



Learn Beyond

# KPR IAS Academy

Institute for IAS, IPS, IFS and TNPSC Exams

No. 5, AKS Nagar, Near Gandhi Park, Coimbatore - 641 001

GS Paper I – Geography

Date: 11.05.26

## What measures are needed to address Delhi's heat crisis?

What structural changes are required to reduce extreme heat? How can urban planning help?

**Suksham Tanu**  
**Amir Hyder Khan**

### The story so far:

**D**elhi and the NCR are facing longer and more intense heatwaves, with the city increasingly retaining heat even at night. Rapid urbanisation, concrete-heavy infrastructure, air conditioning, and shrinking green cover have turned the Urban Heat Island Effect into a deeper "heat re-trap".

### Why is Delhi retaining heat?

This transformation is rooted in the city's material logic. Concrete, asphalt, steel, and glass dominate Delhi NCR's expansion. These materials absorb heat efficiently but release it slowly.

Roads, rooftops, and facades accumulate heat through the day and emit it at night, delaying cooling. Surface temperatures in dense areas reach 50-60°C on peak afternoons. These surfaces act as reservoirs, keeping the surrounding air warm well into the night. The city, in effect, stores the sun.

Glass-heavy architecture in areas such as Gurgaon and Noida worsens the problem by allowing solar radiation indoors, increasing reliance on air conditioning rather than reducing heat.

Vehicular activity adds constant thermal input. Corridors like NH-48 function as continuous heat sources, where engines and exhaust combine with heat-absorbing asphalt to create persistent hotspots. Over time, these form into thermal corridors that reshape the city's microclimate.

At the same time, Delhi struggles to release heat. High-density construction and narrow streets restrict airflow, while traditional cooling features – courtyards, shaded pathways, ventilation corridors – have largely disappeared. As a result, air stagnates and heat accumulates within the city's form.

### How does cooling contribute to warming?

While interiors are cooled, heat is expelled outdoors. In dense neighbourhoods, this raises ambient temperatures by 1-2°C.

This produces a feedback loop: rising temperatures increase the demand for cooling, which in turn releases more heat outside. The city cools itself internally while warming externally.

The energy burden is also significant. Delhi's peak electricity demand has crossed 8,000 MW during the summer, with cooling accounting for a significant share. Nationally, cooling demand is projected to grow nearly eightfold by 2050, increasing pressure on power systems and raising the risk of outages during extreme heat.

### How is heat affecting the economy and ecology?

Factories and warehouses operate within specific temperature limits; excessive heat reduces efficiency and affects machinery. Productivity declines by 2-3% for every degree rise above optimal levels, leading to delays and higher costs.

Supply chains are also slowing as transport hours shrink and storage conditions deteriorate.

At a broader level, India loses over \$100 billion annually due to the decline in

heat-related productivity.

Ecologically, the city has lost natural cooling systems. Shrinking green cover, degraded wetlands, and the loss of the Yamuna floodplains have reduced evapotranspiration. Without vegetation and water bodies, Delhi's ability to regulate temperature has weakened.

### What measures are needed to address the crisis?

Addressing this crisis requires structural change in how cities are built and managed. Materials must shift toward high-albedo surfaces, cool roofs, and reflective coatings. Buildings need insulation and passive design strategies like shading and cross-ventilation.

Urban planning must restore airflow through ventilation corridors and better street orientation. Green and blue infrastructure – including urban forests, parks, and water bodies – must expand as essential cooling systems.

Reducing heat generated by human activity is equally important. Sustainable transport, electric mobility, and improved public transit can lower vehicular emissions. Energy-efficient appliances and district cooling systems can reduce heat discharge.

Equally critical is social protection. Affordable housing upgrades, subsidised cooling, and community cooling centres are necessary to protect vulnerable populations during extreme heat. (Suksham Tanu is a sustainability and environmental studies enthusiast based in Dubai; Amir Hyder Khan is a final-year B.Arch student at Jamia Millia Islamia)

### THE GIST

Delhi and the NCR are increasingly retaining heat, with concrete, asphalt, steel, and glass turning the Urban Heat Island Effect into a deeper "heat re-trap".

Addressing the heat crisis requires structural changes such as cool roofs, passive cooling strategies, ventilation corridors, green and blue infrastructure, and social protection measures.



Learn Beyond

# KPR IAS Academy

Institute for IAS, IPS, IFS and TNPSC Exams

No. 5, AKS Nagar, Near Gandhi Park, Coimbatore - 641 001

## GS Paper II – Polity

### The Governor who forgot his job

**T**he Tamil Nadu Assembly election verdict of 2026 was decisive. The Tamilaga Vetti Kazhagam (TVK), contesting its first election, emerged as the single largest party with 108 seats in a House of 234. The ruling Dravida Munnetra Kazhagam (DMK) was reduced to 59. The All India Anna Dravida Munnetra Kazhagam (AIADMK) won 47. TVK founder, C. Joseph Vijay, had defeated the two Dravidian parties that had ruled Tamil Nadu uninterrupted for 59 years between them. The voter had spoken plainly. Lok Bhavan listened selectively.

Governor Rajendra Vishwanath Arlekar refused to invite the leader of the single largest party to form the government. Instead, he demanded signed letters from 118 Members of the Legislative Assembly (MLA) before he would administer the oath. Mr. Vijay went to the Lok Bhavan three times, and each time he was sent back. Last-minute support from the Viduthalai Chiruthaigal Katchi (VCK) and the Indian Union Muslim League (IUM) eventually took the tally to 121. The Governor then graciously consented. The swearing-in was fixed for May 10 and the Governor has further directed the Chief Minister to seek a vote of confidence on or before May 13. Every step of this exercise is constitutionally wrong. The errors are not minor. They go to the foundation of parliamentary democracy in the States.

