GS Paper II – Polity

Record turnout in Puducherry, Assam; Kerala near all-time high

Incumbents express confidence after increased voter turnout

'Crucial' polls will provide a bigger mandate, says Kerala Chief Minister

Assam CM hails 'historic' turnout as many polling booths cross 95%

The Hindu Bureau
NEW DELHI

There was record poll participation in the Assembly elections on Thursday, with the highest-ever voter turnout of 85.91% in Assam and 89.87% in Puducherry, crossing the previous highs of 84.67% for the State in 2016, and 86.19% for the Union Territory in 2011.

Kerala also saw a high voter turnout of 78.27%, with data still coming in and poll officials saying the final figure could even cross the record of 80.54% registered in 1987.

There were 300 Assembly constituencies at stake in Thursday's polling, including 296 seats in Assam, Kerala, and Puducherry with a total electorate of over 5.31 crore who have all been vetted through the special intensive revision (SIR) of electoral rolls and the special revision in Assam.

Bypolls were also held to four seats in Karnataka, Nagaland, and Tripura. Counting of votes for all seats will take place on May 4. The bypolls held in Karnataka's Bagalkot and Davanagere-South saw a voter turnout of 68.67% and 68.43% respectively. In Nagaland's Koridang seat, 82.21% of the electorate cast their ballot, while 80.04% of electors voted in Tripura's Dharmanagar constituency.

Confident sides

Describing the election as crucial for Kerala's future, Chief Minister Pinarayi Vijayan expressed confidence of victory by a bigger margin for the Communist Party of India (Marxist)-led alliance.

Assam Chief Minister Himanta Biswa Sarma, seeking a third straight term for the BJP-led NDA, hailed the "historic" turnout, as voter participation crossed 95% in many polling booths.

In Puducherry, where polling remained peaceful barring minor incidents, Chief Minister N. Rangasamy said the high voter turnout reflected a strong resolve to re-elect his government, while the Congress president of the U.T., V. Vaithilingam, said the turnout was because of a strong mood for change.

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Making it count

Assam, Kerala, and Puducherry marked higher turnouts than in previous polls; this comes against the backdrop of the SIR (special revision in Assam) leading to deletion of names from voter rolls

Mandate on line: People standing in queue to cast their votes at a polling station in Guwahati on Thursday. RITU RAJ KONWAR

Assam (126 seats)	
Voter turnout	**85.91%**
2021 turnout	82.04%
Kerala (140 seats)	
Voter turnout	**78.27%**
2021 turnout	74.06%
Puducherry (30 seats)	
Voter turnout	**89.87%**
2021 turnout	83.28%

PROVISIONAL TURNOUT AS OF 12:00 A.M.

GS Paper II – Polity

Follow rituals and observances of a temple or stay out, says SC Bench hearing Sabarimala case

Krishnadas Rajagopal
NEW DELHI

The Supreme Court on Thursday said a person who wants to visit a temple has to follow the *sampradaya* (traditional practices) of the shrine or stay out.

The court, in the Sabarimala reference, said people may have their own personal beliefs, but the rituals and observances of a temple have to be followed if one desires to worship there.

'Can't change practice'

"You may have your own personal belief, but you cannot try to change the practice or *sampradaya* followed in a temple... Either you adhere to it or leave it. In Kerala, in some temples, you have to wear dhoti. If you cannot do it, you cannot enter there... There is no choice, except to go under the *sampradaya* attached to a temple or a denomination. The moment you question the practice, you go out of the denomination," Justice M.M. Sundresh, a member of the nine-judge Bench, said.

Chief Justice of India Surya Kant, heading the Bench, said that in Guruvayoor temple, devotees have to take off their shirts to enter. "In gurdwaras, you have to cover your head," he said.

Petitioners say the 2018 verdict, which allowed women of all ages to enter Sabarimala, didn't apply the *sampradaya* test. LEJU KAMAL

Senior advocate C.S. Vaidyanathan, appearing for the Nair Service Society and other devotees' organisations, said the Sabarimala judgment of 2018, which lifted the "ancient" prohibition on women of menstruating age from entering the shrine, did not apply the '*sampradaya* test'.

The 2018 verdict had rejected the argument that the prohibition was an ancient custom and a core belief.

The judgment had declared the bar a violation of women's right to religious freedom and equality.

"Hindus can belong to several *sampradayas*. They can visit any temple. But if a Hindu wants to visit a particular temple, the *sampradaya* attached to that temple must be followed," Justice B.V. Nagarathna observed.

Additional Solicitor General K.M. Nataraj, for the Centre, said the management of the affairs in a temple and the manner of conduct of worship were intrinsic to the faith of the devotee.

GS Paper II – Polity

Have elections in India become plutocratic?

