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DAILY CURRENT AFFAIRS DATED 17.02.2026

GS Paper I: Society

1. Denotified, Nomadic and Semi-Nomadic Tribes in India: The Question of Separate Classification

a. Historical Injustice and Contemporary Marginalisation

Denotified, Nomadic and Semi-Nomadic Tribes (DNTs, NTs and SNTs) are among the most vulnerable communities in India. Their present deprivation is deeply rooted in colonial history. During British rule, many mobile communities were officially labelled as "criminal tribes," institutionalising stigma and surveillance.

Although such laws were repealed after Independence, the social stigma and economic marginalisation continued. Today, the central debate is whether these communities require a separate Constitutional and Census classification to ensure effective welfare delivery and recognition of historical injustice.

b. Colonial Origins: The Criminal Tribes Act, 1871

Nature of the Law

The Criminal Tribes Act (CTA), 1871, was enacted by the British colonial government based on the assumption that certain communities were "hereditary criminals."

Key Features

- Entire communities were compulsorily registered.
- Movement was restricted and monitored.
- Collective punishment could be imposed.
- Surveillance became a routine administrative practice.

Many of these groups were pastoralists, traders, entertainers or artisans who depended on mobility for livelihood. Their non-settled lifestyle was viewed with suspicion by a colonial state that preferred sedentary agrarian populations.

The Act thus functioned as an instrument of social control, embedding stigma in official records and public perception.

c. Post-Independence Developments: Denotification Without Full Rehabilitation

Repeal and Its Limits

In 1952, the Criminal Tribes Act was repealed, and affected communities were "denotified."

Persistent Challenges

- Several States enacted Habitual Offenders Acts, allowing continued surveillance.
- Social stigma persisted despite legal repeal.
- Comprehensive rehabilitation measures were largely absent.

Thus, legal denotification did not automatically translate into socio-economic inclusion. The colonial label may have been removed from law books, but its consequences continued in practice.

This incomplete transition explains the fragmented classification that exists today.

d. Present Status: Fragmented Classification and Policy Gaps

Uneven Inclusion in Reservation Categories

Over time, most DNTs, NTs and SNTs were included under:

- Scheduled Castes (SC)
- Scheduled Tribes (ST)
- Other Backward Classes (OBC)

However, inclusion varies across States.

Structural Issues

- A community recognised as SC in one State may be OBC in another.
- Some groups remain unclassified altogether.
- Certification processes are often complex and inaccessible.

Importantly, there is no uniform national list of DNTs, NTs and SNTs. This absence of clarity creates administrative confusion and weakens targeted policymaking.

e. The Idate Commission: Evidence of Continued Marginalisation

The National Commission for Denotified, Nomadic and Semi-Nomadic Tribes (Idate Commission) identified around 1,200 communities across India.

Key Observations

- Hundreds remain unclassified under any reservation category.
- High levels of poverty and landlessness.
- Low literacy and educational attainment.
- Social exclusion and lack of political representation.

Recommendations

- Systematic Census enumeration.
- Improved and simplified certification mechanisms.
- Establishment of a permanent institutional framework.
- Targeted welfare schemes.

The Commission emphasised that without reliable data and clear identification, policy interventions would remain fragmented.

This challenge became evident in the implementation of welfare schemes.

f. The SEED Scheme: Governance Gaps in Practice

The Scheme for Economic Empowerment of DNTs (SEED) aimed to provide support in:

