

The Hindu Important News Articles & Editorial For UPSC CSE

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Edition : International Table of Contents

Page 01 Syllabus : GS 2 : Indian Polity / Prelims	SC asks govt. to regulate content on Internet
Page 04 Syllabus : GS 2 & 3 : International Relations and Indian Economy	IMF gives 'C' grade for India's national accounts statistics
Page 07 Syllabus : GS 2 : Social Justice / Prelims	Learning from centenarians: new study unveils secrets of longevity
Page 08 Syllabus : GS 3 : Indian Economy / Prelims	India's food colouring woes and steps being taken to combat recurring issue
Page 10 Syllabus : GS 3 : Environment	Why India struggles to clear its air
Page 08 : Editorial Analysis Syllabus : GS 3 : Indian Economy	Enabling a modern and future-ready labour ecosystem

The Supreme Court of India has urged the Ministry of Information & Broadcasting to frame guidelines for user-generated online content, highlighting the increasing harm caused by obscene, defamatory, or "anti-national" materials circulating unchecked on digital platforms. The Court's observations come at a time when India's digital ecosystem is expanding rapidly, posing fresh challenges to freedom of speech, privacy, and online safety.

SC asks govt. to regulate content on Internet

The court suggests 'impartial, and autonomous body' to vet 'prima facie permissible' content

Court says victims of online abuse have to be protected, and seeks 'preventive mechanisms'

A takedown takes 24 hours; in that time the harm is already done, Justice Bagchi says

Krishnadas Rajagopal
NEW DELHI

The Supreme Court on Thursday asked the Ministry of Information and Broadcasting to work on guidelines for user-generated content to protect innocents from becoming victims of obscene, even perverse, "anti-national" or personally damaging online content.

The top court considered the idea of an "impartial and autonomous authority", neither bound to private broadcasters nor the government, to vet "prima facie permissible" content.

A Bench of Chief Justice of India Surya Kant and Justice Joymalya Bagchi said user-generated con-

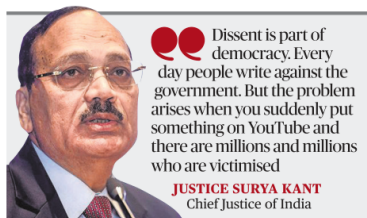
tent, potentially disastrous to reputations or even having "adult content", go viral even before social media intermediaries could take them down.

Aadhaar suggestion

At one point, referring to the easy access to uncurated material online, the court said a few seconds of 'adult content' warning was not enough. It suggested further checks such as sharing Aadhaar details to verify the age of users.

The Chief Justice found it "very strange" the phenomenon that users could create their own online channels and still be not accountable to anyone. "Is there no sense of responsibility?" he asked.

The court clarified that



JUSTICE SURYA KANT
Chief Justice of India

it did not intend to have the proposed guidelines for user-generated content "tinker" with free speech. Though the right was subject to reasonable regulation under Article 19(2) of the Constitution, it was nevertheless to be respected and protected. However, misuse of online speech has exposed millions of in-

nocent people to abuse. They too have a right to be protected, it reasoned.

'Millions victimised'

"Dissent is part of democracy. Every day people write against the government. But the problem arises when you suddenly put something on YouTube and there are millions and

millions who are victimised. They do not have a voice. They do not have a platform, and by the time they rush to court, the damage is done," Chief Justice Kant said, highlighting the need for guidelines.

Advocate Prashant Bhushan said any guidelines restraining free speech mandated prior and extensive public consultations, to be initiated by the Union government.

He cautioned that the term 'anti-national' was both over-broad and ambiguous.

The Chief Justice said there were enough laws to turn to after the damage was done. Victims could approach court for damages or opt for criminal proceedings. But there was

nothing to protect them before the post went online.

"A takedown takes at least 24 hours. By the time it is effectuated, the harm is already done. Social media is mercurial, goes across borders and is transmitted in seconds. This preventive exercise is not to throttle anyone but to have a certain degree of stick. Technology with AI makes you (social media intermediaries) enormously powerful, to curate your material, assess its impact. Platforms are monetising content," Justice Bagchi observed.

The judge termed prosecution of the creator of the offending social media post a "post-occurrence penalty", saying "we must

have preventive mechanisms to ensure there is no spread of misinformation, loss of property as well as sometimes lives".

Senior advocate Amit Sibal, for Indian Broadcast and Digital Foundation, expressed reservations about the court using the term 'preventive' to describe the proposed guidelines. 'Preventive' could be read as 'pre-censorship', Mr. Sibal said.

He suggested changing the prefix to 'effective'.

"The difficulty we are facing is the response time. By the time intermediaries respond to such content, it has already gone viral. Millions of viewership, etc. How do you plug that gap? That is the question," Justice Bagchi emphasised.

Key Analysis

1. Why the Supreme Court intervened

- User-generated content spreads instantly, often before platforms can review or remove it.
- Victims of defamation, sexualised content, trolling, misinformation, or deepfakes suffer irreversible harm in the few hours before takedown occurs.
- Justice Bagchi highlighted the 24-hour takedown delay, calling it inadequate given social media's virality.

2. Proposal for an "impartial and autonomous authority"

- Court suggested an independent body (neither controlled by government nor private platforms)
- Role: Vet prima facie permissible content and ensure preventive safeguards.
- Purpose: Not censorship, but pre-emptive protection against reputational and psychological harm.

3. Balancing Free Speech and Reasonable Restrictions

- Court reiterated that guidelines should not "tinker" with Article 19(1)(a).
- But misuse of free speech has victimised "millions who do not have a voice."

- Objective: Achieve balance under Article 19(2)—public order, decency, morality, defamation etc.

4. Suggestion of Aadhaar-based Age Verification

- Suggested as a mechanism to restrict minors' access to adult content.
- Raises concerns:
 - Privacy (Puttaswamy, 2017)
 - Data protection
 - Inclusion–exclusion issues
- Will need strong data minimisation + purpose limitation logic.

5. Concerns from Civil Society and Industry

- Prashant Bhushan:
 - Warned that the term “anti-national” is vague and prone to misuse.
 - Any regulation must involve broad public consultations.
- Indian Broadcast and Digital Foundation:
 - Flagged the risk of “pre-censorship”.
 - Recommended using “effective” rather than “preventive”.

