

## EDITORIAL HIGHLIGHTS

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# Efforts on to establish AI ecosystem for the judiciary, says CJI

SC has consciously approached technology as an aid to human reasoning rather than substitute for independent judicial thought, Justice Kant says

Press Trust of India  
NEW DELHI

Observing that the Supreme Court has consciously approached technology as an aid to human reasoning rather than as a substitute for independent judicial thought, Chief Justice of India Surya Kant said that considerable emphasis has been placed on developing "Swadeshi jurisprudence".

Delivering a lecture at the Oxford Union and the Oxford Law Society on the theme "Constitutional promise to digital reality: safeguarding justice in the age of AI and technological advancement", the CJI said that in addition to ongoing technological initiatives, serious efforts are under way to explore establishing an indigenous AI ecosystem for the judiciary.

"The Supreme Court of India has consciously approached technology as an aid to human reasoning rather than as a substitute for independent judicial thought. Considerable em-

It [technology] has, in many ways, brought judicial systems across the world into far closer conversation with one another and strengthened what may now fairly be described as an increasingly interconnected global judicial community

JUSTICE SURYA KANT  
Supreme Court



phasis, however, has been placed upon the development of what may be described as 'locally Indian' or 'Swadeshi jurisprudence': One that remains attentive to our own constitutional values, institutional realities, linguistic diversity, and social conditions rather than relying solely upon imported technological models or assumptions," the CJI said.

He said technology has contributed to something beyond the constitutional promise of access to justice.

"It has, in many ways, brought judicial systems

across the world into far closer conversation with one another and strengthened what may now fairly be described as an increasingly interconnected global judicial community," he said.

Young lawyers, judicial officers, and legal professionals are an encouraging source for the judiciary's technological transformation, the CJI said.

He also emphasised that technology can never replace human judgment.

He added that an AI system can process immense volumes of legal text with astonishing speed.

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## Pyroprocessing: heat shows the way

**Vasudevan Mukunth**

**P**yroprocessing is a way to change a solid material physically or chemically using high temperature. It is a dry process and very energy-intensive. The three sectors that use it most are cement-making, metallurgy, and nuclear power.

Of these, cement-making uses pyroprocessing the most. First, finely ground limestone, clay and iron — the raw materials — are fed into a rotary kiln. As the temperature increases to 900° C, the limestone loses its carbon dioxide, and at around 1,450° C, the mix partly melts to form marble-sized nodules called clinker. The clinker is then ground to produce cement.

In metallurgy, pyroprocessing is used to extract metals from their ores in multiple stages. For example, sulphide ores are heated in air — or roasted — to convert them into metal oxides, like zinc sulphide. Smelting melts an ore to separate the metal from waste impurities called slag. Heating limestone to yield lime is likewise called calcining.

In the nuclear industry, pyroprocessing has a slightly different meaning. It is used to reprocess spent nuclear fuel, in techniques developed in the 1980s and 1990s. First, used nuclear fuel is broken up into pieces and placed in a salt bath — usually a mixture of lithium and potassium chlorides at 500° C or more. Then, an electric current is passed through the salt bath, causing



A rotary kiln is visible as the rust-coloured horizontal tube at the centre in this image of a cement plant in the U.S. GREG GOEBEL (CC BY-SA)

different elements to become separated depending on their electrochemical properties. Operators then recover the elements of interest in separate streams.

This form of pyroprocessing has been the subject of study in Japan, South Korea, and the U.S. and is used as part of programmes involving advanced fast reactors.

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## From borderland to India's strategic resource frontier

Within days of one another, official platforms of the Ministry of Mines cast several northeastern States in a similar frame – as repositories of strategic minerals and untapped potential. Manipur was described as a “quiet mineral frontier”, Arunachal Pradesh as a “resource-rich frontier”, while Meghalaya and Mizoram were portrayed through comparable narratives that emphasised the hidden wealth beneath their hills. Governments routinely publicise natural resources and development opportunities, and such descriptions would ordinarily attract little attention.