- Livelihood generation
- Education
- Housing
- Health insurance

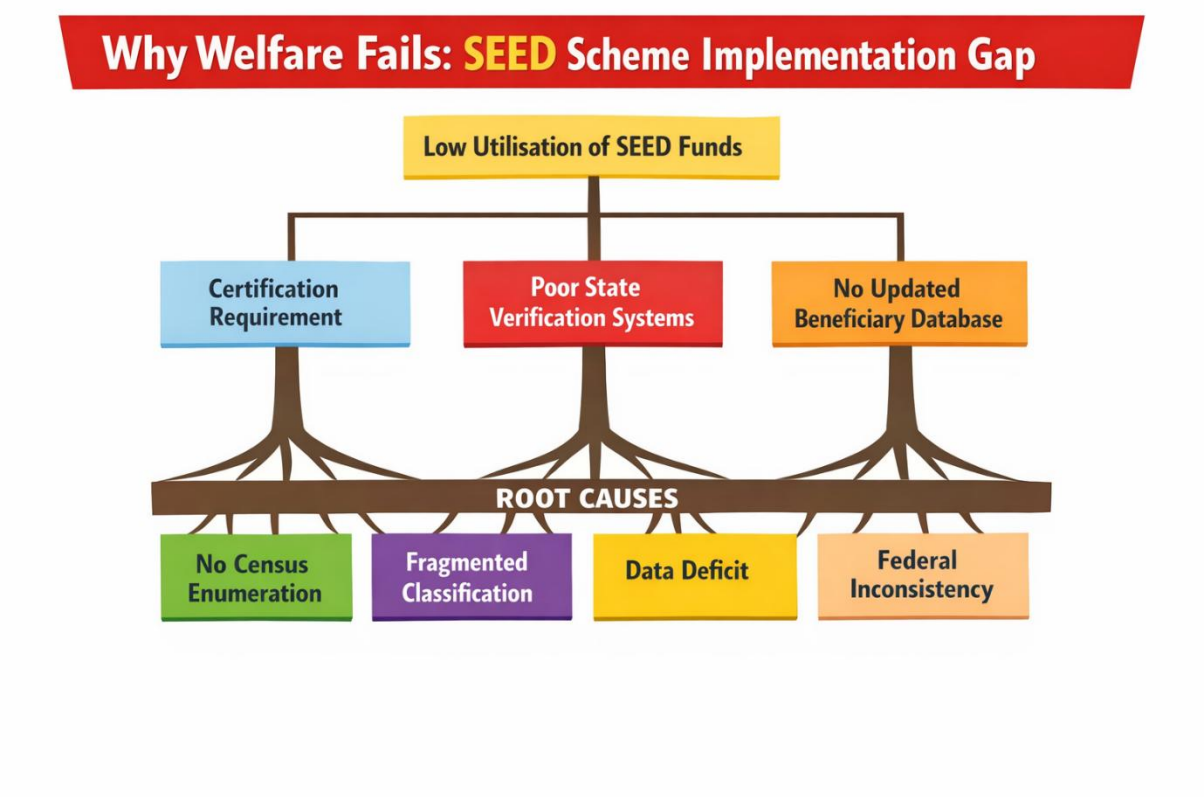
However, implementation revealed structural weaknesses.

Administrative Bottlenecks

- Requirement of specific community certification.
- Absence or poor functioning of certification systems in many States.
- Low utilisation of allocated funds.

This illustrates a recurring governance issue: policy announcements without adequate groundwork in identification and administrative capacity.

These practical difficulties strengthen the demand for separate classification.



g. Why Is Separate Classification Being Demanded?

Community leaders and activists argue that inclusion within broader categories has not adequately addressed their specific historical and social disadvantages.

Key Demands

i. Separate Census Enumeration

- Reliable population data.
- Evidence-based policymaking and budgeting.

ii. Distinct Constitutional Recognition

- Uniform recognition across States.
- Reduction of classification inconsistencies.

iii. Formal Acknowledgment of Historical Injustice

- Recognition of colonial criminalisation.
- Restorative justice and dignity.

iv. Improved Targeting of Welfare

- Clear beneficiary identification.
- Reduced exclusion errors.

Thus, the demand is not merely about reservation expansion, but about recognition, clarity and dignity.

h. Governance Issues at the Core of the Debate

The issue highlights broader governance challenges:

- **Data Deficit:** No comprehensive national database exists.
- **Policy Overlap:** Many communities already fall under SC, ST or OBC categories, creating complexity in designing a new classification.
- **Federal Variation:** State-specific lists differ, complicating uniform national recognition.
- **Certification Barriers:** Cumbersome procedures prevent access to entitlements.
- **Persistent Social Stigma:** Despite repeal of colonial laws, discrimination continues.

Therefore, the question is not only about reservation but about administrative coherence and institutional reform.

i. Constitutional and Ethical Dimensions

Constitutional Principles

- Article 14 – Equality before law.
- Articles 15 and 16 – Permissibility of affirmative action.
- Concept of substantive equality – Treating unequals differently to achieve fairness.

Ethical Considerations

- Dignity as a core democratic value.
- Restorative justice for historically criminalised communities.
- Moral responsibility of the State to correct inherited injustice.

Recognition, therefore, has both legal and ethical dimensions.

j. The Way Forward

A balanced and evidence-based approach is essential.

- **Scientific Enumeration:** Comprehensive identification during Census exercises.
- **Standardised Certification:** Uniform and simplified processes across States.
- **Strengthened Institutional Framework:** Statutory backing for a permanent commission.
- **Improved Scheme Implementation:** Better monitoring and outreach under schemes like SEED.
- **Cooperative Federalism:** Harmonisation of classification practices while respecting State diversity.

Reforms must avoid duplication of benefits while ensuring that no eligible community remains excluded.

Conclusion

The demand for separate classification of Denotified, Nomadic and Semi-Nomadic Tribes arises from a history of criminalisation, persistent stigma and continuing socio-economic vulnerability. While many communities are technically included within existing reservation categories, fragmented classification and weak data systems have limited effective welfare delivery.