#### What the Governor is required to do

The Governor's function on the morrow of an election is narrow and well settled. He is to identify the person most likely to command the confidence of the House and invite that person to be sworn in. He is not a returning officer. He is not an arithmetic tutor. He has no business demanding that a Chief Minister-designate produce a signed muster roll before allowing him to take the oath.

The Sarkaria Commission of 1988, the Venkatachaliah Commission of 2002, and the Punchhi Commission of 2010 were unanimous on the order of preference. The single largest pre-poll alliance comes first. The single largest party that stakes a claim and can form a stable government comes next. Pre-poll combinations command priority because the voter knows what he is voting for. This sequence has been honoured in the breach in Goa, Manipur, Karnataka, Maharashtra, and now Tamil Nadu. The breaches have been remarkably one-sided.

In Goa in 2017, Governor Mridula Sinha invited the Bharatiya Janata Party (BJP), which had 13 seats in a House of 40, ahead of the Congress, which had 17. In the same year, in Manipur, the BJP with 21 seats was preferred over the Congress



**Rajeev Dhavan**

Senior Advocate of the Supreme Court of India



**Sanjay Hegde**

Senior Advocate of the Supreme Court of India

with 28. In 2018, in Karnataka (a House of 224), Governor Vajubhai Vala invited the BJP with 104 seats and gave it 15 days to assemble a majority, ignoring a written letter from a Congress-Janata Dal(S) post-poll alliance with 115.

In every one of those cases the BJP was the beneficiary of an expansive reading of gubernatorial discretion. In Tamil Nadu, where the BJP is not a contender and the Centre's preferred regional partner has been routed, the doctrine has suddenly contracted. The Governor now demands proof of an absolute majority before he will issue an invitation at all. This is not principle. It is partisanship dressed up as prudence.

#### There have been minority governments

The Governor seems to have forgotten that minority governments are a familiar feature of Indian parliamentary practice. On May 16, 1996, the BJP's Atal Bihari Vajpayee was sworn in by President Shankar Dayal Sharma and given 13 days to prove a majority he never possessed. He resigned on May 28 without facing a vote. Nobody suggested that he should not have been sworn in. P.V. Narasimha Rao governed for five years at the head of a minority Congress government and survived a no-confidence motion in July 1993 by a single vote. H.D. Deve Gowda and I.K. Gujral led minority United Front governments at the Centre. In 2004, the first ministry of the Congress's Manmohan Singh was a minority arrangement that ran a full term with outside support.

The constitutional test has never been the production of signatures in advance at Rashtrapati Bhavan/Lok Bhavan. The only testing ground is the floor of the House. A government continues so long as it has not lost a motion of no confidence. That is the essence of Article 164(2) and the convention that flows from it.

The Governor's demand that Mr. Vijay produce signed letters from a majority before being sworn in is, therefore, an invention. No provision of the Constitution requires it. No commission has recommended it. No precedent supports it. Anyone who wished to challenge Mr. Vijay's claim was free to bring a motion of no-confidence on the floor of the House. The MLAs would then have voted on the record, with their constituents watching. That is how parliamentary democracy is supposed to work.

Equally objectionable is the direction that a vote of confidence be taken on or before May 13. The convention is that a newly sworn-in Chief Minister addresses the House at its first session; the address is debated, and the government's majority is tested in the ordinary course. To compress this into 72 hours is to invite the conduct the anti-defection law was meant to

suppress. A three-day deadline signals to disgruntled legislators, and to those willing to do business with them, that the window for horse-trading is open but short. It is an invitation, written in the Governor's own hand, to the kind of resort politics this country has seen too often.

The Karnataka episode of 2018 made this point unambiguously. The Supreme Court of India, hearing the matter at midnight, held that a 15-day window to prove a majority was an invitation to engineered defections. The remedy then was to compress the timetable to a single day. That remedy was tailored to a Governor who had wrongly invited a party that did not have the numbers. It cannot be inverted into a doctrine that the single largest party, which has staked its claim and produced support letters, must prove its majority within 72 hours of taking office.

#### What the Supreme Court must now say

The Court has had many opportunities, in *S.R. Bommai* (1994), *Rameshwar Prasad* (2006) and the Karnataka order of 2018, to lay down the law on gubernatorial discretion in government formation. It has, on each occasion, gone part of the way. The time has come to go all the way.

Three propositions must be settled. First, the Governor's task is to identify the person most likely to command confidence. He must follow the order of preference set out by the Sarkaria, Venkatachaliah and Punchhi Commissions. He has no power to demand pre-swearing-in proof of an absolute majority. Second, a minority government, like any other, falls only on the floor of the House. Third, the convention that the first session of a new Assembly tests the government's majority in the ordinary course should be replaced by requiring the Opposition to bring in a motion of no confidence if they so desire. Ordering a confidence vote is anathema. Minority governments will die before they are born. The only democratic way is a no-confidence vote with debate on why a government needs to be thrown out.

A sworn-in government must be allowed to debate and defend its record on governance, on the floor of the House. In a fresh House, the threat of dissolution is the strongest discipline against defection. An MLA who has just won a five-year term is reluctant to risk a fresh election. If a government is allowed to settle, prove its majority on the floor in the normal course, and govern, the cost of pulling it down rises sharply.

The Governors of India are appointed at the pleasure of the President of India. They are not elected. The least the country can ask is that they remember at whose pleasure they hold office, and whose mandate they are bound to respect. It is the voter's. Not the Centre's.

The Governor's actions during Tamil Nadu's post-election process raise concerns about violations of established democratic norms and conventions



Learn Beyond

# KPR IAS Academy

Institute for IAS, IPS, IFS and TNPSC Exams

No. 5, AKS Nagar, Near Gandhi Park, Coimbatore - 641 001

## GS Paper II – International Relations

# Advancing India-South Korea defence innovation ties

Since establishing diplomatic relations in 1973, India and South Korea have maintained defence ties. Their first formal agreement, the 2005 MoU on Defence Industry and Logistics, promoted cooperation in production, research and development, and procurement. Subsequently, they signed separate five-year memoranda of understanding on defence cooperation and defence research and development (R&D) in 2010.