6. Broader Governance Context

- Digital India has amplified the reach of misinformation, hate speech, morphing, cyberbullying, and fraud.
- Existing frameworks:
 - IT Act, 2000 + Intermediary Rules 2021
 - Penal laws for defamation & obscenity
 - Platform self-regulation
- But these provide post-occurrence remedies; the SC seeks pre-harm safeguards.

7. Ethical and Societal Dimension

- Protecting women, children, and vulnerable groups from online harassment.
- Ensuring accountability of creators of harmful content.
- Upholding democratic dissent while preventing digital spaces from becoming tools of abuse.

Conclusion

The Supreme Court's intervention underscores the urgent need for a balanced regulatory framework that protects citizens from the harms of viral, unverified, or abusive content while preserving constitutional free speech. As digital platforms gain unprecedented influence, India must craft guidelines that combine technology-driven preventive tools, transparent oversight, and public consultation.

UPSC Prelims Practice Question

Ques: With reference to digital intermediaries, 'Safe Harbour Protection' in India refers to:

- A. Immunity to social media platforms for every content published by them
- B. Protection given to platforms if they follow due-diligence rules
- C. Blanket protection to creators of online content
- D. The power of the government to pre-approve online content

Ans : b)

UPSC Mains Practice Question

Ques: The viral spread of user-generated content poses regulatory, ethical and constitutional challenges. Evaluate the need for an autonomous regulatory authority for digital content in India. **(150 Words)**



Page 01 : GS 2 & 3 : International Relations and Indian Economy

The International Monetary Fund (IMF), in its latest Article IV consultation, has assigned a 'C' grade to India's national accounts statistics — including GDP and GVA estimates — indicating shortcomings that hamper effective surveillance. This assessment comes at a critical moment as India prepares to release its Q2 national accounts data, raising questions about the robustness, credibility, and methodological soundness of India's macroeconomic statistics.

Key Body

1. Significance of IMF's Grading System

The IMF uses four grades — A, B, C, D, where:

- C means: "data have some shortcomings that somewhat hamper surveillance."
- India received overall 'B' across all statistical categories, but a 'C' specifically for national accounts data highlights structural concerns.

2. Key Weaknesses Identified by the IMF

(a) Outdated Base Year (2011–12)

- Both GDP and CPI use an old base year, failing to capture:
 - Structural transformation since 2011
 - Digital economy expansion
 - Growth in services
 - Formalisation through GST, UPI, etc.
- An outdated base year reduces accuracy and comparability.

(b) Use of Wholesale Price Index (WPI) as Deflator

- India still uses WPI-derived deflators due to the absence of a comprehensive Producer Price Index (PPI).
- This may misestimate real GDP because WPI:
 - Overrepresents commodities
 - Underrepresents services
 - Is more volatile

IMF gives 'C' grade for India's national accounts statistics

T.C.A. Sharad Raghavan
NEW DELHI

The International Monetary Fund's annual review has given India's national accounts statistics — including Gross Domestic Product (GDP) and Gross Value Added (GVA) — a grade of 'C', the second-lowest rating.

According to the IMF, this grade means the data available "have some shortcomings that somewhat hamper surveillance".

This is of particular significance as the government will release the national accounts data for Q2 of this financial year on Friday.

Weaknesses cited

"National accounts data are available at adequate frequency and timeliness and provide broadly adequate granularity," the IMF noted in its annual Article IV assessment of India's economic framework.

"However, some methodological weaknesses somewhat hamper surveillance and warrant an overall sectoral rating for the national accounts of C." Overall, across all data categories, India has received grade 'B'. There are four grades in total: A, B, C and D.

For example, it highlighted an outdated base year of 2011-12 on which the data is based, and the use of wholesale price indices as data sources for deflators due to the lack of producer prices indices. It further pointed out periodic "sizeable discrepancies" between the production and expenditure approaches of measuring GDP, "that may indicate the need to enhance the coverage of the expenditure approach data and the informal sector".

The Indian government



Grade 'C' means the available data have shortcomings that hamper surveillance. REUTERS

has, from the beginning, used the income approach to measure GDP by measuring the incomes of the government, people, and companies. However, it also provides an estimate based on the expenditure approach, which attempts to quantify GDP through the spending done by these entities.

Often, due to the differing data sources and their coverage, the two estimates of GDP differ, which has attracted criticism from some economists. Finally, the IMF also highlighted the lack of seasonally adjusted data and "room for improvement of other statistical techniques" used in the quarterly national accounts data.

'B' for the CPI

Regarding India's main inflation measure, the Consumer Price Index, the IMF graded India a 'B', which means the data provided "have some shortcomings but are broadly adequate for surveillance".

It said that while the CPI data scores well on its frequency and timeliness, coming as it does once a month and with only a month's lag, the rating of 'B' reflects the outdated CPI base year, items basket, and weights (set in 2011-12), "implying that the CPI basket likely fails to accurately represent current spending habits".

(c) Discrepancies Between GDP (Production vs. Expenditure Approach)

- India primarily uses the income/production approach.
- Expenditure-based GDP often diverges due to:
 - Data gaps
 - Weak coverage of consumption and investment
 - Underestimation of informal sector activity
- These discrepancies raise questions on data consistency.

(d) Lack of Seasonally Adjusted Data

- Most advanced economies publish seasonally adjusted quarterly GDP, enabling:
 - Better global comparability
 - More accurate business-cycle analysis
- India still relies mainly on raw numbers.

(e) Other Statistical Technique Gaps

- IMF highlights "room for improvement" in:
 - Sampling techniques
 - Data revision policies
 - Informal sector estimation
 - Timely incorporation of GST data

3. CPI Gets a 'B' Grade

- CPI data are timely and frequent, but IMF flags:
 - Outdated base year (2011–12)
 - Old consumption basket
 - Weights not aligned with modern spending patterns
- Implication: CPI may not accurately reflect today's inflation experience.

4. Why This Matters for India

Daily News Analysis

- Accurate national accounts are crucial for:
 - Monetary policy decisions (RBI)
 - Fiscal planning
 - Investor confidence
 - International comparisons
- Data shortcomings may impact credibility, particularly when the economy is undergoing rapid structural changes.