Taken together, however, they point to a broader shift in the language through which the northeast is increasingly being framed in the national conversation and strategic picture.

### The critical mineral push

The timing is significant because critical minerals have moved from geological discussions into strategic ones. Lithium, cobalt, graphite, nickel and rare earth elements increasingly shape industrial competition, technological manufacturing and energy transitions. Batteries, semiconductors, renewable technologies and defence systems depend upon them, and countries have begun repositioning themselves around access to these resources. India itself continues to depend on imports for several critical minerals and has consequently expanded exploration efforts. According to a Ministry of Mines reply in Parliament, the Geological Survey of India undertook 43 critical mineral exploration projects across northeastern States during the 2022-23, 2023-24 and 2024-25 field seasons, covering minerals such as graphite, vanadium, lithium, rare earth elements, nickel and cobalt. Exploration activity has expanded across Arunachal Pradesh, Meghalaya, Assam, Nagaland and Manipur. In Manipur, projects involving nickel, cobalt and chromium exploration have recently been initiated.

Geological surveys have pointed toward mineral potential across the region for years.



**Sangmuan Hangsing**

Researcher and alumnus of the Kautilya School of Public Policy

What appears to be changing is the language through which that significance is increasingly being understood. The northeast has long held strategic significance that extends beyond geology, but the framework through which that significance is understood now appears to be widening.

### Shift in language

For decades, the northeast has figured in national strategy largely through the language of borders and security. Discussions have centred on insurgencies, territorial management, connectivity initiatives and geopolitics considerations involving neighbouring countries, while infrastructure and development were often justified as instruments of strategic access and territorial security.

The language of resources is increasingly entering a strategic space once dominated by concerns over borders and security. Critical minerals are now discussed alongside trade corridors and geopolitical access, with territorial and resource security converging. Places once viewed mainly as sensitive border regions are increasingly seen as strategic assets.

The repeated use of the word frontier is revealing, because frontiers rarely function as neutral descriptions. They do not merely describe geography; they often reflect how States imagine it. Historically, frontiers have been viewed as spaces awaiting integration, development or extraction because they appear as landscapes of future possibility.

The difficulty is that frontiers are rarely empty spaces waiting to be discovered. The hills and valleys of the northeast already contain dense social and political worlds structured around customary land systems, local institutions and long-standing relationships with territory. Questions of land often extend beyond economics, as they are also tied to authority, identity and memory. Resource extraction thus enters landscapes that already possess institutions and histories of their own.

These questions become particularly significant in regions where political uncertainties continue to shape everyday life. In Manipur, years of violence and displacement have intensified debates over land and territorial arrangements. Similar concerns about ownership, ecological vulnerability and local participation have surfaced across the northeast at different times. Projects involving land often acquire meanings that extend beyond development, as communities interpret them through the lens of trust, representation and political inclusion.

### Resources and inclusion

India's search for critical resources is understandable within a global environment increasingly shaped by supply-chain uncertainty and strategic competition. The northeast itself also requires infrastructure, employment and economic opportunities that have remained uneven for decades. Questions surrounding resource development rarely fit neatly into positions of support or opposition.

How quickly these transitions unfold and who shapes them may matter as much as the resources themselves. For a very long time, national priorities and local realities in the northeast often moved at different speeds. Connectivity projects sometimes arrived without corresponding economic ecosystems, while strategic considerations frequently overshadowed questions surrounding participation and representation. Resource development risks reproducing similar tensions if extraction begins moving faster than institutions capable of managing its social consequences.

What is being debated extends beyond the minerals beneath the hills. The northeast has spent years being viewed first as a border to be secured and then as a corridor to be connected. If it now begins entering national imagination as a landscape of strategic resources, the question is whether this new frontier will finally include the people who already inhabit it, or merely assign another purpose to the land beneath their feet.