The first enabled exchanges of expertise, training, visits and joint exercises, while the second focused on emerging technologies such as marine, electronics, and intelligent systems through links between India's Defence Research and Development Organisation (DRDO) and the South Korean defence industry. In 2015, the partnership was elevated to a Special Strategic Partnership.

Furthermore, the 2020 Roadmap for Defence Industries Cooperation expanded engagements into key areas, such as land, naval, aero, and guided weapon systems, along with investments and technology transfer in India's defence industrial corridors. A notable outcome of this partnership is the K9 Vajra-T self-propelled artillery system, manufactured in India by Larsen & Toubro (L&T) and Hanwha Aerospace, South Korea under the 'Make in India' initiative, whose success led to a follow-on production contract.

### The new platform

On April 20, 2026, at the India-South Korea Summit between Prime Minister Narendra Modi and President Lee Jae Myung, a new defence innovation platform called the Korea-India Defence Accelerator (KIND-X) was announced.

As part of the Joint Strategic Vision, KIND-X aims to connect businesses, incubators, investors, defence start-ups, and universities from both sides. KIND-X is not a new model of cooperation for India.

It mirrors similar defence industrial innovation bridges with the United States under INDUS-X (India-U.S. Defense Acceleration Ecosystem) and with France under FRIND-X (France-India Defence Startup Excellence). There have also



**Tejas Bharadwaj**

Senior research analyst in the Technology and Society Program at Carnegie India



**Mugdha Satpute**

Research assistant in the Security Studies Program at Carnegie India

KIND-X can help deepen bilateral defence research and development, co-production, and start-up collaboration

been suggestions to create an INDUS-X-like model with South Korea. Drawing on these existing models, KIND-X is expected to be led by South Korea's Defense Acquisition Program Administration (DAPA) and India's Defence Innovation Organisation (DIO). Both countries run defence innovation programmes to strengthen their defence start-up ecosystems, such as South Korea's specialised innovation enterprise system and India's Innovations for Defence Excellence (iDEX).

According to India's Ministry of External Affairs special briefing on April 20, 2024, KIND-X is expected to align with the 2020 Roadmap for Defence Industries Cooperation.

### What can be unlocked

What can KIND-X unlock? KIND-X can emerge as the "defence innovation bridge", expanding defence R&D, innovation, co-development and co-production, involving startups, investors, universities, academia, and think tanks, essentially creating a joint defence innovation and industrial ecosystem from both countries. This may involve release of joint challenges and grants by DAPA and DIO for their respective startups to innovate defence technologies in the areas envisaged under the 2020 road map.

It may facilitate access to testing facilities through universities and laboratories in both countries, promote joint certification and standardisation processes, and support accelerator and incubator programmes connecting investors and innovators from both sides. It may also include workshops to help stakeholders navigate each other's markets and production systems. These workshops can address export control regimes, funding models for defence production, and intellectual property and licensing requirements related to technology transfer for co-production and co-development.

An annual summit, similar to the INDUS-X summit, could convene high-level representatives from defence ministries, industry, universities, think tanks, and academia in Seoul, New Delhi, and other industrial hubs. The KIND-X summit could also convene Track 1.5 dialogues to

emphasise the strategic rationale for bilateral defence cooperation, foster networking, and periodically assess progress on deliverables under the initiative.

The success of KIND-X will depend on leveraging existing co-production ventures such as the K9 Vajra-T howitzers by L&T and Hanwha Aerospace to create templates for future defence projects. It will connect South Korea's innovation clusters in Changwon, Daejeon, and Gumi with India's defence corridors in Tamil Nadu and Uttar Pradesh, and with aerospace hubs in Bengaluru, Chennai, and Hyderabad. Involving major firms such as Hyundai, L&T, Tata Advanced Systems Limited, Mahindra, Bharat Forge, Hanwha, LIG, and Kangnam, alongside start-ups and R&D ecosystems, can further expand linkages.

### As an innovation bridge

The launch of KIND-X as a defence innovation bridge signals both governments' keenness to unlock their respective deep-tech innovation ecosystems to develop dual-use technologies. With deepening ties across other strategic sectors such as shipbuilding, artificial intelligence, space, critical minerals, and semiconductors, KIND-X can complement and draw on convergences in these sectors for defence.

Aligning with India's Defence Forces Vision 2047 and South Korea's Defence Innovation 4.0 strategy, and co-investing in emerging and future technologies will be key to making this initiative forward-looking. Potential areas under KIND-X include Artificial Intelligence platforms for military applications, autonomous weapon systems and robotics, joint development of satellites for space-based intelligence, surveillance, and reconnaissance (ISR), Space Situational Awareness (SSA), communication and navigation, critical mineral supply chains, and defence semiconductor fabs. Given both countries' growing defence exports, KIND-X can emerge as an important facilitator.

The onus is now upon both defence ministries to curate tangible deliverables under KIND-X, clarifying its steering template, funding mechanisms and areas of joint innovation.