Conclusion

The IMF's 'C' grade for India's national accounts acts as a reminder of the need for statistical modernisation. While India's data systems are extensive and improving, longstanding issues — such as outdated base years, inadequate deflators, gaps in informal sector measurement, and lack of seasonal adjustments — constrain the precision of macroeconomic policy. Updating methodological frameworks and strengthening data transparency will be essential to enhance the reliability and global credibility of India's national statistics in an increasingly data-driven economic environment.

UPSC Mains Practice Question

Ques : IMF has given a 'C' grade to India's national accounts statistics. Discuss the concerns raised and their implications for India's economic governance. **(150 words)**

A recent study using data from the Longitudinal Ageing Study of India (LASI) sheds light on the health, lifestyle, and behavioural patterns of India's centenarians (100+ years). As India is projected to have the world's largest population of "superagers" by 2050, understanding these insights is crucial for shaping future public health, geriatric care, and social security policies. The findings highlight both the strengths and vulnerabilities of the oldest-old population, offering actionable lessons for longevity and healthy ageing.

Learning from centenarians: new study unveils secrets of longevity

Healthy diets, active lifestyle, avoiding tobacco and alcohol, and social connectedness foster longevity, according to the findings from the Longitudinal Ageing Study of India; more scientific and policy-based ageing research however, is needed, as India's senior population continues to grow

Sunil Rajpal
Shreya Ronanki

The oldest-olds group (especially centenarians, aged 100+ years) can offer valuable insights and learnings towards understanding longevity via health and healthcare behaviour, social security, dietary patterns, and lifestyle habits. While research investments aimed at understanding the secrets to longevity have grown substantially in high-income countries, developing and populous nations such as India are yet to witness such research advancements.

Although India's traditional knowledge systems hold abundant insights into longevity characteristics, persistent gaps in research and reliable statistics continue to hinder efforts to decode existing wisdom. A recently-published paper on profiling the health and well-being of centenarians, utilising data from the Longitudinal Ageing Study of India (LASI) offer some learnings.

Health markers

India's sample centenarians reveal striking patterns of superior health markers and resilience. Interestingly, most were found to be in good health, reflecting optimal biomarker profiles. More than half (55.5%) of centenarians had a normal Body Mass Index (BMI), while about 41% were underweight. Further, more than 95% of centenarians (100% of female centenarians) had a normal waist circumference. The absence of overweight and high-waist-circumference centenarians in the sample clearly indicates the importance of weight management and lean lifestyles (dietary restrictions and physical activity) for a healthier and longer life.

Chronic ailments that dominate discussions of ageing were virtually absent, with zero cases of high cholesterol, stroke, or heart disease, and only a few with diabetes (1.7%). More than 90% of centenarians had never consumed alcohol, and about 68% had never smoked tobacco. Collectively, these findings highlight the absence of major risk factors as a defining marker of longevity. Global studies have also observed that centenarians either completely avoid or markedly delay the onset of chronic diseases.

These findings add heft to the growing calls from experts to shift the public health discourse in India in order to promote healthy dietary habits and an active lifestyle at the population level, especially among older adults in urban areas. Nutrition policies and programmes need to pivot toward behavioural interventions to promote awareness of the benefits of weight management via healthy diets – reducing consumption of foods containing high fat, sugar, and salt; restricting alcohol and tobacco intake; and developing a consistent health



Shades of grey: India will be home to the highest number of centenarians (superagers) by 2050; therefore, the subject domain warrants timely research and policy attention. *BARAN NISSAR*

Activities of daily living

Only about a third of the centenarians reported difficulties with basic activities of daily living (ADLs), including walking (33.3%), eating (33.3%), bathing (36.1%), and dressing (36.1%). However, more complex instrumental activities of daily living posed substantial barriers. A large proportion of centenarians struggled with housework (88.9%), managing money (83.3%), making calls (77.8%), shopping (75%), and finding addresses (69.4%). From a gender perspective, the findings are alarming, as most of the sample centenarians were female widows from rural areas.

The duality of resilience in health but dependence in daily function carries direct implications for ageing-related policies. The findings warrant sustained efforts towards promoting formal caregiving, community-based day-care services, accessible transport, nursing, and ambulatory care. These ADL limitations also indicate the requirement of an age-based tailored approach to providing elderly care and functioning assistance from a policy standpoint.

Behavioural interventions are also required to promote and destigmatise extra-familial services, such as outside help for formal nursing care of the elderly, to ease the workload on family members. This becomes especially important for tasks that require mental and cognitive abilities, including managing finances and calling for help in case of emergencies.

Advancements in modern technology can also be leveraged to provide remote monitoring support, as well as specialised geriatric aids and equipment to manage urgent healthcare needs.

Finally, a focus on improving social security nets for the oldest-old is critical to promote paid caregiving, along with enhancing the self-respect and subjective well-being derived from financial autonomy.

Well-being profile

Subjective self-assessments are known to be important markers of longevity. Several studies have shown that people with positive ratings toward self-health assessment and life satisfaction levels have a higher likelihood of better health markers and a longer life. The majority of the sample centenarians in India expressed moderate (36.8%) and high (51.2%) levels of satisfaction with their lives. More than 75% of the sample centenarians believed that they were healthy and happy.

Such findings point towards the need to promote discussions around socialisation activities and engagement, family care and bonding, living arrangements, and mental health issues. Potential pathways could be in the form of devoted elderly day-care platforms to encourage voluntary helping activities, augmenting a sense of purpose, and hence enhancing the self-assessment of well-being.

Additionally, spiritual gatherings are an essential platform for elderly Indians to socialise and connect at later stages of life. Fostering such congregations can be beneficial for both psychological and

emotional well-being. Finally, a high well-being rating by the oldest-olds also indicates the importance of mental wellness. Possible learning points from this could be adopting better sleep routines, more outdoor recreational activities, and limiting screen time.

The way forward

India will be home to the highest number of centenarians (superagers) by 2050; therefore, the subject domain warrants timely research and policy attention. To emerge as a global economic powerhouse requires a long-term perspective on research in longevity and well-being. The first step forward is to build a strengthened database on the oldest-olds, their distribution across geographies, demographics, and socioeconomic groups, and their basic lifestyle habits.

India has demonstrated remarkable success in generating reliable demographic and health statistics on infant births, vaccinations, and maternal health. This capacity now needs to be extended to longevity and scientific, policy-based ageing research. Global evidence indicated that longevity secrets cut across clinical, biological, physiological, genetic, and socioeconomic factors. India, with its sheer scale and diversity, is uniquely placed to contribute to this understanding.