Critical mineral ambitions must account for the people, land and history of northeast India

# GS 2: JUDICIARY

## THE HINDU PAGE: 10

# The Ordinance question before the SC

The Collegium's acceptance of an Ordinance that creates four additional judges' posts raises questions about judicial independence, security of tenure and the appearance of detachment from the executive; court has taken a calculated risk by staking its independence on the goodwill of the government and Parliament

**LETTER & SPIRIT**

V. Venkatesan

In February 1937, the President of the United States of America, Franklin D. Roosevelt, asked Congress to enlarge the nine-judge Supreme Court. He sought a new justice for each one past 70 who refused to retire, up to 15 in all. The Senate Judiciary Committee saw through it. It preferred "an independent Court, a fearless Court," to one that bent "out of fear or sense of obligation to the appointing power." The Senate refused, with 70 members voting against and 20 in favour, and the plan was dead.

In Delhi last week, five judges took the oath; three occupy chairs, that no statute has created. They sit because the President, by Ordinance, lifted the sanctioned strength from 34 to 38.

**Ordinance-made seats**

The five are fit for office: four sat as Chief Justices of High Courts, the fifth came from the bar. Their elevation is not the grievance; the manner of it is. The Ordinance was promulgated on May 16, when the Court sat at 32 against a sanctioned 34. Two lawful vacancies existed; two of Tuesday's appointments filled them. The other three rest on the Ordinance alone.

Article 124(D) leaves the number of judges to what Parliament may prescribe. An Article 123 Ordinance carries, for its life, the force of an Act. Independence of the judiciary is a basic feature of the Constitution. It is also about whether the court holds its seats free of obligation to the political branch. A court that owes three chairs to a six-week renewable Ordinance holds them at the executive's sufferance.

**A test of principle**

In 2015, a Constitution Bench decided *Supreme Court Advocates-on-Record Association vs Union of India*. It struck down the 99th Amendment and the National Judicial Appointments Commission. Parliament had passed it 367 to nil in the Lok Sabha, with the States ratifying. The commission was to have six members: the Chief Justice, the two senior-most judges after him, the Union Law Minister, and two eminent persons. The eminent persons were to be chosen by a panel of the Prime Minister, the Chief Justice, and the Leader of the Opposition. That composition was meant to keep the choice neutral. Yet the Act provided that any two members could veto a name. The court feared that the Law Minister and even one eminent person could thus block a candidate the judges favoured. It held that this destroyed the judiciary's primacy in its own appointments.

Yet the Supreme Court Collegium has accepted an Ordinance that seats three of its own, despite the uncertainty over its fate. Under Article 123, the President may withdraw an Ordinance at any time. Both Houses may disapprove it by resolution. Otherwise, it ceases to operate six weeks after Parliament reassembles.

The court itself taught the country to distrust the Ordinance. In *D.C. Wadhwa vs State of Bihar* (1986), it called governance by repromulgated ordinance a fraud on the Constitution. In *Krishna Kumar Singh vs State of Bihar* (2017), a seven-judge Bench ruled against using ordinance-making power as a parallel source of legislation.

If the Bill replaces the Ordinance, the



GETTY IMAGES



C.J. Surya Kant administers the oath of office to Justice V. Mohana as a judge of the Supreme Court, in New Delhi on June 2. She is only the second woman to be elevated directly from the Bar to the court. PTI

anomaly closes. If not, the apex court's strength reverts to 34, and the executive cannot bridge the gap by repromulgation, the fraud Wadhwa condemned. Whether a judge appointed to an Ordinance-created post can be removed once that post lapses is untested. Their judgments hold under the de facto doctrine, affirmed in *Gokaraju Rangaraju vs State of Andhra Pradesh* (1981). The subtler harm is to appearance; in any matter touching the Union, the government whose majority must regularise their seats may appear before them. A judge whose tenure lies, even loosely, in one party's gift cannot wear the detachment the office demands.

**The calculated risk**

The court sits at 37; the 38th and last sanctioned post is empty, the calendar suggests why. Justice Pankaj Mithal retires on June 16 and Justice J.K. Maheshwari on June 28. Their retirements reopen two lawful seats, into which two of the three Ordinance judges move. A judge in the 38th post would be the junior-most. Its occupant would reach a lawful seat only at Justice Satish Chandra Sharma's retirement on November 29, months after the Ordinance expires. Leaving it empty spares the court a judge stranded that long.