Learn Beyond

# KPR IAS Academy

Institute for IAS, IPS, IFS and TNPSC Exams

No. 5, AKS Nagar, Near Gandhi Park, Coimbatore - 641 001

## GS Paper II – Polity

# The insidious return of separate electorates

**F**ew communities would have a greater right to rue the ascendancy of Hindutva politics on the national stage than the largest minority of the country. However, now it seems that all those who believe in a pluralistic polity too have grave cause for concern. It stems from the results of the Assam State Assembly elections. Of the 102 members in the ruling dispensation led by the Bharatiya Janata Party (BJP), none is a Muslim. While this is unsettling, it wasn't entirely unpredictable considering that, for the past five years, the Narendra Modi government has had the dubious distinction of not having a single Muslim Minister, or even an MP at the Centre. What is distressing now is the stark communal segregation in the State Assembly of Assam. While the ruling party has no space for the Muslims of the State, who comprise 34% of the population, the Opposition is going in the opposite direction. The leading Opposition party, the Congress, has 19 MLAs in the Assembly, 18 of whom are Muslims. Throw in another Muslim MLA of its ally, the Rajgor Dal, which has two members in the House, besides two legislators of the All India United Democratic Front (AIUDF) and one from the Trinamool Congress, and you have a unique but disturbing spectacle of only Hindu MLAs on the treasury benches and the Opposition space being almost entirely occupied by Muslim legislators, all 22 of them. To even write about it seems ugly and distressing but that's the reality of new India, from religion-specific residential colonies in urban India and ghettos in other social spaces to now, watertight segregation on the lines of religion in a State Assembly.

**Dangerous precedent**  
For years we have heard, and experienced, that it is no longer possible, in most cases, for a Muslim to win from a largely Hindu-dominated constituency



Ziva Us Salam

Muslims need a voice, but the voice has to come from across the political spectrum, not confined to a single party

For instance, in the general elections of 2024, most of the Muslim winning candidates of the Samajwadi party did so from seats with a sizeable Muslim population. Add to that the BJP's oft repeated emphasis on the 'winnability factor' for denying tickets to the largest minority. Now it seems we could be heading for the reverse. Hindus could be choosing only Hindu representatives. Worse, many are beginning to choose ones who are manifestly so. Hence, the victory of many BJP candidates riding to victory fuelled by hate speech, interspersed with visits to various temples. Hindus choosing Hindus. Muslim choosing Muslims. Parties giving tickets keeping the demographics in mind. These are the new roadblocks for a nation built on a common electorate transcending religion.

This takes one's mind back to the Morley-Minto Reforms of 1909 which introduced the concept of the communal electorate. As the British sought to quell the rising tide of nationalism and the demand for *Swaraj* (freedom), seats were reserved on the lines of religion for elections. While thousands of Indians protested, provincial elections based on separate electorates continued till the formation of the Constituent Assembly.

In fact, the provincial elections in 1946 were crucial as there were talks of the forming of a Constituent Assembly to frame the Constitution of a nation which was soon to be independent. At the same time, there was an increasingly vociferous demand for a separate state of Pakistan by the Muslim League.

Unsurprisingly but still disturbingly, Muslims were asked to vote for the Muslim League because "a vote for the League and Pakistan was a vote for Islam". The League's fight with the Congress was portrayed as a fight between Islam and *kufir* (non-belief). The lines of communal othering were never more distinct. *Liberalism*, M.S.

Golwalkar attacked nationalist Indians for "hugging to our bosom our most inveterate enemies (Muslims) and thus endangering our very existence." To be a nationalist, you had to be anti-Muslim, such was the belief among a section of right-wing Hindus. Much like many right-wing Muslims who equated a vote for the Congress with a vote against Islam. In the elections, the Muslim League swept the Muslim seats, winning 87% of them. The Congress, supposedly a representative of non-Muslims, won 90% of the general non-Muslim seats. The die was cast. The League emerged as the loudest Muslim voice. The Congress of the others. Never mind that Jinnah called Khan Abdul Ghaffar Khan "an adversary", and Maulana Abul Kalam Azad, the "showboy of the Congress". One knows what happened the next year.

### Beyond one's own voice

The Assam Assembly results with only Hindus in the ruling alliance and almost only Muslims in the Opposition fill all those sworn to the idea of India with trepidation. One cannot allow separate electorates to be sneaked in in disguise, delimitation or otherwise. True, the BJP has almost made it a policy decision to marginalise Muslims in representative politics but for the Congress to be whittled down to the position of being the sole spokesperson of Muslims is both unfair and incomprehensible. The repeat drubbing of the All India Majlis-e-Ittehadul Muslimeen in Bengal and the extremely limited success of Badruddin Ajmal in Assam speaks of a community looking for voices beyond its own. Almost only Muslims in the Opposition amounts to the political ghettoisation of the community. Muslims need a voice, but the voice has to come from across the political spectrum, not confined to a single party.



Learn Beyond

# KPR IAS Academy

Institute for IAS, IPS, IFS and TNPSC Exams

No. 5, AKS Nagar, Near Gandhi Park, Coimbatore - 641 001

## GS Paper II – Polity

# Prevalence of fake currency still a reality post-demonetisation

Gujarat accounted for more than half the value of counterfeit currency seizures between 2017 and 2024

### DATA POINT

Sambavi Parthasarathy

In November 8, 2016, Prime Minister Narendra Modi announced the demonetisation of ₹1,000 and ₹500 notes with immediate effect, stating that the move would serve as a major assault on black money, counterfeit currencies, and corruption. The days that followed the announcement saw public panic with long queues at ATMs and widespread economic disruption, particularly in the micro, small and medium enterprises (MSME). While the jury is still out on the exercise's impact on eradicating black money and corruption, the latest 'Crime in India' report of the National Crime Records Bureau for 2024 shows that almost a decade later, the problem of fake currency still persists.

According to the data, over ₹54.61 crore worth of fake currencies were seized from various States in India. Currencies seized included about six lakh ₹500 notes and more than one lakh ₹2,000 notes – which the Reserve Bank of India decided to withdraw from circulation in May 2023 although it continues to remain a legal tender.