.R. adhavan
-founder and esident of S Legislative search

Rangarajan
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PARLEY

As Tamil Nadu, Kerala, West Bengal, Assam and Puducherry head to the polls, India's vibrant democracy is on full display once again. But behind the rallies and roadshows, there is a growing concern: elections are becoming increasingly expensive. With political parties spending heavily on campaigns, advertising, and outreach, the role of money in shaping electoral competition is under scrutiny. Data shows that nearly 93% of India's Members of Parliament are crorepatis, raising the question of whether access to political power is becoming more unequal. What does this mean for smaller parties and independent candidates? And what would it take to fix it? M.R. Madhavan and R. Rangarajan discuss in a conversation moderated by **V. Nivedita**. Edited excerpts:

How expensive are elections in India?

M.R. Madhavan: We actually don't know. Officially, the limit for a Lok Sabha candidate is ₹95 lakh. But we know, from talking to anyone who has contested, that they spend far higher than that. There is no official number, but there are estimates, and they vary from State to State. I have heard numbers in the range of ₹50 crore to ₹100 crore being spent in some places by each candidate. But there is no real data because none of this is accounted, audited, or reported.

The Election Commission mandates that candidates can spend only a few lakhs, but the candidates spend higher than that. How is the EC allowing them to do that?

R. Rangarajan: This is a very complicated problem. I have studied it, taught it, and even contested an election, where I spent ₹20 lakh for a parliamentary seat and got a handsome 1.35 lakh votes, about 12% of the constituency.

But that is for a candidate who simply wants to participate. For winning, as Madhavan said, the official limit is ₹95 lakh for a parliamentary constituency and ₹40 lakh for an assembly segment. In reality, the expenditure runs into tens of crores. There is no limit on party's expenditure but only on candidate.

It has become an uneven playing field. The Election Commission does send observers, but they are there only from the day of nomination to election day. In those 20 days, how much can they monitor? A lot of spending happens in unaccounted cash.

Are smaller parties and independent candidates being pushed out because of high expenditure?

Elections have become increasingly expensive. GETTY IMAGES/ISTOCKPHOTO

R.R.: Money is not a sufficient condition to win an election, but it has become a necessary condition. People spend crores and still lose. Unless there is a strong wave in favour of a leader or a movement, which happens rarely, like the AAP's victory in Delhi in 2014. In most elections that are dominated by national and regional parties, well-meaning independents and smaller parties are only going to be also-rans. They cannot compete with the money power of larger parties.

M.R.: This is standard across democracies. Take the U.S., a large country with 50 States, but effectively only two major parties dominate. India has more parties, but if you look at it at the State-level, typically, there are two main contenders, sometimes three, and they eventually form coalitions. This is typical in a first-past-the-post system, where even a 1-2% margin can decide the winner. So parties tend to consolidate. Smaller parties and independents usually don't stay in power, except in rare cases.

Is a cap necessary on election spending by individual candidates?

M.R.: The problem is that we need to spend a lot of money for the size of constituencies we have, for holding rallies, and to reach out to people. Even if you are not giving money to make people vote for you, you would still need a lot money to campaign legitimately. The current limits are too low.

One option is to increase the limit. Today, even if someone raises funds transparently, they cannot spend beyond the limit without risking disqualification. So, candidates are forced to use black money.

R.R.: It is a catch-22 situation. Increasing limits may allow candidates to spend more white money, because the bigger parties tend to have resourceful candidates. But I think there is a logic in keeping the limit at this level. In fact, many people will say even this limit is quite a high number. Because of the first-past-the-post system, candidates leave no stone unturned to win, including cash distribution.

State funding of elections has been discussed, but it is not practical to implement.

There could be a cap on party funding as well, similar to the U.K. system, where total party spending is linked to the number of candidates. A mixed-member proportional representation system could also help smaller parties gain representation, but that would require major changes.

Will imposing caps on parties' spending on elections level the playing field?

M.R.: Limits can be imposed, but it will drive the spending underground. You'll have more spending with black money, which is not reported. The reported amount stays within the limit. How do you manage that given the way our country works?

One option is to remove limits and focus on transparency. That is, let candidates spend money and report it accurately.

R.R.: Even then, the use of black money will continue. There is already no limit on party spending, yet official disclosures are far lower than actual estimates.

In the 2024 general election, the BJP said it spent ₹1,500 crore and the Congress said it spent around ₹600 crore in their affidavit to the Election Commission. The official expenditure of all the big national and State parties put together is around ₹3,300-3,400 crore. But the Centre for Media Studies estimates that close to ₹1 lakh crore was spent.

Is a level-playing field even possible?

R.R.: It requires political will. One simple reform could be banning government-funded advertisements six months before elections. Currently, governments can spend on ads until elections are announced, just 35-40 days before the elections. Other reforms include proportional representation.

M.R.: The question is, is money the primary driver of election results? Evidence shows that parties spending heavily still lose if they fail to convince voters. I would also focus on post-election functioning. Other than the fact that they elect the prime minister or chief minister, they become irrelevant because they have to abide by the party whip. That is where we need real reforms.

The Supreme Court scrapped electoral bonds, but the opacity remains.

R.R.: I think the Supreme Court rightly struck it down. And we got to know the details of the donors because they were asked to disclose it. And we got to know who had given how much to which party. I think that was a very ill-conceived scheme..