That leaves Justice V. Mohana, alone of the five from the bar and so junior-most,

**The five are fit for office: four sat as Chief Justices of High Courts, the fifth came from the bar**

on an Ordinance post. She can reach a lawful seat only when Justice Sanjay Karol retires on August 22. Here, the Collegium seems to have taken a calculated risk. Justice Karol's retirement all but coincides with the Ordinance's likely lapse, six weeks into the monsoon session. The replacing law should thus arrive first, and even a short delay is caught by his vacancy, which absorbs her. Her position turns precarious only if the Ordinance is rejected or lapses before August 22. Then the strength reverts to 34, the court still sits at 35, and she holds a post that the law no longer recognises. That a judge of the highest court should depend on which reading prevails, and on when Parliament meets, is the disquiet.

**Larger question**

The wager will likely be won; the government has the numbers, and the Opposition will not unsettle freshly sworn judges. But that is not the point. The court has staked its independence and its judges' security of tenure on the goodwill of the executive and Parliament.

The U.S. Senate's warning of 1937 was against a court bound by obligation to the appointing power. The graver danger is a court that no longer notices the obligation. Independence of the judiciary is not only the right to say no to the executive. It is the instinct to want to. (V. Venkatesan is Contributing Editor at Supreme Court Observer. Views expressed are personal)

**THE GIST**

Five judges were sworn in to the Supreme Court after the sanctioned strength was raised from 34 to 38 through a Presidential Ordinance; while two appointments filled existing vacancies, three were made to newly created posts.

The Supreme Court has previously held in cases such as *D.C. Wadhwa vs State of Bihar* and *Krishna Kumar Singh vs State of Bihar* that ordinance-making power cannot become a parallel source of legislation and that repeated promulgation of ordinances is unconstitutional.

If Parliament does not replace the Ordinance with a law, the court's sanctioned strength would revert to 34, raising unresolved questions about the status of judges appointed to Ordinance-created posts and the legal implications of such appointments.

## GS 3: ENVIRONMENT

### INDIAN EXPRESS PAGE: 4

#### DELHI BIRD ATLAS CITES PRESENCE OF ARAVALLIS, FLOODPLAINS, AND A MIGRATORY FLYWAY AMONG REASONS ‘Among global capitals, Delhi ranks second in bird diversity’

Sophiya Mathew  
New Delhi, June 7

THE DELHI Bird Atlas, released on June 5, which claims to have mapped the distribution and abundance of bird species across the city for the first time, has placed it “second only to Nairobi among the world’s national capitals in bird diversity”.

The atlas cites the rare mix of the city’s geography, including the northern edge of the Aravallis, proximity to the western Himalayas, the Yamuna and Sahibi floodplains, and its location near the Central Asian Flyway (CAF) — a key bird migration route stretching from the Arctic down to the Indian Ocean — as the primary reason behind the bird diversity.

The atlas was developed by the Delhi Forest Department, Bird Count India, World Wide Fund for Nature (WWF)-India and other partner organisations, with the participation of birdwatchers, students, researchers, forest staff and

citizen volunteers.

According to the atlas, “The Delhi Bird List now stands at 471 species”, excluding another 22 species that have not been re-recorded since 1975.

The atlas covers 11% of Delhi’s area in its sampling design. The survey started in January 2025, takes place twice a year, in winter and summer, and will run for at least two years. Winter surveys document resident species and winter migrants, while summer surveys record breeding activity, resident birds, summer migrants and early-returning migrants.

In the first year, 221 species were recorded across the city, including 200 in winter and 152 in summer. Of these, 126 were resident species, 81 winter migrants and 14 summer migrants. Nearly half the recorded bird assemblage comprised invertebrate feeders, that is, 108 species or 48.87%. Plant and seed feeders accounted for 37 species, omnivores for 34, vertebrate and carrion feeders for 33, and fruit and



The Ultramarine Flycatcher and (right) the River Lapwing were among birds surveyed. SURVEYOR MOHIT MEHTA

nectar feeders for nine.