Chart 1 shows the value of counterfeit Indian currency seized by authorities over the last decade. A total of ₹638 crore worth of fake currencies have been seized since 2017, the year after demonetisation. The value of counterfeit notes seized in 2024 was also the third highest since 2016. In the year 2020, when COVID-19 broke out, seizures of ₹92 crore were seen. In 2022, two years after the COVID-19 pandemic broke out, counterfeit currencies valued at a whopping ₹382.6 crore were seized.

Data also points to an increase in counterfeit currencies of ₹500 notes and ₹2,000 notes (Chart 2). The number of ₹500 notes seized by authorities in 2024 was almost

four times the notes seized in 2016. The number of counterfeit ₹2,000 notes, introduced after demonetisation, increased almost twice than what it was in 2017.

Besides the data recorded by the NCRB on seizures by law enforcement authorities, data from Parliament showed that more than 11 lakh counterfeit notes of varying denominations, valued at a total of ₹40.26 crore, were detected and reported after they entered the banking system in the five-year period between 2020-21 and 2024-25. That is, an average of roughly two lakh counterfeit notes have been detected each year by the banks (Chart 3).

A denomination-wise break up of these notes implies that new currencies like ₹200 and ₹500 which were reintroduced are also being counterfeited (Chart 4). More than four lakh ₹500 notes belonging to the new series printed after demonetisation made up about 37% of these notes. Close to three lakh ₹100 notes accounted for 26% of the counterfeits reported in banks.

A State-wise breakup of counterfeit notes seized shows that Gujarat accounted for the highest value of fake money seized between 2017 and 2024 (Chart 5). The value of fake currency seized in the State valued at ₹355.72 crore, accounted for more than half of the value of all the seizures in the country during this period. Maharashtra and Karnataka followed Gujarat, accounting for seizures of counterfeit currencies worth ₹100 crore and ₹50 crore respectively.

Data from the RBI also showed that as of May this year, over 174 billion notes were in circulation valued at a total of more than ₹42.12 lakh crore, an increase of about 137% compared to November 2016, when currency in circulation was valued at ₹17.74 lakh crore.

This indicates that the demonetisation exercise's other objective of bringing down currency transactions has also not had the desired impact.

## Counterfeits creep up

The data for the charts were sourced from National Crime Records Bureau and Parliament Questions and Answers



As shown in Chart 1, the value of fake currency notes seized was the highest in 2022. Gujarat alone accounted for over 85% of the value of money seized by authorities that year across the country. The value of fake currency seized in 2024 is the third-highest since 2016, as shown in the chart

Chart 2: Denomination-wise share of fake Indian currency seized by authorities every year. Figures in %

Chart 1: The value of fake Indian currencies seized every year. Figures in ₹ crore

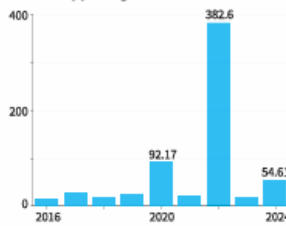


Chart 3: The value of counterfeit notes detected and reported in the banking system during the last five financial years. Figures in ₹ crore

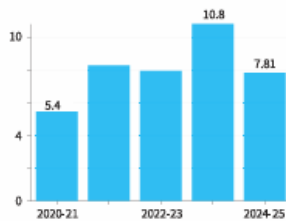


Chart 5: The Statewise share of the value of fake currencies seized by authorities in the 2017-2024 period. Only top 10 States which accounted for most seizures are displayed in the graph

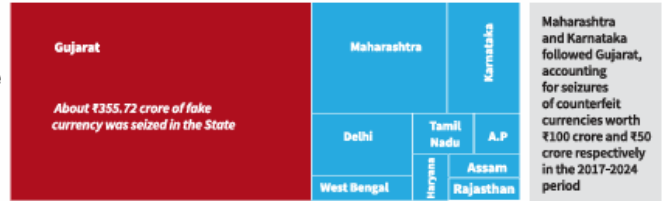
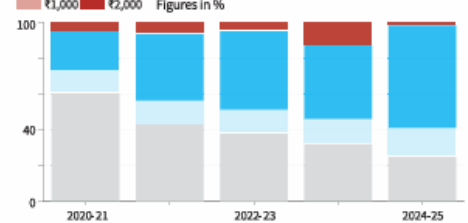


Chart 4: Denomination-wise counterfeit notes detected in the banking system. Figures in %





Learn Beyond

# KPR IAS Academy

Institute for IAS, IPS, IFS and TNPSC Exams

No. 5, AKS Nagar, Near Gandhi Park, Coimbatore - 641 001

## GS Paper II – Polity

# Governor's role in govt. formation

What does Article 164(1) say about the appointment of the Chief Minister? When does the Governor use discretionary powers? Which commissions recommended guidelines for government formation in a hung Assembly? Why has the conduct of Governors in hung Assemblies raised concerns?

### EXPLAINER

Rangarajan R.

#### The story so far:

**T**he Tamilaga Vettri Kazhagam (TVK) secured 108 seats, 10 short of a majority, in the recently concluded Tamil Nadu Assembly elections. After hectic parleys with smaller parties, letters of support from 120 members were provided to the Governor. The Governor then invited TVK chief C. Joseph Vijay to form the government, who was sworn in as Chief Minister.

#### What are constitutional provisions?

Article 164(1) of the Constitution provides that the Chief Minister of a State shall be appointed by the Governor, while other ministers shall be appointed by the Governor on the advice of the Chief Minister. When a single party secures a clear majority in the Assembly, the Governor invites the leader of that legislative party to form the government. If no party secures a majority, the Governor exercises his/her discretion in appointing the Chief Minister.