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THE GIST

Research investments aimed at understanding the secrets to longevity have grown substantially in high-income countries, developing and populous nations such as India are yet to witness such research advancements. Persistent gaps in research and reliable statistics continue to hinder efforts to decode existing wisdom in India

India's sample centenarians reveal striking patterns of superior health markers and resilience. Interestingly, most were found to be in good health, reflecting optimal biomarker profiles. These findings add heft to the growing calls from experts to shift the discourse in order to promote healthy dietary habits and an active lifestyle at the population level

To emerge as a global economic powerhouse requires a long-term perspective on research in longevity and well-being. The first step forward is to build a strengthened database on the centenarians

Key Analysis

1. Key Health and Lifestyle Findings

LASI data reveal that India's centenarians display:

- Optimal biomarker profiles, indicating strong resilience.

Daily News Analysis

- Normal BMI in 55.5%, and no cases of overweight or high waist circumference.
- Very low prevalence of chronic diseases: no recorded stroke, heart disease, or high cholesterol; diabetes in only 1.7%.
- Healthy habits:
 - 90% never consumed alcohol
 - 68% never smoked

These findings affirm global evidence that absence of risk factors—tobacco, alcohol, obesity, and sedentary lifestyle—is central to longevity. The pattern also highlights the importance of lean diets, physical activity, and weight management.

2. Public Health Implications

The study reinforces the need for behavioural public health interventions, especially in rapidly urbanising regions:

- Promote healthy diets and reduce HFSS (high fat, sugar, salt) foods.
- Strengthen nutrition policies focused on awareness and early prevention.
- Encourage active lifestyle routines, especially for middle-aged and older adults.
- Integrate behavioural counselling into national programmes (NHM, NPCDCS).

Early action can significantly reduce India's future burden of non-communicable diseases (NCDs).

3. Functional Ability and Care Needs

While centenarians show good health, many face challenges in instrumental activities of daily living (IADLs):

- Difficulty in housework (88.9%), money management (83.3%), making calls (77.8%), and shopping (75%).
- Most centenarians in the sample were female widows from rural areas, implying added layers of vulnerability.

Policy implications:

- Expand formal caregiving systems, community day-care services, accessible mobility, and ambulatory care.
- Destigmatise extra-familial elderly care, including professional nursing support.
- Use technology for remote monitoring, emergency support, and cognitive assistance.

India must shift from informal, family-based caregiving to a structured geriatric-care ecosystem.

4. Well-being, Mental Health, and Social Connectedness

Findings show high subjective well-being:

- 88% experienced moderate to high life satisfaction.
- 75% believed they were healthy and happy.

Insights for policy:

- Promote social participation, family bonding, community centres, and elderly day-care.
- Encourage spiritual gatherings, outdoor activities, good sleep routines, and minimal screen exposure.
- Strengthen mental health services under Tele-MANAS, district mental health programmes, and community outreach.

Social connectedness and mental resilience emerge as core ingredients of longevity.

5. The Way Forward

India currently lacks a systematic database exclusively tracking the oldest-old population. As the country moves toward a demographic shift, with rising elderly dependency ratios:

Daily News Analysis

- Build a national longevity database capturing geography, socio-economic diversity, behavioural patterns, and health trajectories.
- Invest in scientific, biological, and genetic research on ageing.
- Integrate longevity studies into public health planning, similar to infant and maternal health data systems.
- Encourage academic–government partnerships to expand ageing research, especially given India's vast diversity.

India is uniquely positioned to contribute to global longevity research, but this requires timely, evidence-based investment.

Conclusion

The LASI-based study reveals that India's centenarians offer powerful lessons in healthy ageing — centred on healthy diet, active lifestyle, absence of risk factors, and strong social well-being. However, their functional dependence and limited social security highlight gaps in India's ageing-support ecosystem. As India moves toward becoming home to the largest number of centenarians by 2050, strengthening research, policy design, caregiving infrastructure, and behavioural health interventions will be essential to ensure that longevity translates into healthier, dignified, and productive ageing.

UPSC Prelims Practice Question

Ques: Centenarians in India showed higher difficulty in which of the following activities?

- A. Walking and eating
- B. Bathing and dressing
- C. Housework and managing money
- D. Maintaining normal waist circumference

Ans: c)

UPSC Mains Practice Question

Ques : Healthy dietary habits, low-risk behaviour, and active lifestyles emerge as the core determinants of longevity. How can India integrate these insights into its national NCD prevention strategies? **(250 words)**

India continues to confront recurring cases of food adulteration through non-permitted synthetic dyes, most notably auramine O, an industrial-grade yellow colour banned under the Food Safety and Standards Act (FSSA), 2006. Despite long-standing prohibitions, recent inspections and studies reveal its persistent entry into food items, raising major public health concerns and exposing regulatory gaps.

India's food colouring woes and steps being taken to combat recurring issue

Athira Elssa Johnson

India continues to face recurring episodes of chemical adulteration in food, particularly through the use of non-permitted synthetic dyes. One of the most persistent among them is auramine O, a bright yellow industrial dye banned under Indian food safety regulations.

Recent inspections by State food safety departments, academic studies and even everyday observations have again uncovered its presence in food items.

What is auramine?

Auramine O is a synthetic yellow dye extensively used in industry, including textile and leather processing, printing inks, paper manufacturing, and certain microbiological staining procedures. It has a vivid colour and is inexpensive, but is not approved for use as a food colour in India. Toxicological research has linked its ingestion to a range of health risks, including liver and kidney damage, enlargement of the spleen, mutagenic effects that can alter genetic material, and potential carcinogenic outcomes. The International Agency for Research on Cancer (IARC) classifies auramine as a substance that is possibly carcinogenic to humans.



Despite longstanding prohibitions, auramine O continues to enter the food chain largely due to its easy availability and low cost. GETTY IMAGES

Despite longstanding prohibitions, auramine continues to enter the food chain largely due to its easy availability and low cost. Industrial-grade colours are sold informally in local markets, and small-scale sweet makers or vendors often rely on these unlabelled powders because they provide a bright, appealing yellow that mimics saffron, turmeric, or permitted synthetic colours. In many cases, producers remain unaware of regulatory restrictions or view enforcement as avoidable.

