scientists and science communicators agree that clearly communicating scientific uncertainty is a good thing because it builds trust.

Both false alarm and a false sense of hope can affect credibility when, say, a projection or a forecast doesn't come to pass. The risk – rather than the certainty – implicit in tipping points is also significant enough to warrant climate action.

In one 2025 article in *Nature Climate Change*, researchers from Canada, Switzerland, the U.K., and the U.S. criticised the 'tipping points' framework for "oversimplifying the diverse dynamics of complex natural and human systems and for conveying urgency without fostering a meaningful basis for climate action."

They also called for more clarity, especially on the degree of abruptness, the reversibility of changes, and feedback-driven self-amplification.

"Climate change is already causing demonstrable and obvious harm around the world," the researchers wrote. In tipping point discourse, on the other hand, "there is no specific increment of temperature increase that science can identify as the boundary between our current, already-dangerous climate and a future catastrophic climate, and no justification for doomism and paralysis while the world continues to warm."

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THE GIST

At the Bonn climate talks in Germany on June 8-18, tipping points became an unexpected source of debate and controversy

India urged care and clarity in using terms like "tipping points", which it said would present challenges around defining the idea and cautioned against miscommunicating or oversimplifying the science

It is difficult to project tipping points in the climate because of complexities in the climate system and uncertainties in the input data

01J7. India seeks clarity as 'tipping points' rock Bonn climate talks

‘टिपिंग पॉइंट्स’ को लेकर उत्पन्न विवाद के बीच भारत ने बॉन जलवायु वार्ताओं में स्पष्टता की मांग की



- At the **Bonn climate talks** in **Germany** on **June 8-18**, alongside the usual laundry list of contested themes such as **climate finance**, **tipping points** became an unexpected source of debate and controversy.
जर्मनी में 8-18 जून को आयोजित बॉन जलवायु वार्ताओं में, जलवायु वित्त जैसे सामान्यतः विवादित विषयों की लंबी सूची के साथ-साथ टिपिंग पॉइंट्स अप्रत्याशित रूप से बहस और विवाद का विषय बन गए।
- According to the **Earth Negotiations Bulletin**, **India** urged care and clarity in using terms like “**tipping points**”, which it said would present challenges around defining the idea and cautioned against mis-communicating or oversimplifying the science.
अर्थ नेगोशिएशन्स बुलेटिन के अनुसार, भारत ने “टिपिंग पॉइंट्स” जैसे शब्दों के प्रयोग में सावधानी और स्पष्टता बरतने का आग्रह किया तथा कहा कि इस अवधारणा को परिभाषित करने में चुनौतियाँ हैं और विज्ञान का गलत संप्रेषण अथवा अत्यधिक सरलीकरण करने से बचना चाहिए।

Complexities, uncertainties

जटिलताएँ, अनिश्चितताएँ

- A **climate tipping point** is a threshold in the earth's climate system beyond which a part of it jumps into a new state.
जलवायु टिपिंग पॉइंट पृथ्वी की जलवायु प्रणाली की वह सीमा है जिसके आगे उसका कोई भाग एक नई अवस्था में पहुँच जाता है।
- Once such a **tipping point** has been crossed, changes can happen faster or harder to reverse on human timescales, even if the original cause of the change is removed.
एक बार ऐसा टिपिंग पॉइंट पार हो जाने पर, परिवर्तन अधिक तीव्र गति से हो सकते हैं या मानव समय-मान पर उन्हें उलटना अत्यंत कठिन हो सकता है, भले ही परिवर्तन का मूल कारण समाप्त कर दिया जाए।
- For example, say warming in the **Arctic** melts enough sea ice to expose large areas of dark ocean.
उदाहरण के लिए, यदि आर्कटिक में बढ़ती गर्मी इतनी समुद्री बर्फ पिघला दे कि गहरे रंग के महासागर के विशाल क्षेत्र उजागर हो जाएँ।
- These waters could absorb more heat, causing more warming and even more melting.
ये जल अधिक ऊष्मा अवशोषित कर सकते हैं, जिससे और अधिक गर्मी तथा और अधिक पिघलाव हो सकता है।
- With enough heat, this cycle may be able to continue on its own, rendering recovery very difficult.
पर्याप्त ऊष्मा मिलने पर यह चक्र स्वयं ही चलता रह सकता है, जिससे पुनर्प्राप्ति अत्यंत कठिन हो जाती है।
- However, it is difficult to project **tipping points** in the climate because of complexities in the climate system and uncertainties in the input data.
हालाँकि, जलवायु प्रणाली की जटिलताओं और उपलब्ध आँकड़ों की अनिश्चितताओं के कारण जलवायु टिपिंग पॉइंट्स का पूर्वानुमान लगाना कठिन है।