The Constitution does not prescribe any criteria for selecting the Chief Minister in the event of a hung Assembly. The Sarkaria Commission (1987), followed by the Punchhi Commission (2010), recommended the manner in which the Chief Minister may be appointed in case no party enjoys a majority in the Assembly. The order of preference indicated by these commissions is as follows – first a pre-poll alliance that enjoys majority; next the single largest party staking a claim to form the government with the support of others; then a post-electoral coalition of parties, with all partners in the coalition joining the government; and finally, a



Fresh start: Tamil Nadu Governor Rajendra Arlekar with Chief Minister C. Joseph Vijay, on Sunday. PTI

post-electoral alliance with some parties joining the government and the remaining parties supporting the government from outside.

#### What are the issues?

The recommendations of the above commissions and conventions require Governors to act in a bipartisan manner while selecting the Chief Minister in a hung Assembly. However, Governors have, on numerous occasions, appointed Chief Ministers without following any particular order.

For instance, after the Assembly elections in Goa (2017) and Manipur (2017), the Governors invited BJP-led post-poll alliances to form the government, even though the Congress had emerged as the single largest party. These governments later proved their majority in the Assembly. On the contrary, in Karnataka (2018), the Governor invited the BJP, as the single

largest party, to form the government over a claim by the post-poll alliance of Congress and Janata Dal (Secular). In 2019, the Governor of Maharashtra appointed a BJP-led coalition government when there was uncertainty as to whether it enjoyed a majority. On both occasions, the Chief Ministers had to resign as they were unable to muster the required majority.

Under the Constitution, the Governor is the nominal head of the State executive and possesses certain discretionary powers in specific situations. The discretion vested in the Governor to select a Chief Minister in a hung Assembly is to enable him/her to appoint a government that would be stable and enjoy the majority in the Assembly. However, the conduct of Governors in several such situations has raised concerns that they often function more as agents of the Union government than as impartial constitutional heads of the States.

#### What can be the way forward?

In the current situation in Tamil Nadu, TVK was the only party to stake a claim to form the government. The Governor's office indicated that, since the claim was a post-poll alliance, it was essential to validate whether the formation enjoyed the majority support of 118 members. However, the constitutional requirement for a government is to have the support of the majority of members present and voting in the Assembly. The majority of 118 in the Tamil Nadu Assembly is based on the full strength of the 234-member Tamil Nadu Assembly and does not account for possible abstentions during the vote.

The Supreme Court in the *S. R. Bommai v. Union of India* (1994) had categorically held that the 'floor of the House' is the constitutionally ordained forum for testing the majority support enjoyed by a government. This was reiterated in the *Rameshwar Prasad case* (2006).

The use of discretionary powers by the Governors has been subject to various court pronouncements. Nevertheless, judicial differences in interpretation resulted in inconsistent application of these principles.

The recent Justice Kurian Joseph Committee report on Union-State relations, constituted by the earlier Tamil Nadu government, recommended incorporating a new schedule into the Constitution to codify the rules governing the Governor's use of discretionary powers. This may be considered to provide a constitutional basis for the use of such discretionary powers. It is imperative that the Governors exercise their discretionary powers in a bona fide manner.

*(Rangarajan R is a former IAS officer and author of 'Polity Simplified'. He currently trains civil-service aspirants at 'Officers IAS Academy'. Views expressed are personal)*

### THE GIST

The Constitution allows the Governor to exercise discretion in appointing a Chief Minister in a hung Assembly, but differing interpretations and past instances have raised concerns over the impartial use of these discretionary powers.

The Supreme Court has held that the "floor of the House" is the constitutionally ordained forum to test majority support, while the Justice Kurian Joseph Committee recommended codifying rules relating to the Governor's discretionary powers.



Learn Beyond

# KPR IAS Academy

Institute for IAS, IPS, IFS and TNPSC Exams

No. 5, AKS Nagar, Near Gandhi Park, Coimbatore - 641 001

## GS Paper II – Polity

# AI-enabled oversight layer for continuous electoral roll monitoring

**SIR 2.0 exposed structural weaknesses in electoral roll revision processes; an AI-enabled oversight layer integrated with ECINet could continuously monitor electoral operations, detect anomalies and discriminatory patterns in real time, and strengthen transparency, neutrality, and accountability**

Rajeev Kumar

**W**ithin 72 hours of the recently concluded Assembly elections, the Election Commission (EC) released detailed statistical reports and index cards showcasing the capabilities of ECINet, its digital electoral platform formally launched in its full-fledged professional version in January 2026. However, during the special intensive revision (SIR) for the same West Bengal elections, the EC neither disclosed the status of nearly 34 lakh appeals, including seven lakh deletion appeals, pending before the 19 Supreme Court-appointed tribunals, nor released comparable transparency reports, despite all relevant information being readily available within ECINet.

Reportedly, one tribunal headed by the former Chief Justice of the Calcutta High Court disposed of 1,777 appeals, allowing all 1,717 citizen appeals for inclusion and rejecting all 60 EC appeals for deletion. Similar large-scale corrections may have occurred before the other 18 tribunals. In contrast, the EC reportedly included only about 1,607 voters before polling. Such selective disclosure and inconsistent transparency raise serious questions about the EC's functioning, neutrality, and suppression of equally significant information that could potentially influence electoral outcomes.

The absence of comparable transparency and status disclosures for SIR, despite reports of large-scale discrepancies and disenfranchisement, raises serious questions about selective disclosure and institutional double standards within the EC. As a constitutional authority, the EC commands the highest institutional dignity and trust. Equally, it must remain accountable, transparent, and open to objective scrutiny, especially when allegations of arbitrariness, bias, and large-scale exclusion of genuine voters emerge.

Against this backdrop, an independent AI-enabled oversight layer integrated with ECINet could continuously assess electoral roll revision processes, including neutrality, consistency, and procedural arbitrariness. The proposed AI watchdog framework is straightforward to implement, with a foundational operational model achievable within a few months and capable of continuous enhancement thereafter.