While the Food Safety and Standards Act, 2006, provides stringent provisions against adulteration, enforcement

remains uneven due to variations in laboratory capacity, staffing, and surveillance systems across States.

The Food Safety and Standards Authority of India (FSSAI) periodically intensifies sampling, surveillance, and enforcement efforts, particularly during festive seasons when colour adulteration peaks. Several States have launched targeted drives against illegal colourants, leading to seizures of unlabelled dye packets and prosecution of violating units. Alongside enforcement, awareness programmes for small food manufacturers and street vendors are being expanded to encourage safer manufacturing practices. There is also a push to strengthen laboratory infrastructure and develop rapid testing kits that can detect industrial dyes at the point of sale.

Eliminating auramine O from the food chain will require a multilayered approach. This includes tighter regulation of chemical markets selling industrial dyes, sustained community-level education for small manufacturers, broader deployment of easy-to-use testing tools, and stronger penalties for chronic violators. Consumer education will also be crucial.

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Key Analysis

1. What is Auramine O and Why is it Harmful?

- Auramine O is an inexpensive, bright yellow industrial dye used in textiles, leather, printing inks, and paper.
- It is not permitted for food use, yet it is widely misused to replicate the appearance of saffron or turmeric.

- Toxicological risks include:
 - Liver and kidney damage
 - Splenomegaly (enlarged spleen)
 - Mutagenic effects (genetic alterations)
 - Potential carcinogenicity (classified as "possibly carcinogenic to humans" by IARC)

This makes its presence in food a serious public health hazard.

2. Why Does Adulteration Persist?

Despite legal bans, auramine O continues to infiltrate the food chain due to:

- Easy availability of industrial-grade dyes in informal chemical markets
- Low cost compared to permitted food colours
- Use by small-scale sweet makers and vendors who prioritise appearance and affordability
- Lack of awareness of regulations among producers
- Weak and uneven enforcement across States
 - Varying lab testing capacities
 - Inadequate surveillance and staffing
 - Difficulty in tracking informal supply chains

Thus, structural weaknesses and informal market practices help the dye persist.

3. Regulatory Actions and Policy Steps Taken

The Food Safety and Standards Authority of India (FSSAI) has initiated multiple measures, including:

- Seasonal sampling drives, especially during festivals when colour adulteration peaks
- Targeted raids on illegal colourant sellers
- Seizure of unlabelled dye packets and prosecution of offenders
- Awareness programmes for small food manufacturers and street vendors
- Efforts to upgrade laboratory infrastructure and improve testing capacity
- Development of rapid testing kits for point-of-sale detection

Several States have conducted dedicated crackdowns to curb the circulation of non-permitted dyes.

4. Way Forward: A Multi-layered Approach Needed

Eliminating auramine O from the food supply requires:

- Tighter regulation and monitoring of chemical markets selling industrial dyes
- Continuous community-level training and sensitisation for vendors and small sweet makers
- Wider use of rapid testing devices to detect contamination instantly
- Harsher penalties for habitual violators
- Consumer awareness campaigns to encourage demand for safe food and discourage visually "too bright" products

Only an integrated strategy combining enforcement, education, and technology can address this persistent challenge.

Conclusion

The continued presence of auramine O in India's food chain reflects both regulatory loopholes and informal market vulnerabilities. While FSSAI and State agencies have intensified monitoring and awareness efforts, the recurrence of such incidents underscores the need for a sustained, multi-pronged approach. Strengthening chemical market regulation, improving testing facilities, empowering consumers, and building safer manufacturing practices will be essential to ensure food safety and public health in the long term.

UPSC Prelims Practice Question

Ques: Q3. The persistent use of non-permitted synthetic dyes in Indian food products is primarily due to:

- A. High cost of industrial-grade dyes
- B. Lack of availability of natural colourants
- C. Weak enforcement and informal market supply chains
- D. Mandated use of synthetic colours in traditional sweets

Ans : c)

UPSC Mains Practice Question

Ques : Despite stringent regulations, India continues to face recurrent episodes of adulteration using non-permitted synthetic dyes such as auramine O. Analyse the reasons behind this persistence and suggest a multi-layered strategy to eliminate such adulterants from the food chain. **(150 words)**



India faces a recurring winter pollution crisis, particularly in Delhi–NCR, where air quality plunges to hazardous levels. Each year, the government resorts to short-term, highly visible measures such as smog towers, water sprinkling, cloud seeding, and odd-even schemes. Yet these interventions have produced limited, temporary gains. The deeper challenge lies in India's fragmented air-quality governance, weak institutional coordination, and the dominance of politically convenient quick fixes over long-term structural reforms.

Why India struggles to clear its air

India confronts a recurring pollution crisis shaped by quick fixes such as cloud seeding, smog towers and odd-even rules; fragmented air-quality governance, scattered accountability and short-term political incentives keep long-term progress out of reach

FULL CONTEXT

Atay Singh Nagpure

Each winter, as Delhi slips back into its familiar grey haze, India reaches for the same set of quick fixes, treating the pollution crisis as if it were temporary. Cloud seeding, smog towers, water sprinkling, odd-even rules, and festival crackdowns reappear in a predictable cycle. These are all high-visibility steps that promise urgency, but they change little on the ground (or in the air).

Public debate breaks down just as quickly: scientists are blamed for weak solutions, politicians for weak will, and administrators for blindly importing Western ideas. There is some truth in each charge, but none explains the full picture by itself. Over the last couple of weeks in Delhi, the public response has also included small public protests. In the November 24 edition, 50-60 protesters gathered near India Gate under heavy security presence; the police eventually detained five people, even though the protests were peaceful.

Slits of control

The repeat pattern of short-term interventions points to a structural flaw: the country's air-quality institutions – scientists, governments, regulators, cities, and communities – operate largely on their own. With no clear ownership or shared authority, lasting progress remains elusive.

This disconnect is no accident; instead, it is the product of how India's air-quality governance has taken shape. Unlike countries such as the U.S., the U.K., Japan, or China, where strong national laws and empowered regulators drove decades of steady progress, India's system has been fragmented from the start. The responsibility for clean air is scattered across a long list of bodies: the Ministry of Environment, Forests and Climate Change; the Central Pollution Control Board; the State Pollution Control Boards; the Commission for Air Quality Management; the Delhi Pollution Control Committee; municipal bodies such as the Municipal Corporation of Delhi and the New Delhi Municipal Council; and various State departments overseeing agriculture, transport, industry and energy. Sectoral agencies such as the National Highway Authority of India, the Public Works Department, the power distribution companies, and planning authorities add yet more layers.