Multiple thresholds

अनेक सीमाएँ

- Tipping points have non-linear behaviour.**
टिपिंग पॉइंट्स का व्यवहार गैर-रेखीय होता है।
- Aside from warming in **Arctic**, potential climate tipping points include a ‘**dieback**’ of the **Amazon rainforest** (i.e. the risk of the forest reverting to being a **savannah**), the collapse of an ocean current called the **Atlantic meridional overturning circulation (AMOC)**, the **mass-bleaching of coral reefs**, changes in the **monsoons over India and West Africa**, and the disintegration of the **Greenland ice sheet**.
आर्कटिक में बढ़ती गर्मी के अतिरिक्त संभावित जलवायु टिपिंग पॉइंट्स में अमेज़न वर्षावन का क्षरण, अर्थात् उसके सवाना में परिवर्तित होने का जोखिम, अटलांटिक मेरिडियनल ओवरटर्निंग सर्कुलेशन (AMOC) का



ध्वस्त होना, प्रवाल भित्तियों का व्यापक विरंजन, भारत तथा पश्चिम अफ्रीका के मानसून में परिवर्तन तथा ग्रीनलैंड हिमचादर का विघटन शामिल है।

- While human societies will be better off not threatening any of the climate tipping points, there are also **positive social tipping points in the climate space — such as the adoption of renewable energy.**

यद्यपि मानव समाज के लिए यह बेहतर होगा कि किसी भी जलवायु टिपिंग पॉइंट को खतरे में न डाला जाए, फिर भी जलवायु क्षेत्र में कुछ सकारात्मक सामाजिक टिपिंग पॉइंट्स भी हैं, जैसे नवीकरणीय ऊर्जा को अपनाना।

- Once these technologies win a critical adoption level, some experts have argued, they will be on track to large-scale adoption.

कुछ विशेषज्ञों का तर्क है कि एक बार ये प्रौद्योगिकियाँ एक महत्वपूर्ण स्वीकृति स्तर प्राप्त कर लें, तो उनका बड़े पैमाने पर प्रसार सुनिश्चित हो जाएगा।

Contesting tipping points

टिपिंग पॉइंट्स पर विवाद

- That said, some scientists have also contested whether **tipping points** will be abrupt. फिर भी, कुछ वैज्ञानिकों ने इस बात पर भी प्रश्न उठाया है कि क्या टिपिंग पॉइंट्स वास्तव में अचानक घटित होंगे।
- For example, **ice sheets** deplete over thousands of years — which is far from abrupt for human observers. उदाहरण के लिए, हिमचादरों का क्षय हजारों वर्षों में होता है, जो मानव दृष्टि से अचानक होने वाली घटना नहीं है।

