

EDITORIAL HIGHLIGHTS

31-07-2026

1. The Next DPI — How India Can Commoditise AI (the hindu Page no 8)

Syllabus Mapping

1. GS Paper: GS Paper 3
2. Syllabus Topics:
 1. Science and Technology—developments and their applications and effects in everyday life.
 2. Awareness in the fields of IT, Computers, and Artificial Intelligence.
 3. Indigenization of technology and developing new technology.

The next DPI — how India can commoditise AI

India made identity, payments, and data free. Intelligence is next. No other country has deliberately built all three as a digital public infrastructure (DPI) stack at India's scale. Others have developed only pieces of this. Estonia has a world-class digital identity system, but nothing comparable to UPI. Brazil's Pix is an excellent free payments rail, but it stands alone. Singapore has Singpass and SGFinDex, while Europe has open banking and data portability. India's genuine claim to global leadership in public digital infrastructure lies in this unique combination. Its distinctiveness is not any single component, but the integration of Aadhaar, the Unified Payments Interface (UPI), and DEPA/Account Aggregator as interoperable public digital rails.

Between September 2016 and 2019, the cost of a gigabyte in India fell from about \$4 to under 30 cents, making it among the cheapest in the world. The result was not a telecom story. It was a civilisational one: 500 million people came online in half a decade, powering India's digital economy such as payment volumes, the startup ecosystem, the direct-benefit transfers reaching the last village. Aadhaar enrolled 1.4 billion people and turned identity verification from an expensive paper process to a low-cost API call. UPI made digital payments effectively free, processing around 20 billion transactions a month at near-zero cost. India made data free not by subsidising it, but by letting one player absorb the fixed costs of a nationwide 4G network, price at marginal cost, and force every incumbent to match or die.

India should not be in the capital race to the bottom which we would lose to hyperscalers, and it is the intelligence equivalent of nationalising the telecoms. India crushed the price of data by engineering conditions and competition. So, the target is inference, not training; relentlessly drive down the cost of using a model. It released spectrum, created a demand shock, and let ferocious competition do the rest. The state built the road and set the rules; the market crashed the price. A billion people came online not because data was gifted, but because its cost fell below the threshold of thought. And the case for making it free — or as close to free as a gigabyte of data — is not utopian. It is the same case, run on the same playbook that worked three times before.

This is the model India should now apply to its fourth foundational utility: intelligence itself. Intelligence is no longer a luxury software product; it is foundational infrastructure.

The trade running against India
The global artificial intelligence (AI) race is currently operating under an extractive economic model, and India — despite its immense demographic dividend — is on the losing side of the trade. India serves as the world's digital quarry. India supplies an outsized share of the world's raw intelligence. Its engineers build and fine-tune the frontier models of Silicon Valley. Its



Srivatsa Krishna
IAS officer

digitised public life — languages, documents, transactions, behaviour — becomes training data. Its universities and diaspora furnish a disproportionate slice of the research talent behind every major laboratory. Each day, Indians generate vast data. Indian engineers build Silicon Valley's frontier models; and Indian workers label datasets to make them safer. Yet, Indian startups must rent that intelligence back as dollar-priced API tokens, subject to export controls and hosted on distant servers. India exports talent, data, and usage, then imports the finished intelligence at high-margin, per-token prices on terms set in San Francisco. The pattern is familiar. Ship out the cotton, buy back the cloth. India recognised that trap in textiles centuries ago. It should recognise it in intelligence now.

India's AI token economy
India's national AI token economy should be built on the following pillars. First, making intelligence free is raw compute power. Through the IndiaAI Mission, backed by an outlay of about \$10,372 crore, the government is building a public-private partnership model — not a state-run data centre monopoly. By empanelling private cloud providers and aggregating demand, it has onboarded over 38,000 GPUs, with plans to scale to 1,00,000. Eligible startups and researchers can access compute for about \$65 per GPU hour, a fraction of global market rates.

India's grid planning does not yet treat AI load as a category. The single highest-leverage intervention available to the government is boring: fold compute into the National Electricity Plan, fast-track transmission to data-centre clusters, and dedicate renewables generation, including nuclear, to inference the way it once dedicated coal linkages to steel. Cheap electrons are the new cheap spectrum.

Second, cheap compute is useless without models to run on it. Currently, the most capable foundation models are closed source and owned by western tech giants. If Indian startups build their businesses on top of these proprietary APIs, they remain economically subservient. A single pricing change or policy shift in San Francisco can wipe out an entire sector in Bengaluru. India must mandate that foundational AI models become public goods.

The government must leverage its most valuable asset: linguistic and demographic data. The state should aggregate anonymised public data (legal rulings, agricultural data, educational curricula in all 22 official/scheduled languages) and make them available exclusively to researchers building open-source models. Further, any AI model developed using state-subsidised compute or public datasets must be released under an open-weights license. This mirrors the UPI philosophy: the government builds the rails, makes the protocol free, and lets private companies (Google Pay) compete on the user experience. By flooding the market with highly capable, open-source Indic LLMs (Large

Language Models), India commoditises the "intelligence" layer. When foundational models are free and open, the economic value shifts from the model creators to the application builders — exactly where India's strength lies.

Third, the unified intelligence interface (UII) or distribution. How does a rural farmer or a Tier-3 developer access this free intelligence? An API gateway built on the principles of DPI, a UPI for AI. UPI's genius was not free payments as such; it was interoperability. A common protocol let any app talk to any bank, and switching costs fell to zero. Intelligence needs the same: an open, standardised interface through which any application can call any model — sovereign or private, open or proprietary — with shared standards for identity, consent, billing and safety.