The solution lies in data-driven policymaking, administrative clarity and ethical commitment to dignity. Whether through a separate Constitutional category or strengthened existing mechanisms, the ultimate goal must be substantive equality and meaningful inclusion.

In a constitutional democracy, justice is not achieved merely by repealing unjust laws. It is fulfilled when historically marginalised communities are restored to full citizenship with dignity, opportunity and recognition.

GS Paper I: Society

2. Urban Local Bodies, Municipal Finance and Market Borrowing

a. The Urban Question in India's Growth Story

Urban India occupies a central position in the country's development trajectory. More than one-third of India's population resides in cities, and this share is steadily rising. Urban areas generate nearly two-thirds of national output, functioning as hubs of industry, services, finance and innovation.

However, a structural paradox persists. While cities drive economic growth, the institutions responsible for managing them remain fiscally fragile. Urban Local Bodies (ULBs)—Municipal Corporations, Municipal Councils and Nagar Panchayats—are entrusted with essential public functions such as water supply, sanitation, solid waste management, roads, urban planning and slum improvement. Yet their financial and administrative capacities often fall short of these responsibilities.

In recent years, policy has increasingly encouraged cities to mobilise funds from financial markets through municipal bonds, public–private partnerships (PPPs) and reform-linked mechanisms like the Urban Challenge Fund. This reflects a gradual shift from grant-dependence to a blended model combining public and market-based finance.

b. Constitutional and Institutional Framework

The 74th Constitutional Amendment marked a major step toward democratic decentralisation. It inserted Part IX-A (Articles 243P to 243ZG) into the Constitution, granting municipalities constitutional recognition as institutions of self-government.

The Twelfth Schedule lists eighteen functional domains, including:

Functional Devolution

- Urban planning and regulation of land use
- Water supply and sanitation
- Public health and fire services
- Slum improvement and urban poverty alleviation

Fiscal Provisions

- Article 243X empowers State Legislatures to authorise municipalities to levy taxes.
- Article 243Y mandates State Finance Commissions (SFCs) to recommend revenue sharing between States and ULBs.

However, crucial fiscal powers remain with the States. Municipal financial autonomy depends largely on State-level decisions regarding taxation and devolution. Thus, while constitutional recognition is assured, fiscal empowerment remains uneven.

This structural limitation directly influences the revenue profile of Urban Local Bodies.

c. Sources of Revenue for Urban Local Bodies

i. Own-Source Revenue

These are revenues directly collected by municipalities.

Major Components

- Property tax
- User charges — water supply, waste management
- Advertisement tax and licence fees
- Local service fees and levies

In theory, these are stable and autonomous sources. In practice, they are significantly underutilised.

ii. Assigned Revenue

States may assign a share of certain taxes to municipalities based on SFC recommendations. However, delays in constitution of SFCs and partial implementation of recommendations reduce predictability.

iii. Grants

Urban Local Bodies receive financial support through:

Central Grants

- Finance Commission grants
- Scheme-based transfers — AMRUT, Swachh Bharat Mission–Urban, Smart Cities Mission, PMAY-Urban

State Grants

- Untied transfers
- Project-specific allocations

iv. Borrowings

- Loans from financial institutions
- Municipal bonds
- Public–Private Partnerships

Borrowing remains a relatively small component but is increasingly promoted.

d. Why Are Urban Local Bodies Financially Weak?

i. Low Property Tax Collection

Property tax forms the backbone of municipal finance globally. In India, however, collections remain low due to:

- Outdated assessment systems
- Political reluctance to revise rates
- Weak enforcement mechanisms
- Poor digitisation and mapping

The result is a fragile and unreliable revenue base.

ii. Inadequate Devolution by States

- Delays in constituting State Finance Commissions
- Partial or non-implementation of recommendations
- Excessive reliance on tied grants

This weakens fiscal federalism and reduces planning autonomy at the local level.