It would have been completely opaque. Companies Act was amended to say that even loss-making companies can contribute, which is against the interests of shareholders.

The electoral bond scheme would have neither brought transparency nor accountability.

How do we build a system that has both accountability and transparency?

M.R.: It's very important to have transparency because that brings in accountability. If you see 'X' has funded this party which won the election and that party takes a decision that benefits 'X', it is at least open and visible. That visibility would bring in accountability.

But there's a question – should companies be allowed to fund elections? They don't have a vote. Only citizens vote.

So should such an entity be allowed to fund elections at all? We had actually banned it sometime in the late 60s. We allowed it again about 15 years later. Both were done for certain political reasons, but the fundamental question should be discussed.

R.R.: That is a fair point. Democracies the world over are a nexus between big corporate interests and politicians. This would require political will to change the law and that is not forthcoming, unfortunately.

What role do civil society, pressure groups and media play in fixing the system?

R.R.: I think the most important role they play is at least spreading awareness.

M.R.: But it's also important to note that people do know a lot of things and they act in a particular way. In fact, Milan Vaishnav had a very nice book called 'Why Crime Pays', which says that people actively vote for certain politicians who have a criminal background. That in fact benefits them in an election.

Beyond awareness, we'll have to address the core reasons why people behave in a certain way so that we actually have a more thriving democracy.

To listen to the full interview
Scan the code or go to the link
www.thehindu.com

GS Paper II – Polity

Nari Shakti, India's defining reform for the next decade

Over the past decade, India has done something few nations have achieved at scale: it has moved women's empowerment from intent to infrastructure. This shift did not happen organically; it was designed. Under the leadership of Prime Minister Narendra Modi, policy has placed women at the centre of development recognising that when women move forward, entire economies accelerate.

The results are visible and measurable. More than 57 crore bank accounts have been opened under the PM Jan Dhan Yojana, with over 55% held by women, giving millions their first foothold in the formal financial system. Nearly 10 crore women, organised into over 90 lakh self-help groups, are now driving grassroots entrepreneurship and local economic resilience. The Pradhan Mantri Ujjwala Yojana has reached over 10.5 crore households, reducing health risks and freeing women from time-intensive labour. Moreover, access to credit has expanded, with close to 70% of MUDRA loans going to women entrepreneurs. Female labour force participation has also risen to nearly 37%, reversing a long-standing decline.

In healthcare, programmes such as the Ayushman Bharat and the Pradhan Mantri Surakshit Matritva Abhiyan have expanded access and reduced vulnerability at critical life stages. Initiatives like the Beti Bachao Beti Padhao scheme have begun to shift deeply embedded social attitudes.

Individually, these are strong programmes. Taken together, they represent a structural shift in how India views women not as recipients of support, but as drivers of growth. For policymakers and administrators, this offers a clear lesson: scale works when design, delivery, and accountability are aligned.

In healthcare, where the author's expertise lies, outcomes improve when systems are built around real needs, and not theoretical models. Where access is simplified; delivery is consistent; and outcomes are tracked, impact follows. And yet, the next phase will demand even greater focus, as the challenge before us is no longer policy creation, it is policy penetration.

Sangita Reddy

Joint Managing Director, Apollo Hospitals

Over the next five years, India must invest in preparing women to lead not just electorally, but institutionally

The last mile

Despite the scale of programmes, awareness gaps remain. Enrolment is uneven, and last-mile delivery continues to depend on local capacity. For every woman who has accessed opportunity, there are many more who remain on the margins due to lack of access. This is where administrative leadership becomes decisive.

India must move from announcing schemes to ensuring saturation; from measuring outputs to tracking outcomes; and from eligibility on paper to access in practice. District-level ownership, data-driven monitoring, and convergence across departments will be critical. And while technology can accelerate this, it cannot replace on-ground accountability. Therefore, the question for every policymaker is simple: how do we ensure that no eligible woman is left out?

This is where the Nari Shakti Vandan Adhiniyam can become one of the most consequential reforms of our time. By expanding women's representation in legislative bodies, it creates the possibility of aligning policy design with lived experience. Women leaders can bring their insights shaped by community realities which can strengthen programmes, and their delivery, targeting, and adoption.

Additionally, the Nari Shakti Vandan Adhiniyam when implemented with intent, can trigger a multiplier effect with more women in leadership, more responsive policy, higher participation, and stronger leadership pipelines, making reform self-reinforcing.

Globally, we are entering a decade defined by knowledge, innovation, and technology. India already has a strong base, with one of the highest proportions of women in STEM education globally. This is an opportune moment to translate this gain into leadership across sectors such as healthcare, science, enterprise, and governance without losing time.

The past decade has shown what is possible when political will aligns with policy design. With today's strong foundation, the implementation of Nari Shakti Vandan Adhiniyam can move empowerment beyond access, to authority.

The way forward

However, representation must translate into capability, and capability must be built through institutional support to ensure that implementation delivers results. Over the next five years, India must invest in preparing women to lead not just electorally, but institutionally. This means structured mentorship, policy exposure, and administrative support systems that enable effective governance.