Just as UPI abstracts away the complexity of inter-bank transfers, a national API gateway would abstract away the complexity of AI inference. Startups, government agencies, and educational institutions could plug into this gateway to access a suite of open-source models (translation, vision, text generation) for fractions of a penny.

To kickstart the ecosystem, the government could offer a national "freemium" model. Verified Indian startups or students through Aadhaar-linked digital identity could get monthly free API tokens, subsidised by the state. When startups scale and become profitable, they move to a commercial tier, paying slightly more for compute, which subsidises the free tier.

Additionally, a tenth of the fertilizer subsidy could be diverted to tokens for research and development institutions and schools. When intelligence becomes nearly free, sectors constrained by scarce human capital transform. A rural doctor, aided by AI trained on Indian data, can treat more patients with fewer errors; India's 300 million students get 24x7 personalised AI tutors in local dialects; a Karnataka farmer can settle a crop-insurance claim by voice in Kannada, with AI accessing land records.

The next great equaliser
In sum, free identity and cheap data did not make Indians rich; they made mass participation frictionless. Free intelligence can do the same. Nobody foresaw that near-free data would create the world's largest payments system, short-video platforms, and QR-code vegetable vendors.

Near-free intelligence could be just as generative if the state primes it with token entitlements for students and teachers, citizen services in local languages, and affordable tools for 60 million small businesses. India's leadership in the AI economy is contingent on developing an open-source ecosystem with open weights no-kill switch models that expand competition, choice, opportunities and innovation. The goal is not better chatbots; it is making cognition no longer a class privilege.

The views expressed are personal

Making Artificial Intelligence affordable and ubiquitous should become India's next transformative public infrastructure revolution

2. The Bay of Bengal as India's SHANTI Anchor (the Hindu Page no 8)

Syllabus Mapping

1. GS Paper: GS Paper 2 & GS Paper 3
2. Syllabus Topics:
 1. India and its neighborhood—relations.
 2. Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.
 3. Security challenges and their management in border/maritime areas; Disaster and disaster management.

The Bay of Bengal as India's SHANTI anchor

The Bay of Bengal region, one of the world's most disaster-prone regions, lacks coordinated mechanisms to respond to natural disasters. Non-traditional threats such as climate-induced disasters, illegal fishing, cyber vulnerabilities, and supply chain disruptions require regional cooperation beyond bilateral aid or maritime power. This gap – growing capacity without shared norms – highlights the need for stronger maritime security.

On July 13, External Affairs Minister S. Jaishankar introduced **Securing Holistic Advancement through Norms, Trust and Integrity (SHANTI)** while launching India's candidature for the UN Security Council (UNSC) for the 2028-29 term. Building on Security and Growth for All in the Region (SAGAR) and Mutual and Holistic Advancement for Security and Growth Across Regions (MAHASAGAR), SHANTI provides a normative framework for shared maritime spaces, with the Bay of Bengal serving as the ideal region to operationalise it before expanding it across the wider Indo-Pacific.

The Bay's centrality

In recent years, the Bay of Bengal has moved from the margins to the centre of India's strategic thinking. Historically, it connected South and Southeast Asia through trade, culture, religion, and the exchange of ideas long before the Indo-Pacific entered diplomatic vocabulary.

Today, it links India's Act East policy with the Association of Southeast Asian Nations (ASEAN), provides access to the strategically vital Malacca Strait, and connects the eastern Indian Ocean to major global trade and energy routes. China's heavy reliance on the strait – often described as the "Malacca dilemma" – has driven its expanding regional presence through ports and infrastructure projects, intensifying geopolitical competition. As economic connectivity, maritime



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The Bay of Bengal is an ideal testing ground for SHANTI's security vision

governance, and strategic rivalry converge in the Bay, SHANTI offers a framework that places norms, trust, and integrity – not tonnage – as the currency of durable advantage.

A maritime security evolution

As such, SHANTI can be best understood as a logical evolution of its maritime outreach. SAGAR, articulated in 2015, supplied the vision of 'equity in development' and MAHASAGAR, announced in 2025, expanded that vision's scope recognising the interconnectedness of security (both vertically among nations and horizontally in threat perception) in the wider Indo-Pacific and the Global South. SHANTI offers the grammar of maritime security framework, the norms, trust and integrity in cooperation through which vision can be translated into tangible action that is well received and reciprocated. It shifts the emphasis from competition to demand driven cooperation, from influence to non-prescriptive institution-building, and from episodic crisis management to long-term resilience. This shift – from protecting maritime spaces to governing shared maritime commons – reflects India's new security mantra. If SAGAR was a statement of intent and MAHASAGAR a statement of reach, SHANTI is a statement of method to situate India as the "preferred security partner" and "first responder".

Because the Bay of Bengal is a single interconnected system, its cyclones, fish stocks, shipping lanes and pollution cross national boundaries almost by default, and its littoral states face remarkably similar challenges and concerns – disaster risk reduction and response, coastal erosion, fisheries management, port resilience, undersea cable protection and climate adaptation.

Unlike the western Indian Ocean, which is marked by active conflict, fragile economy and

contested spaces, the Bay of Bengal's strategic geography encourages cooperation. Yet, the region suffers less from a lack of institutions than from institutional fragmentation. What is missing is a common framework to align existing mechanisms. SHANTI fills this gap by providing principles to strengthen cooperation in maritime security, disaster response, the blue economy, and environmental resilience. India's geography gives it a natural convening role, but its centrality should rest on regional stewardship – not dominance – through trust-based, rules-based cooperation among states with shared challenges and opportunities.