### Failures in SIR 2.0

SIR 2.0 exposed unprecedented chaos driven by ad hoc, ever-changing, and subjective SOPs (Standard Operating Procedures) that reportedly excluded millions of genuine voters from electoral rolls and, in several cases, denied candidature rights. What began as an exercise to improve electoral accuracy by removing ASDD (absentee, shifted, duplicate, dead) entries and adding new voters instead resulted in widespread uncertainty, repeated verifications, prolonged appeals, and allegations of arbitrariness, discrimination, and bias.

The exercise relied heavily on inaccurate, incomplete, and non-searchable legacy SIR 2002-04 databases. Instead of correcting defects at the source, the burden of proof was



**Matter of concern:** SIR 2.0 exposed unprecedented chaos driven by ad hoc, ever-changing, and subjective SOPs that reportedly excluded millions of genuine voters from electoral rolls. *AP*

shifted onto voters, forcing genuine citizens to repeatedly establish their eligibility despite long voting histories and valid documents. The process was further marked by uneven application of the logical discrepancy criteria across regions and voter groups, resulting in non-uniform outcomes for similarly situated voters. Minor mismatches in names, ages, or family details often led to exclusions, while opaque decision-making and the absence of reasoned orders fuelled allegations of arbitrariness and algorithmic bias.

The consequences were most alarming in West Bengal, where only about 1,600 inclusion appeals and merely six deletion cases were reportedly disposed of before polling, out of nearly 3.4 million pending appeals, even though inclusion appeals reportedly had a success rate exceeding 99%. Those excluded reportedly included electoral officials and prospective candidates. Notably, one such excluded individual, later cleared for inclusion, went on to be elected as an MLA.

In an unprecedented situation, 49 Assembly constituencies reportedly recorded victory margins lower than the number of voters awaiting disposal of inclusion appeals. The apex court observed that relief for many may come only in future elections and that post-election scrutiny may be necessary in constituencies where victory margins fall below the scale of discrepancies and

pending appeals, raising serious concerns over electoral integrity and the possibility of post-election chaos. The situation reflects not merely administrative failure, but a deeper crisis of credibility in the electoral roll revision process itself.

These developments exposed deeper structural weaknesses in electoral roll management. They stood in sharp contrast to the EC's repeated commitment to "ensuring free, fair, transparent, accessible and peaceful elections" and its assurance that "no genuine voter is disenfranchised."

More significantly, this occurred despite ECINet reportedly being capable of handling three crore hits per minute and maintaining detailed operational data for every voter and transaction. Yet neutrality, consistency, and accountability continued to depend largely on opaque manual processes, administrative discretion, and post-facto correction. The SIR 2.0 experience, therefore, underscored the urgent need for a continuous, technology-driven oversight mechanism capable of monitoring processes, detecting anomalies, assessing institutional neutrality, and identifying discriminatory patterns in real time.

### AI oversight for ECINet

As AI increasingly powers governance and large-scale public systems, electoral management too requires intelligent,

continuously auditable oversight. Embedding an AI-enabled watchdog within ECINet offers a practical pathway to build a neutrality-aware electoral roll management system capable of safeguarding democratic participation and public trust.

Integrated directly with ECINet, the proposed AI layer would function as a continuous oversight and analytics engine. It would monitor system usage, track decision patterns, analyse voter-official interactions, and generate real-time indicators of neutrality, consistency, efficiency, and citizen satisfaction at booth, constituency, district, and State levels. Unlike post-facto reviews, it could continuously audit electoral roll revision processes using transactional and procedural data already available within ECINet, enabling early detection of irregularities before they escalate into large-scale disenfranchisement or administrative crises.

The system could automatically flag anomalies and discriminatory patterns, including unusual spikes in deletions, inconsistent application of SOPs, repeated rejection trends linked to specific officials, excessive grievance delays, abrupt policy shifts, bias arising from logical discrepancy filters, disproportionate exclusions due to minor spelling or family-data mismatches, and concentrated deletions in specific regions, castes, or communities. It could also compare outcomes across regions to identify differential treatment of similarly placed voters and enforce consistency in institutional communication by tracking announcements, circulars, deadlines, SOP revisions, and field instructions.

Further, continuous analysis of bottlenecks, software glitches, verification failures, grievance trends, and operational inefficiencies could support evidence-based refinement of SOPs, replacing ad hoc administrative responses with measurable corrective action. A foundational operational version of such an AI watchdog could be implemented within a few months and continuously enhanced thereafter.

### Way forward

An AI-enabled watchdog integrated with ECINet could continuously monitor electoral operations, assess institutional neutrality, detect anomalies and discriminatory patterns, and flag inconsistencies or shifting eligibility criteria.

It could also standardise announcements, deadlines, and procedural updates, reducing confusion and non-uniform implementation across regions.

With ECINet already fully operational, AI-driven oversight could make SIR processes more transparent, neutral, accountable, and citizen-centric. Importantly, such a system would strengthen – not replace – constitutional authority through transparent audit trails, fairness metrics, evidence-based oversight, and measurable accountability, while reducing arbitrariness, opacity, and public distrust.

*(Rajeev Kumar is a former Professor of Computer Science at IIT Kharagpur, IIT Kanpur, BITS Pilani, and JNU, and a former scientist at DRDO and DST)*



Learn Beyond

# KPR IAS Academy

Institute for IAS, IPS, IFS and TNPSC Exams

No. 5, AKS Nagar, Near Gandhi Park, Coimbatore - 641 001

## GS Paper III – Economy

# CII says private sector capex grew by 67% in September 2025

**T.C.A. Sharad Raghavan**  
NEW DELHI

India's private sector capital expenditure grew 67% to ₹7.7 lakh crore in September 2025 in comparison to September 2024, according to data sourced by the industry body Confederation of Indian Industry (CII).

This comes at a time when officials in the Finance Ministry have publicly lamented that the private sector is not investing enough.