iii. Weak Administrative Capacity

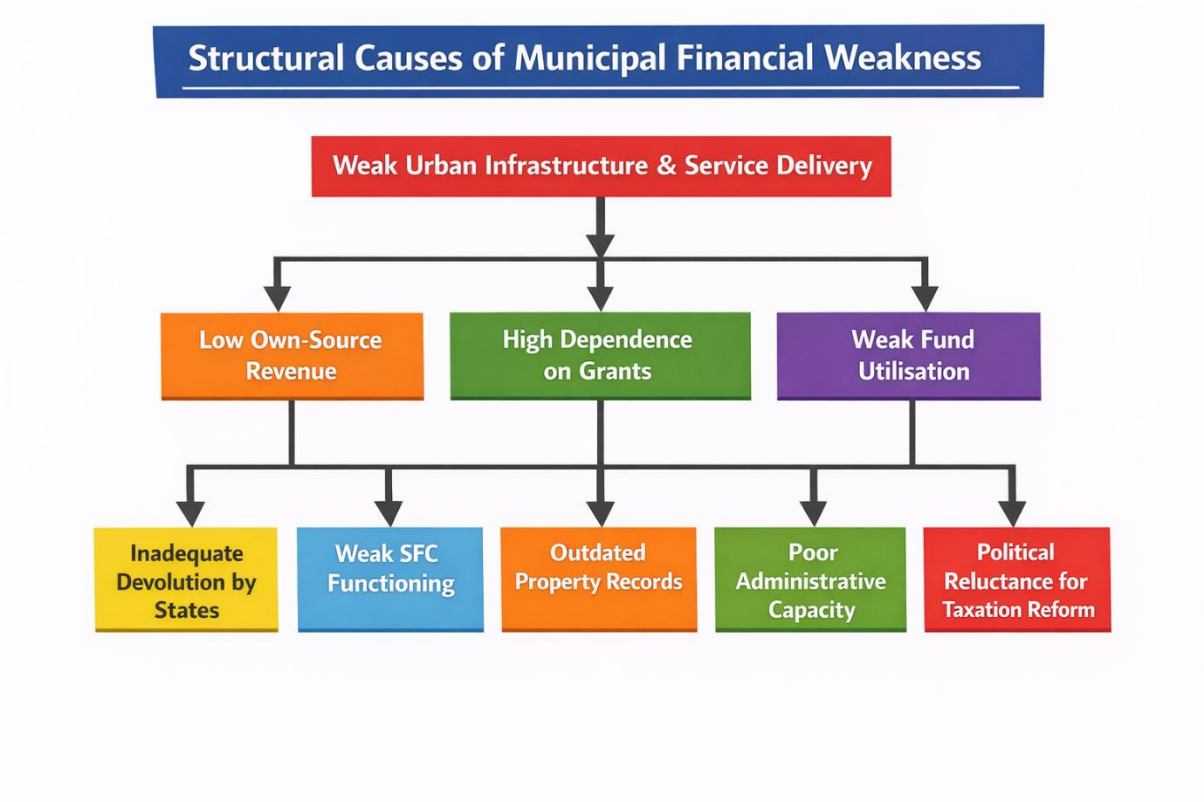
- Shortage of trained urban planners and financial managers
- Limited adoption of double-entry accounting
- Absence of GIS-based property records

Financial weakness and institutional weakness reinforce each other.

iv. Underutilisation of Funds

Even where funds are available, delays in project execution and weak project design hinder effective utilisation. Thus, the crisis reflects governance quality as much as resource scarcity.

These structural constraints have encouraged policymakers to explore market-oriented financing models.



e. The Shift Toward Market-Based Urban Finance

Recent reforms promote:

- Municipal bonds
- Infrastructure loans
- Public–Private Partnerships
- Reform-linked funds e.g., Urban Challenge Fund

The underlying philosophy is that market participation promotes transparency, accountability and efficiency. However, this transition introduces both opportunities and risks.

f. Municipal Bonds: Concept and Functioning

A municipal bond is a debt instrument issued by a city to raise funds from investors, with a commitment to repay the principal along with interest over a specified period.

For example, a city requiring funds for a water supply project may issue bonds. Investors provide upfront capital, and repayment occurs through revenue streams such as property tax or user charges.

Essential Requirements

- Stable revenue base
- Transparent accounting systems
- Creditworthiness and fiscal discipline
- Financially viable projects

Only a limited number of Indian cities—such as Pune, Ahmedabad and Indore—have successfully accessed bond markets.

While promising, such borrowing must be evaluated carefully.

g. Advantages of Market Borrowing

i. Governance Improvements

- Transparent accounting practices
- Improved fiscal reporting
- Digitisation reforms

ii. Efficiency Gains

- Better project appraisal
- Improved execution discipline

iii. Fiscal Relief

- Mobilisation of private capital
- Reduced pressure on public budgets

However, these benefits must be weighed against potential risks.

h. Major Concerns and Risks

i. Growing Inequality Among Cities

Financially stronger cities can access markets more easily, potentially widening regional disparities and creating a two-tier urban system.

ii. Preference for Bankable Projects

Markets prioritise revenue-generating infrastructure.

At-Risk Social Sectors

- Slum rehabilitation
- Affordable housing
- Basic sanitation

This may weaken the equity dimension of urban development.

iii. Risk of Debt Stress

- Revenue shortfalls
- Increased user charges
- Accumulation of unsustainable debt

iv. Weak Regulatory Foundations

- Unclear land titles
- Weak audit mechanisms
- Planning violations

Institutional strengthening is therefore a prerequisite for safe market participation.

i. The Way Forward

i. Institutional Reforms

- Professional municipal cadre
- Adoption of double-entry accounting
- GIS-based property mapping
- Digitisation of land records

ii. Ensuring Genuine Fiscal Devolution

- Regular functioning of State Finance Commissions
- Implementation of recommendations
- Greater untied grants

iii. Protecting Social Priorities

- Safeguard funding for slum upgrading
- Support affordable housing
- Maintain universal access to basic services

iv. Balanced Financing Model

Market borrowing should supplement—not replace—public funding. A calibrated and sequenced approach is necessary.