A faux threshold

एक कृत्रिम सीमा

- At the **Bonn climate talks**, when **India** urged caution on how the term **‘tipping point’** is defined and used, the **European Union** said that amounted to **“misinformation”**.
बॉन जलवायु वार्ताओं में जब भारत ने ‘टिपिंग पॉइंट’ शब्द की परिभाषा और उसके प्रयोग में सावधानी बरतने का आग्रह किया, तब यूरोपीय संघ ने इसे “दुष्प्रचार” बताया।
- Specifically, **India** argued that the term **‘tipping point’** entails **“definitional challenges”**. विशेष रूप से, भारत ने तर्क दिया कि ‘टिपिंग पॉइंट’ शब्द में “परिभाषात्मक चुनौतियाँ” निहित हैं।
- This much has been acknowledged in independent scientific research and in state-led efforts. इस तथ्य को स्वतंत्र वैज्ञानिक अनुसंधानों तथा राज्य-नेतृत्व वाले प्रयासों में भी स्वीकार किया गया है।
- According to a project document: **“Unclear and inconsistent terminology for high impact climate phenomena, including concepts such as tipping points, irreversibility, ‘collapse’ and ‘shutdown’, presents a substantial barrier to clear understanding of Earth system risks.”**
परियोजना दस्तावेज़ के अनुसार: “उच्च प्रभाव वाले जलवायु परिघटनाओं के लिए अस्पष्ट और असंगत शब्दावली, जिसमें टिपिंग पॉइंट्स, अपरिवर्तनीयता, ‘पतन’ तथा ‘शटडाउन’ जैसी अवधारणाएँ शामिल हैं, पृथ्वी प्रणाली के जोखिमों की स्पष्ट समझ में एक बड़ी बाधा प्रस्तुत करती हैं।”

Way from here

आगे की दिशा

- Many scientists and science communicators agree that clearly communicating **scientific uncertainty** is a good thing because it builds trust.



अनेक वैज्ञानिक और विज्ञान संचारक इस बात से सहमत हैं कि वैज्ञानिक अनिश्चितता का स्पष्ट संप्रेषण करना उचित है क्योंकि इससे विश्वास का निर्माण होता है।

- Both **false alarm** and a **false sense of hope** can affect credibility when, say, a projection or a forecast doesn't come to pass.

जब कोई प्रक्षेपण या पूर्वानुमान सही सिद्ध नहीं होता, तब झूठा खतरे का संकेत तथा झूठी आशा की भावना दोनों ही विश्वसनीयता को प्रभावित कर सकते हैं।

- The **risk** — rather than the certainty — implicit in **tipping points** is also significant enough to warrant **climate action**.

टिपिंग पॉइंट्स में निहित जोखिम, न कि उनकी निश्चितता, इतना महत्वपूर्ण है कि वह जलवायु कार्रवाई की आवश्यकता को उचित ठहराता है।

GS Paper III: Internal Security		01 July 2026
TOPICS COVERED		
01J7	Criminal justice system's digital push aims for a full roll-out by next year आपराधिक न्याय प्रणाली का डिजिटलीकरण अगले वर्ष तक पूर्ण रूप से लागू करने का लक्ष्य	



Criminal justice system's digital push aims for a full roll-out by next year

However, data maintained by the NCRB shows only 46% of FIRs were digitally transmitted to courts; out of 36 States, U.T.s, Haryana, Goa, Assam, Punjab, and Chandigarh have implemented all parameters, while 23 States are above national average

GS III: Internal Security
Vijaita Singh
NEW DELHI

From January 1, 2027, procedures related to all investigations and trials under the new criminal laws will be recorded digitally, a senior Home Ministry official said on Tuesday.

The official said the nationwide rollout of the Interoperable Criminal Justice System (ICJS) - which integrates police, courts, prisons, forensics, and prosecution on a single platform - is expected to be completed soon, with emphasis on end-to-end digital workflow.

The data will be stored in the government-owned cloud platform MeghRaj.

However, data maintained by the National Crime Records Bureau (NCRB) showed that the first information report (FIR) consumption by courts, the process through which cases are electronically transmitted to and received by court systems, was at 46%, less than half of the cases registered.

The three new criminal laws, Bharatiya Nyaya Sanhita (BNS), Bharatiya Sakshya Sanhita (BSS), and Bharatiya Nagarik Su-

Digital drive

The digitisation aims to make way for faster, more transparent, and integrated justice delivery nationwide



■ 25 new forensic laboratories have been added in two years to support mandatory forensic investigations

■ All investigations and trials under BNS, BSS, and BNSS will be digitally recorded and stored on the MeghRaj government cloud platform

■ The Interoperable Criminal Justice System (ICJS) connects police, courts, prisons, prosecution, and forensic laboratories on a single platform

■ Over 63,500 zero-FIRs have been registered, allowing complaints to be filed regardless of jurisdiction and transferred electronically

■ Implementation has risen from 46.47% to 70.06% since January 2025, with improved chargesheet compliance and millions of digital evidence IDs and e-summons generated

raksha Sanhita (BNSS), replaced the Indian Penal Code (1860), Indian Evidence Act (1872), and the Code of Criminal Procedure (1898), respectively.