Principles to practice

Taken together, these conditions make the Bay of Bengal India's most governable maritime sub-region – a natural laboratory where SHANTI can move from principle to practice before shaping wider cooperation across the Indian Ocean. This was reflected at the July 2026 BIMSTEC National Security Advisers' meeting in New Delhi, where member-states adopted common principles for maritime law enforcement and humanitarian assistance and disaster relief. BIMSTEC also agreed to hold its first joint maritime security exercise in the Bay, in November 2026, while a white shipping information-sharing agreement remains under discussion. These initiatives reflect the norm-building and trust-based cooperation that SHANTI seeks to promote. Its lasting contribution, therefore, will not be another acronym in India's maritime lexicon, but a redefinition of security – from deterrence to resilience, from rivalry to shared responsibility, and from crisis management to governance of the shared maritime commons.

The views expressed are personal

3. How Common Are Cloudbursts in India? (The hindu Page no 10)

Syllabus Mapping

1. GS Paper: GS Paper I & GS Paper 3
2. Syllabus Topics:
 1. Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location.
 2. Disaster and disaster management.
 3. Conservation, environmental pollution and degradation.

How common are cloudbursts in India?

What counts as a cloudburst under the IMD's definition? How do they form over mountainous regions? Why are they so difficult to forecast? Can the term obscure the role of poor planning, inadequate infrastructure? What is India doing to improve forecasting and early warnings?

EXPLAINER

Vasudevan Mukunth

The story so far:

When a wall of water suddenly crashes from the sky and sweeps away homes and roads within minutes, one of the first words officials and the media in India reach for is 'cloudburst'. However, the term is often misused in a way that can distract from poor planning and crumbling infrastructure.

What counts as a cloudburst?

According to the India Meteorological Department (IMD), a cloudburst occurs when a small area, around 20-30 sq. km, receives 10 cm or more of rain in an hour.

To put this in perspective, Indore receives 1,062 mm of rain every year on average. A cloudburst could dump nearly 10% of this in 60 minutes.

Heavy rains are a common feature of the southwest monsoon, but a cloudburst is still an extraordinary amount of rainfall and much rarer. Because the water falls so quickly over a relatively small area, the ground cannot absorb all of it, leading to rapid and voluminous flooding.

Some scientists have also advocated for a category called 'mini-cloudburst', for 5 cm of rain in an hour over the same area, as, depending on the local topography, this can be devastating as well.

How common are cloudbursts in India?

Although cloudbursts are relatively rare, global warming, in particular as the atmosphere warms and can hold more moisture, is making them more frequent.

In response to a question, former Union Earth Sciences Minister Harsh Vardhan told Parliament in 2019 that between 1970 and 2016, the IMD had recorded only around 30 such incidents. However, many experts believe this number is an underestimate.

Counting them is not straightforward



Debris lies scattered after a cloudburst triggered flash floods, at Pahalgam in Anantnag, on July 12. PTI

because most cloudbursts occur in remote, high-altitude regions, where rain gauges and weather stations are sparse.

In fact, if a cloudburst occurs a few kilometres from a monitoring station, it may not be officially recorded as a cloudburst even if it causes large-scale destruction downstream.

Uttarakhand, Himachal Pradesh, and Jammu and Kashmir have, of late, reported a surge in events that locals have described as cloudbursts, especially in July and August.

How does a cloudburst form?

A cloudburst typically begins with convection, when warm, moist air rises rapidly into the atmosphere. In mountainous areas, this is called orographic lifting, where monsoon winds are forced upwards by steep slopes.

As the air rises, it cools and condenses into towering cumulonimbus clouds, which can be up to 15 km tall.

Water droplets begin to form inside these clouds and, as they get heavier, they would normally fall as rain. However, if the currents of warm air moving upwards are very strong, they can keep raindrops suspended in the air for longer.

Eventually, the weight of the water droplets becomes too great for gravity and the updrafts to hold, or the updrafts

weaken, sending the water plummeting down like an ocean descending on the ground.

Can the label obscure accountability?

By calling a heavy downpour a 'cloudburst', authorities can turn it into a singular and unforeseeable act of nature, obscuring the role of human negligence.

That is, if the cause of a tragedy is said to be a 'cloudburst', the blame can be written off, which is harder to do when the real cause is "heavy rain combined with poor drainage".

In 2025, during the Dharali floods in Uttarakhand, initial reports blamed a cloudburst. However, meteorological data later showed that the actual rate of rainfall was much lower than the threshold for a cloudburst.

The underlying causes were illegal construction on riverbeds, deforestation that had left soil vulnerable to erosion, and the absence of drainage infrastructure along new "all weather" roads.

Had the downpour indeed been a cloudburst, officials may have been able to avoid questions about why the State had allowed buildings to be constructed in high-risk zones and why early warning systems failed.

Last week, the IMD rejected reports

that Assam and Nagaland had experienced cloudbursts over the preceding few days and that they were responsible for the Upper Assam floods.

Are cloudbursts hard to forecast?

Cloudbursts are very difficult to forecast. Meteorologists can usually say whether a region is at risk of heavy rain but cannot say precisely which patch of land will experience a cloudburst.

First, most weather models study the atmosphere in grids and estimate the average weather for each cell.

A cloudburst, on the other hand, occurs over an area smaller than the size of each grid cell. To detect one, scientists need very high-resolution models, which in turn require immense computing power that is not always readily available.