Each agency oversees a slice of the problem, and no single institution holds full authority or full accountability for air-quality outcomes. The result is uneven enforcement across States, weak inter-state coordination in the National Capital Region, and frequent contradictions between court orders, Union government directives, and local decisions.

Policymakers also face real constraints. The environmental powers are constitutionally shared, budgets and staffing are uneven, and judicial pressure often pushes immediate action over long-term planning. In a system where many actors are involved but none is empowered to lead, progress becomes slow, inconsistent, and easily overtaken by short-term, high-visibility measures that step in to fill the governance vacuum.

The dominance of short-term measures is not simply the result of weak institutions: it reflects the incentives that drive Indian governance. Quick fixes allow governments to show visible action within a single news cycle, avoid confronting powerful sectors such as construction, transport, and agriculture,



Fight for rights: People protesting against air pollution near the India Gate in New Delhi. SCIENCE SOURCE/REUTERS

and postpone politically risky reforms. They also fit comfortably within annual budgets, unlike long-term investments in clean fuel, waste systems, or industrial upgrades.

This is why cloud seeding, smog towers, water sprinkling, and odd-even schemes return each winter: they are inexpensive to announce, easy to deploy, and rarely provoke resistance (overwithstanding the recent protests). Tools such as anti-smog guns and festival crackdowns help officials demonstrate responsiveness, even if they do little for public health. In effect, these interventions serve the politics of pollution more than the science of it, masking structural failures with momentary action, while public exposure to harmful air remains largely unchanged.

Two traps

Another reason India's pollution response struggles is what can be called the intellectual trap: the belief that solutions conceived within elite institutions, think-tanks, multilateral agencies, or top scientific organisations will automatically translate into effective action on the ground. Much of India's clean-air practices" without redesigning them for Indian realities. Many of these models come from cities with abundant resources, stable public finance, strong regulatory credibility, and high institutional trust. When adopted wholesale, these approaches often carry assumptions that do not hold in India: consistent enforcement, reliable public transport, low informal activity, or predictable administrative coordination.

Technologies and regulations that function smoothly in European or East Asian settings encounter vastly different constraints in India's dense neighbourhoods, politically negotiated spaces and overstretched agencies. The issue is not the foreign origin of ideas but the lack of adaptation.

Together, the intellectual trap and Western trap shape a policy environment where strategies acquire their legitimacy by sounding sophisticated or globally aligned rather than by being grounded in how Indian institutions actually work. They produce initiatives that attract attention, secure funding, and generate impressive documents, yet struggle to scale or endure. Many fade quietly after a few months when confronted with routine bureaucratic churn, unclear mandates or resistance from stakeholders whose behaviour the policy sought to change. In the process, India's clean-air agenda becomes heavy on conceptual ambition but light on operational traction – a landscape of ideas that travel well but land poorly.

Indian constraints

Escaping the intellectual and Western traps means learning from global and expert ideas as well as accepting that even strong solutions must be redesigned for India's administrative and social realities. That requires institutions capable of planning beyond election cycles, coordinating across sectors, and staying focused even when political priorities shift.

For this, India needs clearer rules about who leads on air quality, who is accountable, and how decisions move between national, State, and municipal levels. A modern clean air law with explicit mandates could create this basic clarity. The goal is not another powerful regulator but a coordinating body that can be trusted enough to align policies, resolve routine jurisdictional overlaps, and make sure implementation remains steady. Public access to compliance data and visible enforcement would make environmental rules credible while stable multi-year funding would allow agencies

to build staff, maintain monitoring systems, and sustain long-term programmes instead of reacting to crises.

Effective institutions also need the right expertise. India needs a professional layer of science managers, i.e. people who understand science, governance, and political constraints, and can convert knowledge into workable, context-specific decisions. Their role is not to generate more studies but to adapt existing insights to local capacity, guide ministries through complex transitions, and keep reforms coherent despite bureaucratic turnover. Without this bridging function, India's scientific strengths, including its models, sensors, and analytical tools, remain disconnected from day-to-day decision-making.

What India lacks, ultimately, is not ideas but alignment: between ambition and capacity, between what experts recommend and what institutions can actually enforce. Imported frameworks and elite prescriptions often fail because they assume levels of staffing, coordination, and public compliance that vary widely across States and cities. Indian solutions must therefore begin with Indian constraints: uneven municipal capacity, informal labour markets, competing development pressures, and diverse regional priorities. Policies must be designed to be implementable, not just elegant, which means they must be built around what agencies can realistically enforce, what communities will accept, and what local budgets can support. Without this grounding, well-intentioned initiatives will continue to stall once they leave conference rooms and meet real-world conditions.

What India needs

Clean air is not a seasonal aspiration: it is essential to public health, economic productivity and basic functioning of cities. India can learn from global experience and from its own scientific advances, but lasting progress depends on institutions and policies shaped for Indian conditions. Technology may offer moments of relief but only governance built for India's complexity can deliver durable change. The tools exist and the demand for cleaner air is unmistakable. Thus, what India needs now is the confidence to design solutions that reflect its own realities and the commitment to sustain them long enough to make the air genuinely breathable.

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THE GIST

India's repeat cycle of cloud seeding, smog towers, odd-even rules and festival crackdowns reflects a structural flaw in air-quality governance, where responsibilities are scattered across many bodies and no institution has full authority or accountability.

India's response is weakened by the intellectual trap – expert and global ideas that look good on paper but fail in practice because they don't account for India's limited municipal capacity, informal economies, and complex political and administrative realities.

What India needs is institutions designed for Indian constraints: clearer rules on who leads, a modern clean air law with explicit mandates, steady multi-year funding, credible enforcement, public access to compliance data, and science managers who can bridge science with governance and politics.

Key Analysis

1. Fragmented Institutional Architecture

India's air-quality responsibility is dispersed across multiple agencies:

- Ministry of Environment, Forest and Climate Change
- Central Pollution Control Board and State Pollution Control Boards
- Commission for Air Quality Management (CAQM)
- Delhi Pollution Control Committee
- Municipal bodies (MCD, NDMC)
- State departments (agriculture, transport, energy, industries)
- Sectoral agencies (NHAI, PWD, DISCOMs)

Issue: No single body has full authority or full accountability → weak enforcement, inter-state contradictions, and overlapping mandates. Judicial pressure often forces short-term actions, not systemic reform.