These came into effect on July 1, 2024, and in the past two years, 74.66 lakh FIRs have been filed under BNS. Since these laws require upgraded infrastructure and forensic capabilities, States and Union Territories have been given five years to implement all the pillars of criminal justice system.

As many as 63,572 zero-FIRs, those which can be

filed irrespective of jurisdiction, have been registered under the BNSS. Though the provision existed earlier, the BNSS gave it a statutory backing. The official said that around 13,000 zero-FIRs were filed in different districts of the same State and fell under the category of "intra-State transfers".

The Crime and Criminal Tracking and Network Systems, the platform which is used to file FIRs across 16,000 police stations in the country, has an option to register cases in 23 languages and the Bhashini

App can translate the zero-FIR to the language used in the jurisdiction concerned, the official said.

"A police person cannot turn away a complainant from filing a zero-FIR. Once registered, the case is transferred to the police station concerned and they can decide further upon inquiry, if they want to close the case or pursue the investigation," said the official. Out of 36 States and Union Territories, Haryana, Goa, Assam, Punjab, and Chandigarh have implemented all the parameters of the justice system, while 23 States and U.T.s, including Delhi, are above the national average. The official said due to connectivity issues, some of the northeastern States were lagging behind.

More forensic labs

As the new laws make forensic examination of crime scenes mandatory in cases punishable by seven years or more, as many as 25 new forensic laboratories (FSL) were added in the past two years, taking the total number of laboratories from 129 in 2023 to 154 in 2025.

While in 2023, the forensic labs received 8,44,589 cases for exami-

nation, out of which 4,64,879 were pending, in 2025, the cases received were 11,11,798 with 3,90,786 pending. More than 700 mobile forensic units have been deployed so far.

After the new laws came into effect, the national implementation score increased from 46.47% (January 2025) to 70.06% (June 2026). The 60-day chargesheet compliance rose from about 51% to 67%, and the 90-day compliance rose from about 40% to 61%. Additionally, 46.5 lakh digital evidence (Sakshya) IDs were generated, and 56.74 lakh e-summons were served.

As on May 31, 2026, there are 37.68 crore police records, which include 9.9 crore FIRs and 7.64 crore chargesheets in the database, which can be accessed by police and investigating agencies.

The Ministry official said that improving Internet connectivity, especially in remote and northeastern parts of the country, standardising processes across States and U.T.s, ensuring full interoperability among all criminal justice platforms and training of personnel were some of the challenges ahead.

01J7. Criminal justice system's digital push aims for a full roll-out by next year आपराधिक न्याय प्रणाली का डिजिटलीकरण अगले वर्ष तक पूर्ण रूप से लागू करने का लक्ष्य

- From **January 1, 2027**, procedures related to all **investigations** and **trials** under the **new criminal laws** will be recorded **digitally**, a senior **Home Ministry** official said on Tuesday.
1 जनवरी 2027 से नए आपराधिक कानूनों के अंतर्गत होने वाली सभी जाँचों तथा विचारण (Trials) से संबंधित प्रक्रियाओं का डिजिटल रूप से अभिलेखीकरण किया जाएगा, यह जानकारी गृह मंत्रालय के एक वरिष्ठ अधिकारी ने मंगलवार को दी।
- The **nationwide rollout of the Interoperable Criminal Justice System (ICJS)** – which integrates **police, courts, prisons, forensics, and prosecution** on a single platform – is expected to be completed soon, with emphasis on **end-to-end digital workflow**.
देशभर में इंटरऑपरेबल क्रिमिनल जस्टिस सिस्टम (ICJS) का क्रियान्वयन शीघ्र पूरा होने की संभावना है।

यह प्रणाली पुलिस, न्यायालयों, कारागारों, फॉरेंसिक संस्थानों, तथा अभियोजन तंत्र को एक ही मंच पर एकीकृत करती है तथा आरंभ से अंत तक डिजिटल कार्यप्रवाह (End-to-End Digital Workflow) पर विशेष बल देती है।