It also means rethinking how the country designs policy itself. Programmes must be simpler to access and faster to deliver. Feedback loops must be strengthened so that policy evolves with need. And success must be measured not just by coverage, but by change in outcomes across sectors. As India moves towards its vision of becoming a developed nation by 2047, this is not a peripheral agenda – it is central to its success. Women's participation is directly linked to economic growth, social stability, and institutional effectiveness.

If India can achieve saturation in access, strengthen participation, and enable leadership, it will not just empower its women – it will redefine its growth trajectory. For policymakers and administrators, the mandate is clear: the time to implement is now.

GS Paper II – Social Justice

Semaglutide is off patent: what does this mean for obesity in India?

India is facing a growing epidemic of obesity and metabolic disease and GLP1 drugs are one form of treatment; while a reduction in costs means easier and more widespread access to these drugs, it must be remembered that they serve as add-ons to the fundamental precepts of lifestyle modifications and exercise

Nanditha Ramachandran

When Rakesh (name changed) first walked into the clinic, he could not fit into a chair with armrests due to his body weight. Weighing 169 kg, Rakesh had almost given up on his weight loss goals, having tried multiple diets, and attempted various forms of exercise.

"I am fed up, doc!", he said. " I cannot even drive a car - I cannot fit in the seat!"

Fast forward to today and Rakesh walks in, having lost 37 kgs, over a span of 9 months .

"It has changed my life!" he said." "I can drive again! I swim now, I feel so much more confident".

What changed his life was GLP1 therapy, the 'weight loss' drugs that have revolutionised the way we treat metabolic disease!

As his doctor, what I see, goes far beyond the numbers on the scale: GLP1 therapy has improved Rakesh's metabolic health, reduced his cardiovascular risk, improved his fatty liver and optimised his cholesterol and blood pressure. These, therefore, are not just weight-loss drugs: they are disease-modifying agents that target the root of metabolic disease.

GLP1 therapy has taken the world by storm in recent times. These drugs, which have been around for almost two decades now for the management of diabetes, gained popularity, when their indication expanded beyond diabetes, as anti-obesity/weight management drugs.

Obesity has been found to be the main reason for the increasing prevalence of diabetes in all populations. Therefore, targeting obesity seems to be the right strategy, especially at individual levels. GLP1 therapy, in that regard, has been a game-changer, transforming the management of both obesity and diabetes.

The Indian context

The growing burden of type 2 diabetes and metabolic disease, including obesity, in India, is a matter of grave concern. This is related to changing food habits, especially an increase in the consumption of fat, as well as sedentary lifestyles. Indians have a high risk of diabetes and cardiovascular disease, even with lower levels of generalised obesity due to what is known as the "thin-fat" phenotype. This means that even if not obese by overall body weight, Indians have higher body fat percentage and higher insulin resistance, thus increasing our risk for type 2 diabetes and lifestyle diseases.

Targeted therapies such as GLP1, combined with lifestyle changes, can play a crucial role in addressing this growing epidemic in India. GLP1 therapy, when used in the right individual, is a great option for the typical "insulin resistant" Indian. Through its actions, it can result in meaningful weight loss - reducing waist circumference and body fat and improving metabolic health.

On March 22, the originator company, Novo Nordisk's patent for semaglutide (the active ingredient) expired, and the floodgates opened. More than 50 companies in India have now launched semaglutide at almost half the price that multinational companies sold it at.

New-found popularity: From ₹11,000 to ₹18,000 a month for a pen, the cost of GLP1 has now dropped to around ₹5,000 per month, making it more affordable and thus increasing access. GETTY IMAGES

What does this mean for India? One of the biggest barriers for GLP1 therapy so far, the cost, may now be overcome. From ₹11,000 to ₹18,000 a month for a pen, the cost has now dropped to around ₹5,000 per month, making it more affordable and thus increasing access.

Who can take it?

GLP1 therapy has clear indications, as to who can use it and when.

Being primarily an antidiabetic agent, its use in type 2 diabetes is clear. In people without diabetes, these drugs have been approved for weight reduction. Here, they can be used in anyone with a BMI of over 27, suffering from obesity-related complications such as obstructive sleep apnea, diabetes, hypertension etc., or in a person with a BMI of over 30 without diabetes. This is a boon to many, in whom lifestyle changes alone do not suffice, and in fact, bridges the gap between lifestyle management and bariatric surgery for obesity management.

It is important to note that these drugs are not shortcuts and not for casual use or as cosmetic quick fixes.

Do they really work, and how?

The short answer is yes. But this also depends on two factors: pharmacogenomics, as each person's response to a drug may be different, and tolerability to the drug , which in turn determines compliance to taking it, and ease with dose escalation, as weight loss is best with higher doses.

GLP1 therapy, primarily works through natural pathways in the body, by regulating/suppressing appetite, delaying gastric emptying time and other mechanisms. Hence the response to the drug is largely dependent on each person's natural response. On an average, a good response would be between 10 to 15% of body weight loss from baseline weight.