2. Dominance of Short-Term, High-Visibility Measures

Political incentives prioritise measures that:

- Are easy to announce
- Show visible action within a news cycle
- Avoid confrontation with powerful lobbies (construction, transport, agriculture)
- Fit within annual budgets

Thus, cloud seeding, smog towers, anti-smog guns, and festival crackdowns keep returning despite minimal scientific impact.

These measures serve politics of pollution, not public health.

3. The "Intellectual Trap"

Many solutions come from elite institutions or global think-tanks and:

- Are analytically strong but disconnected from ground realities
- Don't account for municipal limitations (staff shortage, poor data, weak record-keeping)
- Assume high administrative capacity and compliance

Hence, strategies often remain pilot projects or collapse during implementation.

4. The “Western Trap”

Imported global best practices often fail because they assume:

- Strong enforcement
- Reliable public transport
- High regulatory credibility
- Low informal sector activity

Indian cities face dense settlements, informal economies, political negotiations, and overstretched agencies. Without adaptation, foreign solutions “travel well but land poorly”.

5. India’s Administrative Realities

True reform requires:

- Institutions capable of long-term planning (beyond election cycles)
- Clear rules on leadership and accountability in air-quality governance
- Stable, multi-year funding
- Public access to compliance and monitoring data
- Professional “science managers” who can translate scientific insights into usable, localised policy
- Policies designed around what Indian cities can realistically implement

The core problem is misalignment between ambition and capacity.

Conclusion

India’s struggle to clean its air is not due to a lack of ideas or technology but due to fragmented accountability, capacity constraints, and the dominance of short-term political incentives. While quick fixes provide momentary visibility, they cannot replace a coherent, India-specific air-quality governance framework. Achieving clean air requires long-term institutional clarity, coordinated action across States, adapted policy models, empowered regulators, transparent enforcement, and solutions rooted in India’s administrative, economic, and social realities. Durable improvement will come not from seasonal firefighting but from sustained governance tailored to India’s complexity.

Daily News Analysis

UPSC Prelims Practice Question

Ques: Consider the following statements about the Commission for Air Quality Management (CAQM):

1. It has jurisdiction over Delhi, Punjab, Haryana, Rajasthan and Western Uttar Pradesh.
2. It can issue directions to States and Union Territories and such directions are legally binding.
3. It is a constitutional body under Article 253.

Which of the above statements is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

Ans : a)

UPSC Mains Practice Question

Ques: India's air pollution crisis is less a technological problem and more a governance problem. Discuss. **(150 Words)**



Enabling a modern and future-ready labour ecosystem

November 21, 2025 will go down as a milestone in India's journey of Viksit Bharat – a day when the much awaited Four Labour Codes were made effective by the Government of India. India has taken a giant leap in labour rights with the implementation of four modernised Labour Codes (the Code on Wages, 2019, the Industrial Relations Code, 2020, the Code on Social Security, 2020 and the Occupational Safety, Health and Working Conditions (OSH) Code, 2020). These reforms create a fair, modern and future-ready labour ecosystem – one that empowers workers, enhances enterprise competitiveness and strengthens India's path towards a Viksit Bharat and Aatmanirbhar Bharat.

India's labour framework has evolved gradually over several decades, leading to the creation of multiple pieces of legislation operating across different time periods and economic contexts. While these laws have played an important role in shaping employment relations, the growing size and diversity of India's workforce brought to the fore the need for simplification and consolidation. The Second National Commission on Labour recommended grouping existing laws into broader functional codes. Extensive consultations with industry, employers, trade unions and State governments between 2015 and 2019 led to these four comprehensive Labour Codes being enacted.

A workforce that is both large and young
India today has one of the world's largest and youngest workforces, with more than 643 million workers, and is expected to contribute nearly two-thirds of new global workforce entrants in the coming years, as in the World Economic Forum. Recent labour market trends point to a positive momentum: between 2017-18 and 2023-24, India created 16.83 crore jobs, the unemployment rate declined from 6% to 3.2%, and formal employment expanded significantly.

Given that a large share of India's workforce still remains in the informal sector, the need for a simplified and coherent labour framework has been particularly important to help extend protections and improve productivity of the unorganised sector. The coverage under the Code



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for Social Security has been extended to the unorganised sector also. These developments reflect the growing dynamism of the economy and emphasise the need for a modern labour regulatory system that supports this trajectory.

For workers, the Labour Codes provide a stronger and more consistent set of protections. Universal minimum wages, a national floor wage, mandatory appointment letters, timely payment of wages, and clear rules on working hours – including the 48-hour work week – reinforce fairness and security. The OSH Code's emphasis on safety committees, free preventive health check-ups and improved workplace standards strengthens the focus on well-being and productivity.

The Code on Social Security, 2020 provides for universal Employees' State Insurance Corporation (ESIC) coverage with no geographic restrictions, streamlined Employees' Provident Fund (EPF) procedures for quicker resolutions, and support for the construction sector through simplified cess payments. It also establishes a National Social Security Fund for various worker categories.

Another major reform under these codes is the simplification of compliance requirements. The shift to single registration, single licence and single return significantly reduces administrative burdens, particularly for micro, small and medium enterprises (MSME). A uniform definition of wages introduces clarity across multiple laws, helping reduce disputes and improving predictability in wage-related calculations. Decriminalisation of minor offences and the introduction of digital processes such as algorithm-based inspections encourage transparency and trust-based compliance.

Preparing for the future of work

India's workforce is diversifying, with the rapid growth of gig and platform-based employment, flexible working models and digital-enabled livelihoods. In this context, the Social Security Code's inclusion of gig and platform workers is timely. With the size of this workforce expected to grow from one crore in 2024-25 to 2.35 crore by 2029-30, establishing a framework for social protection is a forward-looking measure that

aligns with the changing nature of work.

The Codes also emphasise formalisation, which remains vital for long-term economic progress. Clearer rules, standardised definitions and transparent processes encourage more enterprises to enter the formal economy and help extend protections to a larger share of the workforce.