Because of the mechanism through which cloudbursts form, they also develop and occur quickly. Cyclones and monsoon systems, on the other hand, can be tracked for weeks or even months, giving scientists more data to work with.

Finally, mountains are challenging environments for weather monitoring, and cloudbursts have a greater propensity to occur there. For instance, Doppler weather radars work by emitting and receiving radar beams, which mountains can block, creating blind spots over many areas where cloudbursts are also more common.

Because the terrain is so rugged, there are also fewer automatic weather stations. If there are no sensors on the ground to tell a computer what is happening at a given moment, it cannot reliably predict what could happen in the next hour.

That said, the IMD is currently working on 'nowcasting', a technology that issues short-term alerts every few hours.

Under the government's new 'Mission Mausam', India also plans to more than double its radar network, from the current 40 or so, and use AI to better predict hyperlocal events.

That said, even with the best technology, a cloudburst is likely to remain more difficult to predict than a typical rainstorm.

THE GIST

A cloudburst is a highly localised weather event in which at least 10 cm of rain falls over 20-30 sq. km in an hour, making it difficult to forecast despite advances in nowcasting and radar coverage.

The term is often incorrectly used for heavy rainfall events, even though many disasters are exacerbated by poor drainage, deforestation, construction in high-risk zones and other human factors.

4. Why Did Cauvery Panel Order Karnataka to Release Water? (The Hindu Page no 10)

Syllabus Mapping

1. GS Paper: GS Paper 2
2. Syllabus Topics:
 1. Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure.
 2. Dispute redressal mechanisms and institutions (Inter-state water disputes).

Why did Cauvery panel order Karnataka to release water?

What factors did the committee consider before fixing the quantum of release?

T. Ramakrishnan

The story so far:

The Cauvery Water Management Authority (CWMA), at its meeting on Thursday in New Delhi, endorsed the Cauvery Water Regulation Committee's (CWRC) order, issued on July 28, that Karnataka release 3,500 cubic feet per second (cusecs) to Tamil Nadu for 15 days, starting from July 29. If the quantity of 3,500 cusecs is available throughout the day for 15 days, the quantum of water is about 4.5 thousand million cubic feet (tmc ft).

What is the brief for the CWRC in tackling the Cauvery dispute?

The CWRC functions within the ambit of the Cauvery Water Management Authority (CWMA), which constitutes the implementation mechanism for the final award (2007) of the Cauvery Water

Disputes Tribunal as modified by the Supreme Court in 2018.

The committee is headed by the Member (Water Resources) of the CWMA, Vineet Gupta, and has as its members the Chief Engineers of all the basin constituents and a representative each of the India Meteorological Department, Central Water Commission, and Union Ministry of Agriculture and Farmers' Welfare.

According to a notification issued by the Union Jal Shakti Ministry in June 2018, the committee monitors daily water levels, inflows and storage at each of the reservoirs – Hemavathy, Harangi, Krishnarajasagara (KRS) and Kabini (all in Karnataka), Mettur, Bhavanisagar and Anasurashagar in Kerala. It is to ensure 10 daily releases of water on a monthly basis from the reservoirs as directed by the authority. It is also to prepare seasonal – southwest monsoon (June-October 15);

northeast monsoon (October 16-January 31) and hot weather (February-May) – and annual reports of the water account.

During either of the monsoons, the CWRC ordinarily holds meetings once every 15 days in a hybrid mode. As there has been scanty rainfall in the Cauvery catchment this time and Tamil Nadu pressing its demand for the release of its share of water, the CWRC met on July 28 to review the situation. It will meet again on August 11.

How does the committee arrive at decisions in times of distress?

The hydro-meteorological conditions prevailing in the Cauvery basin, including the rainfall recorded and the forecast or outlook for the ensuing fortnight, live storage position, inflows into and outflows from the eight reservoirs, and the realisation of flows at Biligundulu are reviewed and deliberated upon in detail.

Compliance with the decision and

directions issued during the previous meeting is also reviewed at the next meeting.

What else was considered by the CWRC?

The committee took into account net inflow to the four reservoirs in Karnataka during the current season and compared it with 30-year data. Mr. Gupta, in a conversation with *The Hindu* on Wednesday, said the shortfall suffered was to the extent of 60%.

The CWRC considered the flow of river water at Biligundulu and in the intermediate catchment – between KRS-Kabini and Mettur, both of which presented a gloomy picture. At Biligundulu, the deficit was 90%.

Given that the Meteorological Department did not give an optimistic outlook for the subsequent weeks, the CWRC, according to its chief, had arrived at the decision that would make Karnataka comfortable to release the water. As on July 30, the combined storage of the four reservoirs in the upper riparian State was 65.34 tmc ft against a total capacity of 114.57 tmc ft.

What were the reactions?

As Karnataka has not commenced water supply for irrigation this time in view of deficient rainfall, it is naturally upset at the decision. At the meeting of the CWMA, it filed an appeal against the

CWRC's order, but this was rejected. Chief Minister D.K. Shivakumar, now in New Delhi, subsequently announced that an all-party meeting would be held in Bengaluru on August 2 to seek the advice of the parties on the next move.

In Tamil Nadu, where the authorities have not commenced the water release for irrigation in the Cauvery delta, there are no takers for the Committee's move. The quantum is viewed as insufficient. There is a view that the CWRC should have ordered Karnataka to release the entire deficit of 9.8 tmc ft, as worked out by it. According to an estimate, the State's water requirement for the ongoing and short-term *kuruvai* cultivation season is at least 30 tmc ft, given the current coverage of 3.5 lakh acres. But the storage in Mettur is around 36 tmc ft, of which 10 tmc ft has to be kept apart for drinking water needs and dead storage. However, Tamil Nadu would require much more water for the next *samba-thaladi* cultivation season, which facilitates livelihood opportunities to lakhs of agricultural labourers in the delta. It needs a minimum of 180 tmc ft.