As with any other drug, GLP1 therapy must only be used under medical supervision, by a certified health professional.

Side effects are mainly gastro-intestinal (due to the mechanism of action) and include – nausea, loss of appetite, burping and in some cases, diarrhea. However it is important to note, that these side effects are usually transient, and subside after the first few weeks. With medical guidance, these side effects can be mitigated to a large extent.

As far as safety is concerned, there is a rare association with pancreatic inflammation, thyroid tumours and rare case reports of eye complications. Proper guidance and monitoring are key to safe and effective use.

When one stops

If you lost a lot of weight through diet and exercise, and then stopped both, what would happen? You would potentially regain the weight. The same principle applies to GLP1 therapy.As with any intervention, stopping the drugs may cause a regaining of weight to some extent. This serves to illustrate the fact that obesity is a chronic, relapsing condition, requiring long-term treatment.

It is important to reiterate that GLP1 therapy is not a replacement to lifestyle changes or a shortcut for weight loss. It is only an add-on to lifestyle modifications, including diet and exercise.

Another factor to remember while on GLP1 therapy is that it is important to include strength training/muscle strengthening, and sufficient protein in the diet, so as to reduce muscle loss. A study found that the use of semaglutide, when combined with sufficient protein intake and resistance training, resulted in fat mass loss of 18%, and although lean body mass initially dropped, it was subsequently maintained and stabilised.

India is facing a growing epidemic of obesity and metabolic disease, including in the young population.

This looming crisis demands immediate attention and action. GLP1 drugs are one form of treatment and while exciting, there is an urgent necessity to tackle the problem on other fronts. We need to change food policies to reduce consumption of processed food and reduce fat content in marketed food products. Similarly, urban and town planning must be rejigged to encourage physical activity.

Obesity now is considered a chronic metabolic disease. While clinicians today have an effective tool, with GLP1 therapy enriching the landscape of options, the real question that remains is, will this translate into meaningful change in public health? Only time and our actions now, will tell.

(Dr. Nanditha Ramachandran is director and consultant diabetologist at Dr. A. Ramachandran's Diabetes Hospitals in Chennai. Drnanditharamachandran@gmail.com)

THE GIST

- The growing burden of type 2 diabetes and metabolic disease, including obesity, in India, is a matter of grave concern. GLP1 therapy, in that regard, has been a game-changer, transforming the management of both obesity and diabetes
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GS Paper III – Economics

India's FY 27 growth outlook cut to 6.6% from 7.2%: World Bank

The Hindu Bureau
NEW DELHI

The World Bank has revised downwards India's growth outlook for 2026-27 to 6.6% from 7.2%, citing the impact of the war in West Asia on household and government consumption, as well as on industrial activity.

The India Development Update report by the World Bank said that "in the absence of the conflict", India's GDP growth was projected at 7.2%, a reflection of better-than-expected growth in 2025-26, "strong initial momentum" in the fourth quarter of that year and a "broad pro-growth reform agenda".

"Growth is now projected at 6.6% in FY27, reflecting headwinds from the Middle East conflict – assuming an extended disruption in global energy (oil and gas) supply till end-2026," the report said.

The India Development Update report is a companion to the South Asia Economic Update 2026, which was released on April 8. That report had projected growth in South Asia to slow to 6.3% in 2026 from 7% in 2025 due to disruptions in global energy markets.

The World Bank's Acting Director for India Paul Procee noted that there are things that can be done to boost growth. "Boosting private sector-led growth will be critical to strengthening economic resilience and supporting more young people to enter the workforce," Mr. Procee said during the release of the report.

CONTINUED ON
» PAGE 12

Revised figures

India's GDP growth would have been 7.2% in absence of the war, says the report

OUTLOOK FOR FY27:

- Real GDP growth: **6.6% vs 7.6%** in FY26
- Inflation (Consumer Price Index): **4.9% vs 2.3%** in FY26
- Net FDI, inflow (as % of GDP): **0.6 vs 0.5** in FY26

GS Paper III – Economics

Timely inaction

Slowing growth and rising inflation necessitated unchanged rates

The RBI Monetary Policy Committee's (MPC) decision to keep interest rates unchanged – a "wait and watch" approach, in the Governor's words – is a sensible move. At a time when hasty words and deeds have roiled world markets, economies, and even households, a measured policy response was the need of the hour. The challenge before the MPC is that the main tool it has – the repo rate – impacts growth and inflation in opposite ways. That is, if it had raised rates to try to contain an anticipated surge in inflation, this would have hurt growth. On the other hand, if it lowered rates to boost growth, this would have pushed inflation up. The war in West Asia has resulted in both of these undesirable outcomes: supply chain constraints have pushed up costs while also dragging down growth. A rate change at this juncture could have made matters significantly worse and further dampened the mood in the economy. In his speech, RBI Governor Sanjay Malhotra predicted that India's GDP would grow 6.9% in 2026-27. Given that this is still the first month of the financial year, the forecast is likely to change considerably over the subsequent MPC announcements. For example, the MPC in April last year had predicted that growth in 2025-26 would be 6.5%. In contrast, the government's latest estimate for the year is 7.6%. Considerable uncertainty continues to persist in West Asia, with shipping companies still hesitant to brave the Strait of Hormuz.