- The **data** will be stored in the government-owned cloud platform **MeghRaj**.
संपूर्ण डेटा को सरकार के स्वामित्व वाले क्लाउड प्लेटफॉर्म मेघराज (MeghRaj) पर सुरक्षित रखा जाएगा।
- However, data maintained by the **National Crime Records Bureau (NCRB)** showed that the **First Information Report (FIR) consumption by courts**, the process through which cases are electronically transmitted to and received by court systems, was at **46%**, less than half of the cases registered.
हालाँकि, राष्ट्रीय अपराध रिकॉर्ड ब्यूरो (NCRB) के आँकड़ों से पता चलता है कि न्यायालयों द्वारा प्रथम सूचना रिपोर्ट (FIR) उपभोग (Consumption), अर्थात् वह प्रक्रिया जिसके माध्यम से मामलों का इलेक्ट्रॉनिक रूप से न्यायालयों तक प्रेषण एवं प्राप्ति होती है, केवल 46% रही, जो पंजीकृत मामलों के आधे से भी कम है।
- As many as **63,572 Zero FIRs**, those which can be filed irrespective of **jurisdiction**, have been registered under the **BNSS**.
BNSS के अंतर्गत 63,572 ज़ीरो एफआईआर दर्ज की गई हैं, जिन्हें क्षेत्राधिकार (Jurisdiction) की परवाह किए बिना किसी भी थाने में दर्ज कराया जा सकता है।
- The **Crime and Criminal Tracking and Network Systems (CCTNS)**, the platform which is used to file **FIRs** across **16,000 police stations** in the country, has an option to register cases in **23 languages** and the **Bhashini App** can translate the **Zero FIR** into the language used in the jurisdiction concerned, the official said.
क्राइम एंड क्रिमिनल ट्रैकिंग एंड नेटवर्क सिस्टम (CCTNS), जिसका उपयोग देश के 16,000 पुलिस थानों में एफआईआर दर्ज करने के लिए किया जाता है, में 23 भाषाओं में मामले दर्ज करने की सुविधा उपलब्ध है तथा भाषिणी ऐप संबंधित ज़ीरो एफआईआर का उस क्षेत्राधिकार की भाषा में अनुवाद कर सकता है।
- "A **police person** cannot turn away a complainant from filing a **Zero FIR**.
"कोई भी पुलिस अधिकारी किसी शिकायतकर्ता को ज़ीरो एफआईआर दर्ज कराने से मना नहीं कर सकता।
- Once registered, the case is transferred to the **police station concerned** and they can decide further upon inquiry, if they want to close the case or pursue the **investigation**," said the official.
एक बार मामला दर्ज हो जाने के बाद उसे संबंधित पुलिस थाने को स्थानांतरित कर दिया जाता है और जाँच के आधार पर वह यह निर्णय ले सकता है कि मामले को बंद करना है या जाँच जारी रखनी है," अधिकारी ने कहा।
- As the **new criminal laws** make **forensic examination of crime scenes** mandatory in cases punishable by **seven years or more**, as many as **25 new Forensic Science Laboratories (FSLs)** were added in the past **two years**, taking the total number of laboratories from **129** in 2023 to **154** in 2025.
चूँकि नए आपराधिक कानूनों के तहत सात वर्ष या उससे अधिक की सजा वाले मामलों में अपराध स्थल के फॉरेंसिक परीक्षण को अनिवार्य बनाया गया है, इसलिए पिछले दो वर्षों में 25 नई फॉरेंसिक विज्ञान प्रयोगशालाएँ (FSLs) स्थापित की गईं, जिससे प्रयोगशालाओं की कुल संख्या 2023 में 129 से बढ़कर 2025 में 154 हो गई।
- The **60-day chargesheet compliance** rose from about **51%** to **67%**, and the **90-day compliance** rose from about **40%** to **61%**.
60 दिनों के भीतर आरोपपत्र (Chargesheet) दाखिल करने की अनुपालना लगभग 51% से बढ़कर 67% हो गई, जबकि 90 दिनों की अनुपालना लगभग 40% से बढ़कर 61% हो गई।