The CII also called on Indian industry to aid the economy during the ongoing West Asia crisis by cutting fuel usage over the next two quarters, providing MSMEs (Micro, Small and Medium Enterprises) a payment guarantee, and front-loading their capital investment plans for the

current financial year, among other steps. "The 67% jump in private capex to ₹7.7 lakh crore is, by some distance, the most important signal yet that India's investment cycle has decisively turned," Chandrajit Banerjee, director-general of CII, said.

"Manufacturing has committed close to ₹3.8 lakh crore, led by metals, automobiles and chemicals, while services have put in ₹3.1 lakh crore led by trading, communications and IT/ITeS."

### Difference of opinion

Mr. Banerjee added that with capacity utilisation increasing to 75.6%, order books expanding at over 10% year-on-year and bank credit growth close to 14% in the second half of FY26, private enterprise is committing capital at scale,

### Push to private capex

Private capital expenditure rose by 67% year-on-year to ₹7.7 lakh crore in September 2025



SOURCE: CONFEDERATION OF INDIAN INDUSTRY

and across sectors, "in a manner not seen in well over a decade".

This data, however, is at odds with what the Central government seems to be observing. Earlier this month, Chief Economic Adviser (CEA) V. Anantha Nageswaran pulled up the private sector for not investing enough.

"Post Covid, if you look at BSE 500 or NSE 500

companies, corporate profits grew at 30.8% per annum," Mr. Nageswaran had noted while addressing the second annual Isaac Centre for Public Policy Growth Conference organised by Ashoka University on May 2. "But still, our overall capital formation rates from the private sector have been disappointing," he said.

"Corporates and the se-

cond or third generation entrepreneurs chose to accumulate those cash profits and probably set up family offices elsewhere rather than investing in real assets on the ground," the CEA had added.

### Fuel-related steps

That said, the CII seems to be sufficiently buoyed by the investment data to call on the Indian private sector "to step forward and shoulder its share of the national burden during the ongoing period of global stress".

Towards this, it recommended five steps that could be taken that would benefit the economy and the government's finances.

The first step, it said, was for the ₹10 per litre Central excise cut on petrol and diesel to be progressively rolled back in

tranches over six to nine months as crude prices stabilise.

According to the Ministry of Petroleum and Natural Gas, the Centre is foregoing about ₹14,000 crore a month due to the excise duty cuts it implemented in March 2026.

As its second step, the CII called on its member

companies to commit to a 3-5% reduction in fuel and power consumption over the next two quarters through process optimisation, efficient logistics, fleet electrification and accelerated renewable power purchase agreements.

### Domestic players

"Larger member corporates could commit to a voluntary 45-day MSME payment guarantee, backed by aggressive use of the TReDS platform and sup-

ply-chain finance, to ease working capital pressure on small enterprises during this volatile period," the industry body proposed as its third step.

The fourth measure Indian industry could take is to further ring-fence its supply chains and opt for deeper import substitution.

As the fifth step, the CII called on industry to front-load FY27 investments in manufacturing, energy transition and digital infrastructure, exercise voluntary price restraint on essential inputs, and scale up internship intake over the next 12 months under the PM Internship Scheme.

"Taken together, these five suggestions could add up to industry's concrete partnership offer to the government in recent memory," Mr. Banerjee added.

CM  
YK



Learn Beyond

# KPR IAS Academy

Institute for IAS, IPS, IFS and TNPSC Exams

No. 5, AKS Nagar, Near Gandhi Park, Coimbatore - 641 001

## GS Paper III – Environment

# Environment clearance to Nicobar Project lacked adequate study: Congress

**The Hindu Bureau**

NEW DELHI

The ecological assessments cited by the Union government to clear the Great Nicobar Island Development project do not fulfil the statutory requirements, Congress general secretary (communications) Jairam Ramesh said in a letter to Union Environment Minister Bhupendra Yadav on Sunday. He demanded that the report of the High-Powered Committee (HPC), constituted on directions of the National Green Tribunal (NGT), be made public.

Mr. Ramesh was addressing the government's claim in a "frequently asked questions" document released on May 1, 2026, which stated that the project's potential ecological impacts had been "comprehensively identified, assessed, and effectively managed" through a robust mechanism.

The environment clearance was given using baseline data collected "over a few days and weeks at best" and these were grossly inadequate, he said. "These reports are an insult to science and make a mockery of the Environment Impact Assessment (EIA) process. All my efforts to locate the compre-



The Congress has demanded that the report of the High-Powered Committee on Great Nicobar project be made public. GETTY IMAGES

hensive studies, detailed assessments and robust EIA and Environmental Management Plan (EMP) relied on in the FAQs have failed," Mr. Ramesh said.

The law mandates comprehensive EIA studies for port projects, particularly in ecologically sensitive regions such as the Andaman and Nicobar Islands. Citing a 2009 Office Memorandum of the Ministry, the Congress leader emphasised that port projects exceeding five million tonnes per annum on the islands must undergo detailed assessments, including multi-season baseline studies, modelling, and field verification.

According to Mr. Ramesh, such studies must account for seasonal variations in biodiversity and ecological processes, requiring data collection across at least two to three

seasons. He also referred to the Ministry's sector-specific EIA manual, which prescribes multi-season data for physical, chemical and biological parameters.

Further, he pointed to provisions under the Island Coastal Regulation Zone Notification, 2019, which require comprehensive EIAs for projects located along eroding coastlines. He said satellite mapping by ISRO in 2021 had already categorised significant portions of the Galathea Bay shoreline as eroding, underscoring the need for detailed assessments. Mr. Ramesh recalled that in 2015, then Environment Minister Prakash Javadekar had rejected a proposal to allow rapid EIA studies for coastal projects, stating that single-season data was insufficient to capture environmental impacts.