All of this, coupled with the fuel constraints, will continue to hamper growth in 2026-27. The RBI lowered its growth forecast for the first quarter by just 0.1 percentage points, which might end up being an over-optimistic reading of the situation. The World Bank's India Development Update report, released on Thursday, predicts a slowdown in industrial growth in India over the course of this financial year. Consumer and government demand, too, is expected to slow as both groups try to tighten their belts. Inflation, on the other hand, is expected to accelerate considerably to 4.6%, according to the RBI. Yet, the MPC was correct not to raise rates since most of the inflationary pressure is due to supply issues rather than demand conditions. Raising rates would not only have slowed growth further, but even the primary objective of containing inflation would not have been met. A lot of factors need to play out before monetary policy can act – the war, the U.S. tariff-related investigations, greater clarity on a potential El Nino impact on the monsoon this year, to name a few. Until then, inaction is the best course of action.

GS Paper III – Science & Technology

India's first Quantum Reference Facility to be launched in A.P.

The Hindu Bureau
VIJAYAWADA

India's first quantum computing testing beds, called Quantum Reference Facility, will be dedicated to the nation by Chief Minister N. Chandrababu Naidu on April 14, coinciding with the World Quantum Day, says P.S. Pradyumna, Secretary to the Chief Minister.

Addressing the media in Vijayawada, Mr. Pradyumna said the two testing beds, developed as part of the Amaravati Quantum Reference Facilities under the State government's Amaravati Quantum Valley programme, were coming up at SRM University A.P.

They were being developed in partnership with the Amaravati Quantum Research Facility and Qubit Force. At SRM University, a team of 50 researchers, students and scientists was working on assembling the quantum computing ecosystem.

"Till date, we did not have a quantum testing computer in the country that can be used as a reference to test different components of the quantum computing ecosystem," Mr. Pradyumna said, adding that Andhra "is the first State to take this up."

GS Paper III – Economics

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What does the Jan Vishwas Bill do?

What does the Jan Vishwas Bill propose? Which offences are being decriminalised? Why remove jail terms for minor lapses? How does the Bill ensure proportionality? How will penalties be structured?

EXPLAINER

G.S. Bajpai

The story so far:

Unnecessary criminalisation is an anathema to business regulations. India's regulatory framework has significant punitive aspects. Under dozens of Central Acts, minor procedural lapses, missed filings, or technical defaults could land a citizen or a small business owner in jail. The Jan Vishwas (Amendment of Provisions) Bill, 2025-26, seeks to shift India's regulatory approach from a punitive model to "trust-based governance." It builds on the earlier Jan Vishwas (Amendment of Provisions) Act, 2023, which decriminalised 183 provisions across 42 Central laws.

Why is the Bill being introduced?

The 2026 Bill proposes amendments to 784 provisions across 79 Central Acts administered by 23 ministries. Of these, 717 provisions are earmarked for decriminalisation, while the rest address ease of living more broadly. Its governing principle is proportionality – the severity of the State's response must bear a rational relationship to the gravity of the conduct it targets.

The Bill pursues three related goals, all rooted in ensuring proportionality in regulation.

First, it seeks a principled separation between conduct that warrants criminal sanction, such as fraud, wilful evasion, and threats to public safety, and procedural non-compliance that carries no comparable moral charge. Conflating the two does a disservice to the seriousness of the former and an injustice to those caught by the latter.

The second objective is equity. Smaller enterprises and MSMEs are disproportionately exposed to compliance risks, not because they violate laws more often, but because they lack the capacity to absorb the consequences when accused of doing so. The idea is to make compliance simpler.

GETTY IMAGES

Third, it seeks to provide institutional relief. India's district and subordinate courts carry over 4.8 crore pending cases (NJDG, December 2025), a significant share of which consists of minor regulatory matters. Decriminalising such cases is not leniency but a rational reallocation of judicial resources.

What are the key features?

The Bill focuses on removing the criminal liability clause for minor procedural lapses and improving the ease of doing business and living.

Its central mechanism is the replacement of criminal penalties with civil and administrative alternatives. The measures on imprisonment provisions are intended to be replaced by monetary penalties calibrated to the gravity of the violation.

For minor or first-time defaults, graded responses such as warnings and advisory notices replace prosecution.

Compounding provisions are expanded to provide faster resolution without full adjudication.

Adjudicating officers are empowered to decide cases within defined timelines, with appellate mechanisms to ensure fairness. Penalties are to be periodically revised to retain their deterrent value, and the Bill emphasises digitisation and procedural simplification to reduce inconsistencies in enforcement.

How does it impact institutions?

For the judiciary, the most immediate consequence is meaningful relief. Diverting routine regulatory cases from criminal dockets should free courts to concentrate on matters of genuine public significance.