What is the way forward?

The States, as Mr. Gupta also pointed out, have to evolve a distress-sharing formula. This issue can be covered in the proposed visit of Tamil Nadu Chief Minister C. Joseph Vijay to Bengaluru to persuade the Karnataka government to release his State's share of the Cauvery river water.

5. Exam Reforms: What the Report After 2024 Leak Said (India express page no 9)

Syllabus Mapping

1. GS Paper: GS Paper 2
2. Syllabus Topics:
 1. Issues relating to development and management of Social Sector/Services relating to Education and Human Resources.
 2. Statutory, regulatory and various quasi-judicial bodies.
 3. Important aspects of governance, transparency and accountability.

• EDUCATION

Exam reforms: What the report after 2024 leak said

The K Radhakrishnan Committee recommendations aimed to transform the National testing Agency into 'a nimble, zero-error, adaptive process'



AMAAAL SHEIKH

AS THE Supreme Court on Monday heard petitions seeking changes to the conduct of the NEET examination after the 2026 paper leak controversy, the Centre informed the court that it has constituted a high-powered committee under entrepreneur Nandan Nilekani to recommend the next phase of examination reforms. The same day, the Central government introduced the Public Examinations (Prevention of Unfair Means) Amendment Bill in Lok Sabha to strengthen the anti-paper leak law.

The Centre's decision regarding the Nilekani-led committee has brought attention to an earlier reform blueprint: the K Radhakrishnan Committee report. The Committee, which was constituted in 2024 after the NEET-UG 2024 paper leak controversy, submitted a report containing 101 recommendations "with short term, medium term and long-term perspective".

The report was prepared under former ISRO Chairman Dr K Radhakrishnan and submitted to the Ministry of Education in October 2024. The report was developed after "twenty-three formal full-day physical sittings" and more than 37,000 responses received from students and parents through the MyGov portal. Its stated vision was to transform the National Testing Agency (NTA) into "a nimble, zero-error, adaptive and integrative process".

Why it was constituted

Constituted amidst "the rousing public concern on the integrity of entrance tests after reports of breaches and leakage of question paper", initially, the Ministry of Education asked the panel to recommend reforms in improving examination processes, strengthening data security, and reviewing NTA's structure and functioning.

Its mandate later expanded after directions from the Supreme Court in *Vanishka Yadav v. Union of India*. The additional terms of reference included examination security and administration, technological safeguards, policy and stakeholder engagement, international collaboration, staff training, and mental

• STATUS OF IMPLEMENTATION

The Union Ministry of Education constituted a high-powered steering committee in November 2024 under former ISRO chairman Dr K Radhakrishnan to monitor implementation of the committee's recommendations. The affidavit was filed before the Supreme Court in May 2026.



A protest rally against the NEET paper leak issue in Kolkata. PTI

health support for students.

What it found

Instead of treating paper leaks as isolated incidents, the report argued that vulnerabilities existed across the entire examination ecosystem. It mapped weaknesses throughout what it called the "Testing Life Cycle" — from printing and transporting question papers to candidate verification, examination centre management, and grievance redressal.

The report found that the NTA had been "operating as a single window agency" despite having "conducted more than 240 examinations since its inception involving over 5.4 crore candidates". It concluded that the agency's "present capacity and internal domain expertise need to be augmented".

Replacing physical transport with digital delivery

The report's central technological recommendation was Computer-assisted Secure Pen-and-Paper Testing (CPPT), designed "to eliminate potential breaches during the printing, storage and transportation chains" of question papers.

Instead of printing papers at central presses and transporting them across the country, encrypted question papers would

Secure testing

Instead of printing papers at central presses and transporting them physically, encrypted question papers would be sent electronically to secure servers at exam centres and printed there shortly before the exam.

The committee believed this would reduce opportunities for leaks.

OF THE COMMITTEE'S 101 recommendations, 60 were short-term and 35 long-term. The remaining six relate to monitoring and periodic appraisal, which the affidavit said is already in place.

COORDINATION COMMITTEES AT the state and district levels have been made functional and played a key role in conducting NEET-UG 2025 and 2026.

A MULTI-LAYER FRISKING mechanism has been introduced, with frisking by state police followed by NTA personnel at examination centres, along with installation of CCTV cameras and mobile jammers.

THE NTA SAID it has introduced data analytics to detect suspicious patterns and malpractice and is in the process of "adding Artificial Intelligence/Machine learning functionality to the Grievance Redressal System".

be transmitted electronically to secure servers at examination centres and printed there shortly before the examination. At the same time, candidates would continue writing conventional pen-and-paper tests.

By eliminating the need to transport printed question papers over long distances, the committee believed the model would significantly reduce opportunities for leaks during transit.

DIGI-EXAM

The committee also proposed a digital authentication framework called DIGI-EXAM, modelled "on the lines of 'Digi Yatra', to ensure "that ONLY the candidate writing the exam joins the intended programme". Instead of verifying candidates only on examination day, the system envisaged a continuous "multi-stage authentication of candidate's" across application, examination, and admission stages using Aadhar, biometrics, and AI-based analytics.

A complete overhaul

The report argued that technology alone would not solve the NTA's problems. It said the agency needed stronger institutional capacity and should reduce dependence on outsourced agencies for critical examination functions.