Conclusion

Urban transformation depends on financially empowered and institutionally capable cities. Municipal bonds and market-based instruments can contribute meaningfully, but they cannot substitute foundational reform.

The correct sequence of reform is crucial: genuine devolution must precede capacity building; capacity building must enable financial strengthening; only then should market borrowing expand responsibly.

If sequenced properly, cities can become engines of inclusive and sustainable growth. If not, they risk becoming centres of fiscal stress. True urban reform lies not merely in raising funds, but in building institutions capable of managing them wisely and equitably.

GS Paper III: Economics

3. Fertiliser Price Controls, Subsidy Structure and Regulatory Challenges in India

a. Fertilisers in India's Agricultural Model

India's post–Green Revolution agricultural growth rested on three pillars—high-yielding seeds, expanded irrigation, and chemical fertilisers. Fertilisers helped raise crop productivity, supported food grain self-sufficiency, and stabilised farm incomes by making yield gains more predictable.

India is now among the world's largest fertiliser consumers, using roughly 60–70 million tonnes annually. This scale of usage has grown under a system where the State plays a dominant role: prices are controlled or influenced, subsidies are extensive, and supply chains are closely managed. As a result, fertilisers sit at the intersection of four competing objectives—food security, farmer welfare, fiscal prudence, and environmental sustainability.

b. Structure of Fertiliser Pricing in India

India broadly operates a dual structure—most fertilisers are in the subsidised basket, while a smaller set of speciality products is market-priced.

i. Subsidised Fertilisers

- Urea — most tightly controlled
- Phosphatic and Potassic (P&K) fertilisers under Nutrient-Based Subsidy (NBS)

ii. Non-Subsidised Speciality Fertilisers

- Micronutrients and water-soluble mixtures
- Bio-stimulants and precision products used more in high-value crops

This classification matters because the degree of price control differs sharply across categories, shaping farmer choices and nutrient balance.

c. Subsidised Fertilisers: How Pricing and Subsidy Work

i. Urea: The Most Controlled Input

What is controlled?

- The maximum retail price (MRP) of urea is fixed by the government and has remained largely unchanged for long periods.
- The actual cost (production/import + distribution) is higher than the farmer-paid price.

How subsidy is paid

- The government pays the difference between cost and MRP to fertiliser companies as subsidy.
- This keeps urea artificially cheap, especially compared to other nutrients.

Why urea dominates nutrient use

- When one nutrient is much cheaper, farmers rationally use more of it.
- This makes nitrogen disproportionately attractive compared to phosphorus and potassium.

Urea's price control sets the stage for a wider nutrient imbalance, which becomes clearer when we look at P&K fertilisers.

ii. Phosphatic and Potassic Fertilisers: NBS and Partial Market Linkage

The Nutrient-Based Subsidy (NBS) system

- Government provides a fixed subsidy per kg of nutrient — N, P, K, S.
- Companies set prices, but subsidy levels and global prices strongly influence retail prices.

Why "decontrolled" does not mean fully market-priced

- When global input prices rise, retail prices tend to rise unless subsidy is increased.
- Since subsidy decisions are policy-driven, pricing remains partly administered.

So, while urea is directly price-controlled, P&K fertilisers are indirectly controlled through subsidy design and market conditions.

d. Non-Subsidised Speciality Fertilisers: Role and Limitations

i. What they include and why they matter

Examples

- Zinc sulphate, calcium nitrate, bentonite sulphur
- Water-soluble nutrient mixtures, micronutrients, bio-stimulants

Typical usage pattern

- Used in smaller quantities and often in high-value crops — fruits, vegetables, sugarcane.
- Aim to improve precision and efficiency of nutrient delivery.

ii. Why the segment remains small

- Higher market prices reduce adoption in staple crops.
- Awareness, quality concerns, and inconsistent availability also limit growth.

This brings us to the deeper governance reality: fertiliser policy is not only about prices—it is also about control over supply and movement.

e. Extent of Government Control Beyond Prices

i. Key control points

- MRP fixation/influence — especially urea
- Central determination of subsidy amounts
- Planned allocation across States
- Monthly supply targets and monitoring
- Coordination of movement through railways
- District-level distribution oversight

ii. Why such control exists

- Prevent shortages and panic buying
- Avoid price spikes during sowing seasons
- Maintain political and food security stability

However, heavy control also creates structural distortions. Understanding those distortions is essential to evaluating reform options.

f. Core Structural Problems in the Fertiliser Sector

i. Distorted Price Signals and Nutrient Imbalance

What "balanced fertilisation" means

- Applying nutrients in proportions that match crop and soil needs.