For regulatory agencies, the Bill increases responsibility. Administrative adjudication is faster and less resource-intensive than criminal prosecution, but it requires institutional capacity, clear guidelines, and oversight mechanisms to avoid arbitrariness. The appellate structures built into the Bill acknowledge this risk, and hence, their effectiveness will depend entirely on how seriously they are operationalised.

For businesses, particularly MSMEs, reduced criminal exposure could meaningfully shift the calculus around formalisation. The fear of prosecution, even where the underlying conduct is technical rather than intentional, has long acted as a disincentive to transparency and engagement with the formal economy.

How does the Bill promote efficient justice?

The indiscriminate use of criminal sanctions – treating a tax fraudster and a businessperson who faltered on a procedural formality – undermines the law's pragmatism. By reserving criminal liability for conduct involving genuine intent or harm, and channelling procedural defaults through civil mechanisms, the Bill narrows the scope for over-criminalisation in a structured way.

A more predictable regulatory environment encourages voluntary compliance. When the consequence of a minor lapse is a proportionate penalty rather than the spectre of prosecution, the incentive structure shifts towards transparency. The durability of these gains will depend on implementation. Enhanced administrative discretion must be matched with clear guidelines, meaningful oversight, and appellate mechanisms that function as genuine checks.

The Jan Vishwas Bill is a serious and overdue reform. Its success will depend less on what it says than on whether the institutions tasked with carrying it forward are genuinely equipped, and held accountable, to do so.

There is a risk of excessive discretion in administrative authorities, weak appellate safeguards in some sectors, the possibility that monetary penalties may replace criminalisation without reducing the burden, and limited clarity on uniform standards across different laws.

(The author is the Vice Chancellor of the National Law University, Delhi. Contributions of Vibhuti Sharma, Academic Fellow, NLU Delhi, are acknowledged)

THE GIST

- The Bill seeks to shift India's regulatory framework from a punitive model to 'trust-based governance' by decriminalising minor procedural lapses and ensuring proportionality between the gravity of conduct and the State's response.
- It also aims to promote ease of doing business and living, reduce burden on courts through civil and administrative alternatives, while raising concerns about administrative discretion, appellate safeguards, and implementation gaps.

GS Paper III – Science & Technology

How will Gaganyaan astronauts return safely to earth?

Why can't parachutes alone ensure a safe landing? How does Gaganyaan module lose its enormous speed?

Unnikrishnan Nair S.

The story so far:

The Gaganyaan crew module, which will host the Indian astronauts on their human spaceflight mission, will orbit the earth at about 7,800 m/s. When it re-enters the atmosphere, it will have to shed its kinetic energy. The atmospheric drag itself will be the primary brake, taking away most of its energy in a process called aerobraking. To further reduce the module's velocity for a soft landing, a multi-stage parachute system will be deployed once the module comes within 12 km of the ground. A typical recovery system includes all the items required to soft-land the module in sea or on land after aerobraking. This includes parachutes, locating devices to find out where the module has splashed down, and a system to ensure the module is pointing in a favourable direction in case it drops in the sea. For touchdown on land, apart from parachutes, the recovery system will fire braking motors to reduce the impact velocity before touchdown. The Russian Soyuz and Chinese Shenzhou modules are designed for terrestrial landing and use retro-rockets for braking.

Why do parachutes alone not suffice?

As the land is hard, touching down on land needs to be around 1-2 m/s. The module can, however, tolerate landing at around 7-9 m/s in the sea, as water is a natural energy absorber.

Land touchdowns also require vast, empty territories free of people or buildings, while offering easier crew recovery and quicker refurbishing of the module.

Sea landings are preferred by countries that lack large deserts or plains. However, it requires recovery ships, flotation bags, and specialised gear to keep the crew safe in rough waters.

Reducing a module's velocity to less than 2 m/s using parachutes alone is impractical due to the inverse-square relationship between speed and drag area. To slow a module from 7 m/s to 1 m/s, the parachute will have to be roughly 49x larger, incurring a large weight and volume penalty.

A parachute that large would also be difficult to deploy without tangling.

Why is the landing zone elliptical?

When a module returns to the earth, it doesn't aim for a bull's-eye but rather a large ellipse. This is because the module's kinetic energy is concentrated almost entirely along its flight track. At hypersonic speeds, minor fluctuations in atmospheric density or re-entry conditions like velocity can cause the module to over- or undershoot its target by hundreds of kilometres.

In contrast, energy available to make any significant path changes in a direction sideways to its track is very low and hence lateral deviations are minimal. The result is a landing footprint significantly elongated along the path of travel.

Once a module is in the water, recovery teams use predictive tracking, electronic signalling, and visual aids to find it. The module transmits its GPS coordinates and homing signals to satellites and aircraft and also releases a bright green fluorescent dye.

If the splashdown is at night or in low visibility, flashing from high-intensity strobe lights from the module will be used to locate it. To ensure it stands out against the deep indigo colour of the water, the module and its flotation bags are painted international orange.

How will the Gaganyaan crew module be recovered?