It recommended that the NTA's Governing Body "be recast as an empowered and accountable Apex Body" headed by a Director General "not below the rank of Additional Secretary to Govt". It also proposed creating 10 dedicated verticals within the agency, including Nation-wide Testing Centre Infrastructure, Information Security, Vigilance and Forensics, and Research and Development.

Testing centres

To reduce dependence on private vendors, the committee recommended developing "at least 1,000 Secure Testing Centres... in a phased manner, in reputed Government institutions," in accessible locations requiring power supply, seating requirements, technical support and candidate support facilities such as lockers for phones, ventilation in exam halls, help desks, and waiting areas for families of the candidates.

For remote and underserved regions, it proposed mobile testing centre buses equipped with laptops and servers that would function as fully operational examination centres for around 150 candidates.

For examinations involving very large numbers of candidates, the report recommended moving towards Multi-Session Testing spread over several days or weeks. It also described Multi-Stage Testing for NEET-UG as "a viable possibility".

Where multiple sessions are held, it stressed that score normalisation should be transparent and properly established and documented. Over the longer term, it also recommended gradually shifting towards Computer Adaptive Testing, in which question difficulty adjusts according to a candidate's performance.

Mental health

The report also placed considerable focus on student welfare to make their approach "holistic". Its recommendations included creating a dedicated mental-health cell within the NTA, tele-helplines, counselling services, and teacher sensitisation programmes. It also suggested that "a suitable oversight mechanism may be considered for Coaching Institutes", citing concerns over student stress and the financial burden placed on families.

The committee recommended equipping the NTA's Grievance Reporting and Redressal Cell with AI and machine learning-based interactive chatbots so that candidates could "receive clarifications in the language of their choice" for queries that arise during the examination process.

6. CBDT's Crypto Asset Reporting Guidance, and What It Means for Taxpayers (Indian express page no 9)

Syllabus Mapping

1. GS Paper: GS Paper 3
2. Syllabus Topics:
 1. Indian Economy and issues relating to planning, mobilization of resources, growth, development.
 2. Money-laundering and its prevention.
 3. Awareness in the fields of IT and emerging financial technologies.

CBDT's crypto asset reporting guidance, and what it means for taxpayers

Aanchal Magazine
New Delhi, July 27

THE CENTRAL Board of Direct Taxes has released a 198-page guidance note on crypto-asset reporting obligations, aligning India's tax reporting framework with that laid out by the Organisation for Economic Co-operation and Development (OECD). The measure puts the onus on crypto exchanges to report all transactions accurately and in detail, while helping countries to undertake automatic exchange of information regarding crypto asset transactions starting next year.

Experts say that while there is no additional filing requirement for taxpayers under this guidance note, the importance of accurate reporting and documentation has increased considerably.

The OECD framework is expected to strengthen the tax reporting framework for the crypto-asset sector as it will impose obligations on the service providers. Tax authorities will have access to more reliable information on crypto transactions, including those involving offshore exchanges. The likelihood of data-driven verification is expected to increase, experts said.

How are crypto assets defined legally?

India's income tax legislation defines a "crypto-asset" as a digital representation of value that relies on a cryptographically secured distributed ledger or a similar technology to validate and secure transactions. The OECD Crypto-Asset Reporting Framework (CARF) defines crypto-assets similarly, but also includes "similar technology to validate and secure transactions, which includes cryptocurrencies, as well as cryptography-based tokens".

The CBDT, however, pointed out that nothing in the guidance note and FAQs should be construed as affecting the permissibility or legitimacy of the transactions in crypto-assets, or their regulation.

What does the guidance note say?

India currently engages in the Automatic Exchange of Information with tax authorities in other jurisdictions through global tax transparency initiatives such as the Common Reporting Standard (CRS) and the Foreign Account Tax Compliance Act. Building on them, the CARF extended global tax transparency standards to crypto-asset activities.

The note seeks to guide Reporting Crypto-Asset Service Providers (RCASPs) for compliance with the reporting obligations under Section 509 of the Income-tax Act, 2025, and under Rules 241 to 244 and Form 167 of the Income-tax Rules, 2026.

In the note, CBDT Chairman Ravi Agarwal highlighted the challenge posed by the rapid growth of crypto-assets amid India's commitment to combating tax evasion and protecting its revenue base. The note will help RCASPs understand and discharge their obligations, he said.

What are the implications for taxpayers and crypto exchanges?

The note provides guidance to RCASPs on their obligations under the Income-tax Act and Rules, with detailed FAQs addressing the key facets of implementation, including scope, due diligence, reportable users, reporting requirements, and penalties.

"It clarifies that, in case of any inconsistency between the Guidance Note or the FAQs and the Act or Rules, the statutory position in the Act and Rules shall prevail. Its practical explanations, illustrations and FAQs should help RCASPs understand and implement the statutory framework," Richa Sawhney, Partner - Tax, Grant Thornton Bharat, told *The Indian Express*.

The framework mandates due diligence and valid self-certification at onboarding for new users, while pre-existing users as of December 31, 2025 are required to complete within 12 months from January 1, 2026, according to Sawhney.

Ankit Agarwal, Senior Partner, Nangia & Co LLP, said the note does not require every crypto investor to make fresh disclosures directly to the Income-tax Department, but places the primary compliance obligation on

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RCASPs, who are now required to collect, verify and report specified information relating to the transactions.

Crypto exchanges or service providers will be required to undertake customer due diligence and determine the tax residency of users; collect prescribed KYC and taxpayer information; maintain records of reportable crypto transactions; and furnish annual transaction information in the prescribed manner under Form 167, he said.