What happens in India

- Cheap urea leads to excessive nitrogen use.
- The N:P:K usage ratio often becomes skewed toward nitrogen.

Why it is harmful over time

- Soil quality and structure deteriorate
- Crop response efficiency falls — more fertiliser gives less additional yield
- Long-run productivity weakens despite short-run gains

ii. Rising Consumption and Import Dependence

Demand-side push

- Low administered prices encourage higher consumption.

Supply-side constraint

- Domestic production often falls short, raising imports.

Global price risk

- When global fertiliser prices rise, import bills spike.
- This directly inflates subsidy requirements.

iii. Fiscal Stress and Budget Volatility

Why subsidy becomes a macro issue

- Fertiliser subsidy forms a major part of agricultural expenditure.
- Global price volatility makes subsidy outlays unpredictable.

What this does to public finance

- Adds pressure on the fiscal deficit
- Complicates budget planning and prioritisation

iv. Regulatory Overreach and Investment Uncertainty

Effects on firms

- Reduced operational autonomy
- Uncertainty from sudden policy changes, price freezes, or restrictions

Long-term costs

- Lower investment in modern plants and efficiency upgrades
- Weak R&D and slower innovation in speciality products

These governance challenges become sharper when restrictions extend even to the non-subsidised segment.

g. Restrictions on Non-Subsidised Fertilisers: The Regulatory Challenge

i. Why some States restrict speciality fertiliser sales

Stated objective

- Prevent unfair trade practices e.g., “bundling” speciality products with subsidised fertilisers.

ii. Unintended consequences

For farmers and markets

- Reduced access to advanced nutrients and precision options
- Organised firms may scale down operations

- Unregulated/low-quality substitutes may fill the gap

For the investment climate

- Abrupt or inconsistent decisions weaken investor confidence
- Regulatory uncertainty increases risk premiums and discourages innovation

This illustrates the policy tightrope: protecting farmers without destabilising technology access and market credibility.

h. The Broader Policy Dilemma: Three Key Tensions

i. Welfare vs Market Efficiency

- Subsidies support small farmers and stabilise production
- But deep subsidies distort choices and resource allocation

ii. Food Security vs Fiscal Sustainability

- Subsidies help ensure stable output and affordable inputs
- But rising costs strain budgets, especially in global price spikes

iii. Regulation vs Innovation

- Oversight can prevent exploitation and shortages
- But excessive control discourages diversification and greener technologies

Because these tensions are structural, reform must be gradual and calibrated, not abrupt.

i. Environmental Implications of Current Fertiliser Use

Key impacts of excessive nitrogen use

Climate and air

- Higher nitrous oxide emissions — a potent greenhouse gas

Water bodies

- Runoff increases nutrient pollution
- Eutrophication: algal blooms → oxygen depletion

Soil health

- Soil structure deteriorates
- Organic content declines
- Long-term fertility weakens

Thus, fertiliser reform is not only an economic or fiscal issue—it is also linked to sustainable agriculture and climate commitments.

j. Reform Pathways

i. Rationalising Urea Pricing

What to do

- Gradual, calibrated increase in urea prices to reduce distortion.

How to protect farmers

- Phasing and safeguards for small/marginal farmers
- Complementary extension support — soil testing, advisory

ii. Strengthening Direct Benefit Transfer

Present reality

- Subsidy is largely product-based i.e., linked to sales.

Reform direction

- Move toward farmer-based support where feasible.
- Separate income support from input price distortion.

iii. Promoting Balanced Fertilisation

- Expand soil testing and strengthen Soil Health Card usage
- Encourage micronutrients and correct local deficiencies
- Support efficient technologies including nano-fertilisers where appropriate

iv. Ensuring Regulatory Stability

Governance principle

- Avoid abrupt bans/restrictions; use predictable rules and transparent enforcement.

Why it matters

- Stable policy encourages investment, quality control, and innovation.

v. Encouraging Sustainable Practices

- Precision agriculture and fertigation — nutrient application through drip irrigation
- Promote bio-fertilisers and organic inputs to reduce chemical dependence
- Focus on long-term soil health as a productivity strategy

Together, these reforms point toward a system that protects farmers while correcting distortion and improving sustainability.

Conclusion

India's fertiliser policy has played a decisive role in food security and agricultural expansion by ensuring affordability and availability. Yet the same system has also generated nutrient imbalance, rising import dependence, fiscal volatility, and regulatory rigidities that discourage innovation.

A sustainable path forward requires harmonising four objectives:

- More balanced nutrient pricing especially correcting urea distortion
- Targeted and transparent subsidy delivery
- Stable, predictable regulation that supports quality and innovation
- Soil and environmental sustainability as a long-run productivity foundation

The goal is not to abandon welfare support, but to redesign it so that India moves from a pure price-control model toward a smart, sustainable, and institutionally robust fertiliser framework.