The Gaganyaan recovery operation will be led by the Indian Navy, plus other stakeholders. After the module is slowed by parachutes, it will splash down in the Bay of Bengal. Immediately after, the parachutes will be released to avoid any entanglement and the flotation bags will automatically inflate.

Once naval divers find and secure the module with a flotation collar and towing gear, it will be winched onto a ship's deck to safely extract the crew.

(Unnikrishnan Nair S. is former director, VSSC and IIST; founding director, HSFC; and an expert in launch vehicle systems, orbital re-entry and human spaceflight technologies: Currently Dr Sarabhai Professor at VSSC)

THE GIST

- The crew module sheds most of its kinetic energy through aerobraking, with atmospheric drag acting as the primary brake, followed by a multi-stage parachute system and, for land touchdowns, braking motors to ensure a soft landing.
- Due to high re-entry speeds and limited lateral control, the landing zone is an elongated ellipse, and recovery involves locating devices, GPS signals, and Indian Navy-led operations after splashdown in the Bay of Bengal.

GS Paper III – Environment

Climate change reshaping disease patterns, straining health systems: report

Geetha Srimathi
CHENNAI

Climate change is emerging as a major public health threat in India, reshaping disease patterns, straining healthcare systems, and placing nearly 40% of districts at high risk from extreme weather events, according to a new report.

The report, *Under the Weather: India's Climate-Health Intersections and Pathways to Resilience*, by Dasra, a philanthropy fund organisation, highlights how rising temperatures, erratic rainfall, floods, and cyclones are no longer isolated events but part of a continuous cycle of disruption affecting health, livelihoods, and access to care across the country.

Changing disease landscape

Extreme weather events in India are increasing in frequency and intensity, bringing both immediate and long-term risks, the report notes. Floods trigger outbreaks of water-borne diseases such as cholera and hepatitis, while heatwaves lead to dehydration, heatstroke, and increased cardiovascular stress.

The report says climate change is altering how diseases spread. Warmer temperatures and shifting rainfall patterns are expanding the range of vector-borne diseases such as dengue and malaria into new regions. Areas that were previously unaffected, including Shimla, parts of Jammu & Kashmir, and the Himalayan foothills, are now reporting cases. The report also identifies Pune as a major dengue hotspot, with cases expected to rise further.

Non-communicable diseases are also linked to climate stress. Heat exposure has been associated with higher cardiovascular mortality, while worsening air pollution contributes to respiratory illnesses and chronic conditions. Climate change, the report says, is acting as a "health-risk multiplier", increasing both disease burden and pressure on healthcare systems.

Unequal burden

The impact is not evenly distributed. Vulnerable communities – including rural populations, informal workers, women, and children – face the greatest risks. These groups are often the least equipped to cope with climate shocks, deepening existing inequalities.

Extreme heat, for instance, reduces labour productivity and increases health risks for outdoor workers. The report notes that India lost an estimated 160 billion labour hours due to heat exposure in 2021.

Big impact: Vulnerable communities — including rural populations, informal workers, women, and children — face the biggest impact of climate change. K.V.S. GIRI

Women and children face heightened risks from climate-related health impacts. The report notes that exposure to extreme heat is linked to a 16% increase in the odds of preterm birth during heatwaves, with risks rising further for every 1 degree Celsius increase in temperature.

Air pollution, particularly fine particulate matter (PM2.5), has been associated with hypertensive disorders in pregnancy, including pre-eclampsia, as well as increased gestational blood pressure. As infants and young children have limited ability to regulate body temperature, it makes them more prone to heat stress, dehydration, and respiratory illnesses.

Exposure to air pollution is also linked to low birth weight, asthma, and reduced lung function, the report says.

Climate disasters also disrupt access to healthcare. Floods and cyclones can damage hospitals, cut off roads, and interrupt the supply of medicines and vaccines. In remote areas, even a small disruption can leave communities without access to basic services.

Beyond direct health impacts, climate change is also affecting livelihoods and economic stability. Rising healthcare costs, loss of income, and reduced productivity are creating a cycle of vulnerability, particularly for those already at risk.

Efforts taken

Despite these challenges, the report highlights growing efforts to address the climate-health link. Over the past decade, India has begun to move from broad climate policies to more targeted approaches that recognise the connection between climate and health. Initiatives such as the National Action Plan on Climate Change and Human Health and State-level action plans are helping shape local responses. Heat Action Plans, which include early warnings and preparedness measures, are now being implemented in several cities and districts.

These efforts are helping communities adapt to both immediate shocks and long-term climate risks.

Challenges ahead

However, the report identifies several challenges, including a lack of local, disaggregated data linking climate events to health outcomes, limiting targeted interventions. Funding for adaptation remains constrained and skewed towards mitigation, while weak public awareness and fragmented data systems further hinder effective response.

The report calls for stronger collaboration between government, civil society, and the private sector, along with greater investment in local data systems and climate-resilient healthcare infrastructure. It also calls for placing health at the centre of climate policy, rather than treating it as a secondary concern.

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