"Taxpayers should continue reporting crypto income in accordance with the existing provisions of the Income-tax Act; maintain proper records of purchases, sales, transfers and wallet movements; preserve exchange statements and supporting documentation; and ensure that the information disclosed in their income-tax return is consistent with the records available with crypto exchanges," Agarwal added.

What is the OECD's reporting framework?

The CARF requires the RCASPs to identify their users and to report on specified transactions in order to ensure the annualised reporting of tax-relevant information concerning certain activities in relation to crypto-assets.

Once received by tax authorities, the information will be automatically exchanged with the tax authorities of the jurisdiction(s) of residence of the crypto-asset users, pursuant to an international agreement that provides a legal basis for the automatic exchange of such information for tax purposes, the note added.

The increasing use of crypto-assets raised concerns among tax administrations worldwide about potential tax compliance evasion. Since assets can be transferred and held outside the traditional financial sector, they could go undetected and unreported by CRS, thus reducing the efficacy of the automatic exchange of information mechanism. Thus, a global reporting framework was seen as necessary to plug this loophole.

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7. Modi's Commitment to Gen Z: State Listens, Responds, Reforms (Indian express page no 10)

Syllabus Mapping

1. GS Paper: GS Paper 2
2. Syllabus Topics:
 1. Important aspects of governance, transparency and accountability.
 2. Citizen participation, democratic dissent, and executive responsiveness.
 3. Issues relating to development and management of Social Sector/Services relating to Education.

Modi's commitment to Gen Z: State listens, responds, reforms



**GOURAV
VALLABH**

IN FOUR days, Prime Minister Narendra Modi translated the concerns of young Indians into a clear sequence of democratic action. On July 23, he promised fast-track courts for paper leak cases. On July 24, after negotiations with the Centre, Sonam Wangchuk ended his 26-day hunger strike. On July 25, Education Minister Dharmendra Pradhan resigned, after which protest leaders called off their 36-day Jantar Mantar sit-in. On July 26, Modi announced a high-powered task force headed by Nandan Nilekani to help make examinations trustworthy, transparent and technology-led. The Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026, introduced in the Lok Sabha on July 27, proposes stronger penalties, time-bound investigations and special fast-track courts. These steps show a government that listens, accepts accountability and converts public concern into durable reform.

These are not concessions extracted from a reluctant state; they reflect confident democratic leadership. In a constitutional democracy, peaceful protest is a right of the citizen. The government's response shows how that right and responsible governance can reinforce each other. By keeping channels open, negotiating with protesters and moving decisively from dialogue to action, the PM reaffirmed that the voice of India's youth has a place at the centre of governance.

The episode rebuts the claim that Indian democracy has lost the capacity for dissent or course correction. An agitation continued for weeks, forced a national conversation, brought the government to the negotiating table and produced a legislative and structural response. Indian democracy showed that dissent can lead to dialogue and reform.

History points towards the stakes, although parallels must be drawn with care. The J.P. movement gathered strength through 1974 and 1975; hours after Jayaprakash Narayan's Ramlila Maidan rally on June 25, 1975, Emergency was proclaimed. Civil liberties were suspended, the press was censored, and opposition leaders, including J.P., were imprisoned. The anti-Mandal protests of 1990 arose from a different context, but they too brought turmoil and violent clashes. The movements are not equal. But the present episode offers a contrast: Instead of repression or prolonged drift, the Modi government chose engagement, accountability, legislation and institutional reform.

Modi's response is also consistent with a longer conversation with aspirational India. Since 2018, 'Pariksha Pe Charcha' has brought examination anxiety, parental pressure and time management into a regular national dialogue. The Vatsit Bharat Young Leaders Dialogue invites young Indians to contribute ideas to the country's future. Together, these initiatives form a wider approach combining dialogue with expanding opportunity and stronger institutions. The last few days reveal a defining quality of Modi's leadership: Political generosity. A secure leader can absorb criticism and place institutional interest above personal prestige. By accepting a colleague's resignation and moving from listening to action, Modi chose reconciliation over confrontation.

Nilekani's appointment makes a larger point: Public knowledge is national property. He is joined by S. Somnath, Tapan Deka, V. Kamakoti, Anita Karwal and Amrit Lal Meena, bringing expertise across technology, security, education and logistics. Reform must combine secure question banks, encrypted transmission, randomisation, controlled access, independent audits and strict vendor oversight, with computer-based or secure on-site printing wherever feasible. An independent examination-security board, annual audits and a national testing calendar can further strengthen the NTA.

Finally, fast-track courts will be most effective when paired with fast, specialised investigation. The proposed two-month investigation window and three-month trial framework can be backed by digital forensics teams, experienced prosecutors, witness protection and coordination with states and high courts. These measures can ensure offences are detected, proven and punished without prolonged uncertainty for students.

A credible examination system rests on four assurances: A breach must be extraordinarily difficult, rapidly detected, transparently remedied and credibly punished. The PM's initiatives bring these into a coherent framework. Modi has spent a decade telling India's youth that they are partners in Vatsit Bharat. The last four days have given that commitment institutional form: Listen, respond, correct and reform.

An agitation continued for weeks, forced a national conversation, brought the government to the negotiating table and produced a legislative and structural response. Indian democracy showed that dissent can lead to dialogue and reform

The writer is professor, XLRI and part-time member, EAC-PM. Views are personal

8. India, Bangladesh Must Not Just Renew Ganga Treaty. They Should Reimagine It (Indian express page no 11)

Syllabus Mapping

1. GS Paper: GS Paper 2
2. Syllabus Topics:
 1. India and its neighborhood—relations.
 2. Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.
 3. Functions and responsibilities of the Union and the States (sub-national diplomacy).