A boost for women in the workforce

Women's participation in the workforce has improved yet remains below its potential. According to the International Labour Organization's India Employment Report 2024, India's female labour force participation rate stands at 32.8%. The Labour Codes help strengthen the enabling environment by reinforcing equal remuneration, enhancing maternity benefits and expanding social protection to unorganised, gig and platform workers. The OSH Code also allows women to work at night with their consent and has adequate safety arrangements, thereby widening opportunities across several sectors. Together, these provisions support greater access and continuity of employment for women as the economy evolves. A modern labour framework must balance the need for worker protection with the requirements of a competitive business environment. The Labour Codes aim to provide this balance by offering clearer industrial relations norms and faster dispute resolution, while ensuring that workers have access to essential rights, safety and social security. This balanced approach supports investment, promotes stability and helps strengthen India's position in global value chains.

The next few days will be crucial as the implementation process for these Codes moves forward. It will be important for States to align with the minimum thresholds and guiding principles laid out in the Codes to ensure uniformity and clarity across the country. After the Goods and Services Tax (GST) reforms, this represents one of the most significant structural reforms. This reform momentum should continue, supporting greater investments, and thereby contributing to higher employment generation in the country.

The Four
Labour Codes
will result in a
modern labour
regulatory
system that
supports the
growing
dynamism of
the Indian
economy

GS. Paper 3 Indian Economy

UPSC Mains Practice Question : The implementation of the Four Labour Codes in India is being hailed as a milestone in modernising labour governance. Discuss the key features of these Codes and analyse their potential impact on workers, enterprises, and India's economic growth. Also, critically examine the challenges in their implementation. (250 words)

Context :

The Government of India implemented the long-pending Four Labour Codes on November 21, 2025, marking a major structural reform after the GST. These Codes — Wages (2019), Industrial Relations (2020), Social Security (2020), and OSH (2020) — consolidate 29 central labour laws into a simplified, coherent framework. With India possessing one of the world's largest and youngest workforces, these reforms aim to modernise labour governance, reduce compliance burden, and extend protections to informal, gig, and platform workers. The Codes are expected to support India's transition towards Viksit Bharat and enhance competitiveness in global value chains.

Key Analysis

1. Why Labour Reforms Were Needed

Fragmented and outdated legislation

- Earlier labour laws were created across different eras, sectors and socio-economic contexts.
- They caused overlapping mandates, high compliance burden, litigation and regulatory uncertainty.

Growing workforce and changing nature of employment

- India has 643 million workers, a large share in the informal sector.
- Emergence of gig employment, platform work, flexible work models required new forms of social protection.
- **Between 2017-18 to 2023-24, India witnessed:**
 - 16.83 crore new jobs
 - Decline in unemployment from 6% to 3.2%
 - Expansion of formal employment : These shifts required a supportive and simplified regulatory framework.

2. Key Features of the Four Labour Codes

(A) Code on Wages, 2019

- Universal minimum wage for all workers, organised and unorganised.
- National floor wage to ensure uniformity across states.
- Mandatory appointment letters, timely wage payment.
- 48-hour work week and clarity on working hours.

(B) Industrial Relations Code, 2020

- Streamlines trade union recognition, dispute resolution, layoffs and retrenchment processes.
- Aims to create predictability for businesses while safeguarding workers' rights.

(C) Social Security Code, 2020

- Universalised ESIC coverage — no geographic restrictions.
- Simplified EPF procedures for quick resolutions.
- National Social Security Fund for gig, platform, and unorganised workers.
- Dedicated support for construction workers, simplified cess processes.

(D) OSH (Occupational Safety, Health and Working Conditions) Code, 2020

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- Focus on workplace safety, preventive health check-ups, safety committees.
- Allows women to work at night with consent and adequate safeguards.
- Uniform workplace standards across industries.

3. Simplification and Ease of Doing Business

- Single registration, single licence, single return → major compliance relief.
- Algorithm-based digital inspections → transparency and reduced inspector-raj.
- Decriminalisation of minor offences → fosters trust-based governance.
- Uniform definition of wages → reduces disputes in PF, bonus, gratuity calculations.

These measures particularly help MSMEs, which often struggle with complex labour compliance.

4. Strengthening Worker Protection and Welfare

Enhanced labour rights

- Fair wages, formal appointment letters, consistent working hours, safer workplaces.
- Improved access to EPF/ESIC benefits.

Inclusiveness

- Codes extend protections to the unorganised sector, which forms nearly 90% of India's workforce.
- Gig and platform workers (expected to rise from 1 crore in 2024-25 to 2.35 crore by 2029-30) brought under social security — a first in Indian law.

5. Boost to Women's Workforce Participation

- As per ILO India Employment Report 2024, female LFPR = 32.8%.
- Codes promote women's participation by:
 - Equal remuneration
 - Stronger maternity benefits
 - Allowing night shifts with safeguards
 - Social security access for informal/gig women workers : These reflect a shift towards gender-inclusive labour markets.

6. Implications for India's Growth Trajectory

Formalisation and productivity

- Clear definitions, standardised procedures and digitised processes encourage enterprises to enter the formal economy, improving productivity, wages and tax compliance.

Global competitiveness

- Modern labour norms support India's ambitions in global value chains, since MNCs favour predictable labour regulations and worker protections.

Cooperative federalism challenge

- Successful implementation depends on state-level rules, thresholds and enforcement capacities.

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- States must align with central codes to ensure nationwide uniformity.

Criticisms & Concerns

1. Fear among trade unions

- Easier retrenchment norms for firms may weaken job security.
- Fixed-term employment may increase precarious work.

2. Gig worker coverage still limited

- Social security is “enabling”, not automatic; actual benefits depend on future rules and funding.

3. Delayed implementation by states

- Uneven rollouts may undermine national uniformity.

4. Possibility of extended working hours

- Though capped at 48 hours weekly, flexible shifts may lead to exploitation if oversight is weak.

Conclusion

The implementation of the Four Labour Codes marks a transformative step in India's labour governance, comparable only to the GST in scale. By simplifying outdated legislation, expanding social protection, supporting ease of doing business, and recognising new forms of work, the Codes aim to create a balanced, future-ready labour ecosystem. Their success, however, will depend on effective state-level implementation, awareness among workers, and continuous dialogue between industry, labour and government. If executed well, these reforms can significantly strengthen India's competitiveness, promote formalisation and inclusivity, and support the long-term vision of Viksit Bharat and Aatmanirbhar Bharat.