The atlas also records 18 endemic bird species, that is, species found exclusively in one specific geographic region. It also lists several vulnerable bird species, including the Endangered Egyptian Vulture and Black-bellied Tern, the Vulnerable River Tern and Common Pochard, and Near Threatened species such as the Black-tailed Godwit, Ferruginous Duck,

Painted Stork, Black-headed Ibis and Oriental Darter.

Unlike other bird lists, the atlas used a grid-based method. Delhi was divided into grids of 6.6 km by 6.6 km, subdivided into smaller quadrants and subcells. A total of 145 subcells were randomly selected for sampling to reduce bias and ensure representation across habitats. Each subcell required four 15-minute checklists, with birds recorded

on foot and uploaded to eBird. The atlas says this “systematic approach” of collecting “equal-effort lists from randomly placed grids across the city” helps reduce sampling bias and ensures that results reflect the “true distribution and abundance of species”.

Experts associated with the atlas attribute Delhi’s bird diversity to the city’s position at an ecological intersection: the Ridge brings the Aravalli landscape into the Capital, while the Yamuna floodplains and associated wetlands provide refuge for waterbirds and migrants. The city’s proximity to the western Himalayas, meanwhile, facilitates seasonal movement. The atlas notes that Delhi “lies almost at the heart of the Central Asian Flyway”, making it “a seasonal haven for species arriving from as far as Central Asia and the Arctic”.

The exercise, according to the atlas, provides “a robust scientific baseline” against which future atlases, to be con-

ducted five years from now and beyond, can measure ecological change. Repeated surveys will help track shifts in bird populations, habitat preferences and environmental stress over time, officials said.

Meanwhile, the atlas also describes Delhi as “a meeting point of history, geography, and biodiversity”, noting that such diversity persists despite the pressures of one of the world’s most populous urban regions. It underlines the importance of protecting “green and blue spaces that sustain it”, pointing to forests, wetlands, riverine systems, grasslands, urban greens and floodplains as habitats that continue to support birdlife. The Yamuna floodplains, in particular, are identified as a key ecosystem for conservation and habitat restoration.

The Delhi Bird Atlas was prepared by Dr Lynette Gomes, nodal officer, Delhi Forest Department; Pankaj Gupta, state coordinator, Bird Count India; and Arnab Gupta.

# GS 2: INTERNATIONAL RELATIONS INDIAN EXPRESS

JAISHANKAR, SUGIONO HOLD TALKS

## India, Indonesia deepen cooperation in defence, maritime security, infra

PM Modi's visit to Jakarta also discussed

Shubhajit Roy  
New Delhi, June 7

EXTERNAL AFFAIRS Minister S Jaishankar and his Indonesia counterpart Sugiono held bilateral talks on Sunday as the two nations agreed to advance cooperation in defence, maritime security, digital connectivity and infrastructure. The two leaders also discussed Prime Minister Narendra Modi's likely visit to Jakarta next month.

Jaishankar co-chaired the 8th India-Indonesia Joint Commission Meeting with Sugiono in New Delhi.

After the bilateral meeting, Jaishankar posted on X, "... Our Comprehensive Strategic Part-



External Affairs Minister S Jaishankar holds talks with his Indonesian counterpart Sugiono in New Delhi, Sunday. PTI

nership has witnessed a strong growth in recent years. Held substantive discussions on our political, defence & security, maritime & shipping, trade, fintech, health, pharmaceuticals, fertiliser, critical mineral as well as tourism, education and cultural cooperation."

He also said he "exchanged perspectives on regional developments, advancing our multi-

lateral coordination and deepening India — ASEAN ties".

Sugiono said, "... We discussed key priorities under the Indonesia-India Comprehensive Strategic Partnership, from trade and maritime security to digital connectivity, infrastructure, health and people-to-people ties."