SRINIVAS CHOKKAKULA

AS THE 30-year term of the 1996 Ganga Water Treaty between India and Bangladesh approaches its conclusion, discussions about its future are gathering momentum. Much of the public debate is about whether the treaty will be renewed or revised. But a more consequential question is, what kind of agreement will it be? The political, institutional and ecological conditions that produced the 1996 treaty are vastly different. The negotiations are likely to be about much more than water sharing at Farakka.

The 1996 treaty had a single-point agenda of water sharing, following India's decision to build the Farakka barrage. The treaty provided a flow-dependent water-sharing arrangement that includes a 50:50 pro-rata sharing when the flows at Farakka dip below a limit. Bangladesh has often expressed its dissatisfaction about not receiving its due share during the dry seasons.

The next Ganga Treaty is not likely to be restricted to this one specific transborder issue. It will transcend territories and borders, within and outside, enlarging the scope of negotiations. The negotiations will be challenging, especially given the new political realities in Bangladesh. But they can also offer new opportunities for robust water diplomacy and enduring relations between India and Bangladesh.

There are two reasons why the negotiations will have an expanded agenda.

First, politics have become more complex. The 1996 treaty, signed after decades of deliberations, reflected a particular political moment of relatively stable bilateral relations. The treaty emerged from sustained Track 1 and Track 2 engagements that built trust and goodwill. Today, the negotiations are likely to be shaped as much by domestic political dynamics as by bilateral diplomatic considerations. Dhaka will find it challenging to navigate the antagonistic sentiment



ILLUSTRATION: C.R. SAKSHUMAR

become regional in character. Framing it as interdependencies shifts the focus to shared gains. Better management of floods, fisheries, inland navigation for trade, improved flood forecasting, and joint ecological restoration efforts could create benefits that extend beyond questions of water allocation.

Third, an enabling response to the first two is to invest in institutional avenues. Both India and Bangladesh will need to invest in appropriate institutional processes to channel polarised domestic politics in support of negotiations. Bilateral institutions need re-vitalising as well. Earlier institutional choices of the overarching Joint Rivers Commission and the Joint Committee for implementing the Ganga Treaty will not be adequate. They were conceived to implement agreements, not to manage uncertainties. The changed realities and greater uncertainties, including water availability, will need robust and resilient transborder institutions to address the enhanced scope of issues — water sharing, data collection and monitoring, dispute resolution, responding to risks, etc.

Finally, both countries will have to reinvent the political capital that made the 1996 treaty possible, and reinvest in it. The treaty negotiations can be a means to do it. Alongside Track 1 diplomacy, both countries should encourage Track 2 dialogues to generate ideas, sustain dialogue and build intellectual and political constituencies to support the dialogue. The 1996 treaty benefitted from such engagement. The Centre for Policy Research was among those at the forefront of such initiatives and contributed to developing a working draft of the treaty.

The negotiations can offer an opportunity to revisit the regional vision that India and Bangladesh jointly championed when SAARC was conceived. The institutional form may have to evolve beyond SAARC, but the underlying strategic rationale has become stronger. The next Ganga Treaty, therefore, presents an opportunity not merely to renew a bilateral water-sharing arrangement but to reimagine a regional strategic vision to address challenges of this new age of shared vulnerabilities and fragmented global economy.

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towards India at home. In India, too, the federal politics surrounding Ganga water-sharing are no less complex. West Bengal's resistance prioritising its own needs and Bihar's allegations of siltation upstream of Farakka leading to floods will both pose challenges.

Second, the agenda has expanded beyond Farakka. Besides the Teesta, the recent protracted source of tension, disagreements over multiple shared rivers in the past three decades will impact the negotiations. Further, the concerns are unlikely to be just about water-resources sharing and development. The scope will expand to growing water-related risks, with greater uncertainty due to climate change. Climate change pushes the agenda beyond bilateral water allocations to regional-level responses to managing Himalayan glaciers, hydrological extremes, ecosystem resilience and shared vulnerabilities.

These changes have a few critical practical implications for the negotiations.

First, there is a need to avoid what political geographers call the "territorial trap" — the assumption that negotiations occur between the two sovereigns, represented by Delhi and Dhaka. Water diplomacy cannot be separated from internal diplomacy efforts, both in India

and Bangladesh. Dhaka must figure out a way to navigate the polarised politics within. Further, posturing has its limits as a bargaining strategy. Signalling closer engagement with China in the Teesta basin may strengthen Bangladesh's negotiating position in the short term, but it also risks securitising negotiations and narrowing opportunities to explore mutual benefits. As the downstream riparian, Dhaka's long-term interests are better served through stable cooperation than through strategic posturing.

India, too, will need to invest in some amount of federal diplomacy despite the conducive equations after the recent elections in Bihar and West Bengal. Getting the states on board will not be easy. Water is an emotive subject and can offer opportunities for the parties in opposition to mobilise resistance from within.

Second, shared rivers create indispensable interdependencies — a less acknowledged but essential characteristic of transboundary rivers. It is not a zero-sum game when water-sharing considerations accompany those of coping with collective risks. The negotiations must build on this for an enduring bilateral relationship. The interdependencies may not always be bilateral. They may transcend to

The 1996 treaty, signed after decades of deliberations, reflected a particular political moment of relatively stable bilateral relations. The treaty emerged from sustained Track 1 and Track 2 engagements that built trust and goodwill