"Looking forward to Prime Minister Narendra Modi's upcoming visit to Jakarta," said

### E. EXPLAINED

#### Historical links

From struggle against colonial powers, democratic traditions and pluralist culture, India & Indonesia share deep linkages. Independent India and Indonesia became chief votaries of independence of Asian and African countries, the spirit of which led to Bandung Conference of 1955 and later formation of NAM in 1961. Indonesia is a key pillar of India's Act East Policy. The PM's likely visit will give a fillip to new sectors like defence & semiconductors.

Sugiono, adding that it will be an important opportunity to deepen cooperation between both nations.

## GS 3: ENERGY SECURITY INDIAN EXPRESS

### • SHIPPING

# Why energy tankers are using risky dark fleet ploy to cross Hormuz

Sukalp Sharma  
New Delhi, June 7

FOR YEARS now, ships involved in sanctioned and illicit trade have “gone dark” to avoid detection — that is, switched off their automatic identification system (AIS) transponders to make themselves virtually invisible to authorities and other vessels.

This dark shipping practice has largely been limited to the “shadow fleets” transporting sanctioned Iranian and Russian oil. But as the US-Iran war drags on, for energy tankers looking to sail through the blockaded Strait of Hormuz, avoiding detection is increasingly becoming a necessity. This has brought this risky tactic out of the margins.

#### Surge in dark transits

According to International Maritime Organization (IMO) guidelines, AIS should always be in operation when a ship is sailing or at anchor, unless the master of the

ship decides that broadcasting the information is a threat to its safety or security.

Switching the transponder off makes the vessel untrackable and invisible to other ships’ systems, which can significantly increase the risk of collisions at sea. This risk becomes even greater in crowded waterways such as the Strait of Hormuz.

According to energy and freight markets analytics firm Vortexa, dark transits through the Strait of Hormuz — between March 1 and late May — represent 57% of all transits recorded over the period.

This trend of ships going dark while transiting the strait has intensified in recent weeks. The share of outbound laden vessels transiting dark stood at 58.5% in March, slightly dipped to 54% in April when vessel movements through the waterway picked up slightly through corridors regulated by Iran, and then rose sharply to 65.2% in May, as per Vortexa.

“Commercial operators are simulta-

#### India-bound ships too

● India depends heavily on the Strait of Hormuz, with over 40% of its oil imports, 60% of its LNG imports, and 90% of its LPG imports coming through this narrow passage.

● Many of the energy cargoes that have reached India via the Strait of Hormuz over the past three months went dark as they crossed the strait.

neously adapting both operationally and physically to the environment through prolonged dark operations, altered routing, escort behaviour, and possible vessel hardening measures. Taken together, the Strait of Hormuz is increasingly functioning as a contested low-visibility operating environment where commercial transit continues, but under growing military pressure, degraded transparency, and sustained enforcement risk,” maritime intelligence provider Windward said in a note last month.

Of the energy cargoes being transported by tankers that are going dark to cross the Strait of Hormuz, crude oil and condensates account for around 40%, ‘clean products’ (like petrol, diesel, jet fuel, and naphtha) account for about 25%, ‘dirty products’ (like bunker oil and bitumen) have a share of about 18%, and LPG accounts for about 14%, shows Vortexa data. LNG tankers, hitherto absent from dark shipping activity in the region, appear in

the data from April into May.

#### Accepted protocol

Ship tracking data shows that tankers belonging to or chartered by the national energy companies of countries such as the UAE, Qatar and Saudi Arabia are also going dark to cross the strait. In March, non-Iranian operators accounted for 37% of dark outbound laden transits through the chokepoint, which rose to 56% in April and 67% in May.

Vortexa analysis shows that UAE-linked vessels account for the largest share of dark transits at around 27%, followed by Iraq at about 11%, and Qatar at around 10%. Saudi Arabia, Kuwait, and Bahrain together account for another 9%.

Experts point out that with global energy flows disrupted due to the crisis, there is increasing pressure on major energy producers from the Gulf to keep exports going to the extent possible.