GS Paper III: Science and Technology

4. Artificial Intelligence in School Education: Bharat EduAI Stack and Bodhan AI

a. The Rationale for Artificial Intelligence in Education

India has more than 25 crore school students, spread across diverse regions, languages and socio-economic backgrounds. Ensuring quality education at such scale is a structural challenge. Learning gaps—especially in foundational literacy and numeracy—remain persistent despite policy efforts.

Artificial Intelligence (AI) refers to computer systems that can perform tasks requiring human-like intelligence, such as learning from data, recognising patterns and making recommendations. In education, AI can help personalise learning, support teachers and improve governance through data-driven decision-making.

In this context, the proposed Bharat EduAI Stack, developed through a not-for-profit entity called Bodhan AI anchored at IIT Madras, aims to build a foundational AI-driven digital infrastructure for school education. The vision is to create a form of Digital Public Infrastructure (DPI) for education—similar in ambition to earlier digital transformations in identity and payments.

b. Digital Public Infrastructure: The Conceptual Foundation

Digital Public Infrastructure refers to core digital systems that enable large-scale delivery of public services. It is not a single app, but a shared technological backbone upon which multiple applications can operate.

Examples from India

- Aadhaar – identity infrastructure
- Unified Payments Interface (UPI) – digital payments backbone
- CoWIN – vaccination management platform

These systems provide foundational layers that private and public actors can build upon.

The Bharat EduAI Stack aims to play a similar foundational role in education—enabling innovation while maintaining standardisation and interoperability.

c. What is the Bharat EduAI Stack?

i. Core Vision

The Bharat EduAI Stack is envisioned as an AI-powered digital infrastructure tailored to India's educational needs.

Key Features

- Alignment with NCERT and State curricula
- Multilingual capability, including Indian languages
- Interoperable architecture for States and EdTech developers
- Indigenous data models to ensure contextual relevance

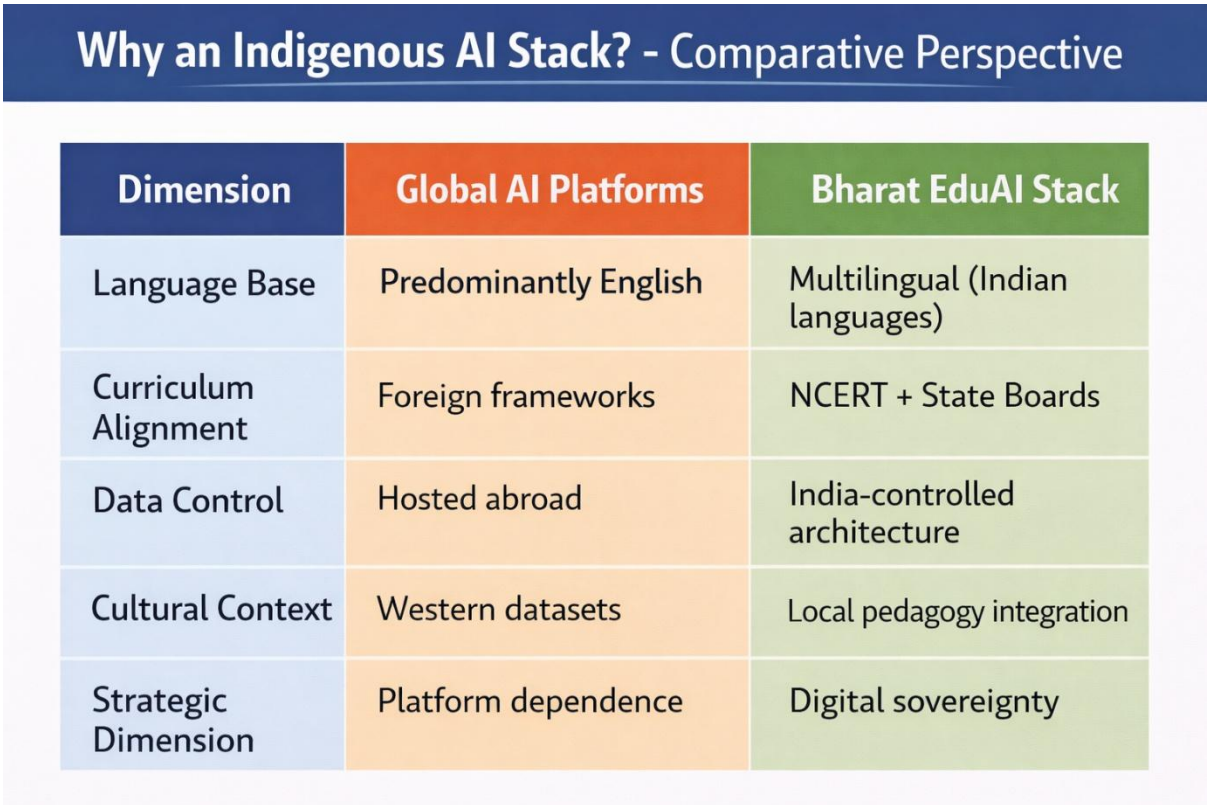
ii. Why an Indigenous AI Stack Matters

Many global AI tools are trained on English-language datasets and foreign curricular frameworks. An indigenous stack aims to:

- Reflect India's linguistic diversity
- Incorporate local cultural and pedagogical contexts
- Enhance digital sovereignty and reduce dependence on foreign platforms

Thus, the initiative combines educational reform with strategic technological autonomy.

This foundation opens the door to multiple practical applications in school education.



d. Applications of Artificial Intelligence in Schools

i. Personalised Learning for Students

Traditional classrooms move at a uniform pace, but students learn differently.

How AI Enables Adaptation

- Identifies individual strengths and weaknesses
- Recommends targeted practice modules
- Provides voice-based and multilingual feedback

For example, a child struggling with fractions can receive customised exercises, while another facing reading comprehension challenges in the mother tongue can get adaptive language support.

The goal is to close learning gaps early, particularly at foundational stages.

ii. Support for Teachers

AI is designed to assist—not replace—teachers.

Administrative Assistance

- Automated grading
- Worksheet generation
- Progress report compilation

Learning Analytics

- Identifies at-risk students
- Highlights conceptual misunderstandings

- Enables focused classroom intervention

By reducing routine workload, AI allows teachers to devote more time to mentoring and creative engagement.

iii. Governance and Policy-Level Insights

At a macro level, AI-generated aggregated data can:

- Identify regional disparities in learning outcomes
- Monitor effectiveness of schemes
- Support evidence-based policymaking

Thus, AI strengthens not only classroom teaching but also systemic governance.

These applications closely align with the goals of the National Education Policy (NEP) 2020.

e. Alignment with National Education Policy 2020

The NEP 2020 emphasises:

- Foundational literacy and numeracy
- Mother-tongue instruction in early grades
- Meaningful integration of technology

AI-based diagnostic tools can identify deficiencies in reading and numeracy early. Adaptive learning systems reinforce foundational skills. Multilingual AI models support mother-tongue education.

Thus, the Bharat EduAI Stack operationalises NEP's technology vision.

f. Broader Significance

i. Personalisation at Scale

India's large student population makes individualised attention difficult through traditional methods alone. AI enables scalable, data-driven customisation.

ii. Strengthening the Indian Language Ecosystem

Training AI in multiple Indian languages enhances inclusion, particularly in rural and semi-urban regions.

iii. Digital Sovereignty

Developing indigenous AI systems reduces reliance on foreign platforms and mitigates data security risks.

iv. Innovation Ecosystem

A shared infrastructure encourages startups and developers to build applications within a regulated framework.

g. Key Concerns and Risks

i. Data Privacy and Child Protection

Educational AI systems may collect sensitive data such as:

- Academic records
- Voice samples

- Behavioural patterns

Misuse could lead to profiling or commercial exploitation. Strong safeguards—minimal data collection, encryption and strict access control—are essential.

ii. Digital Divide

- Unequal access to devices and connectivity
- Infrastructural gaps in rural areas

If AI tools are introduced without parallel infrastructure expansion, inequalities may deepen rather than reduce.

iii. Cognitive and Health Concerns

Excessive screen time may affect attention span and physical well-being. Blended learning models and voice-based tools can reduce screen dependency.

iv. Algorithmic Bias

AI systems may reflect biases embedded in training data.

Risks

- Linguistic inaccuracies
- Cultural misrepresentation
- Disadvantage to marginalised groups

Continuous auditing and transparent design are necessary to mitigate bias.

These risks highlight the importance of ethical governance.

h. Ethical and Governance Dimensions

Artificial Intelligence in education must rest on four core principles:

- **Equity:** Technology must benefit all students, not only those with better digital access.
- **Transparency:** Clear communication about how algorithms function and how decisions are made.
- **Accountability:** Human authorities—teachers, administrators, policymakers—must remain responsible for outcomes.
- **Privacy:** Protection of children's data as a matter of dignity and rights.

Human oversight must remain central. AI should enhance pedagogical judgement, not replace it.

i. Implementation Challenges

Successful implementation depends on:

i. Teacher Capacity Building

- Training in AI literacy
- Integration into pedagogy

ii. Federal Coordination

- Standardisation with flexibility
- Interoperability across States

iii. Cybersecurity

- Protection from hacking and data breaches

- Robust encryption protocols

iv. Sustainable Funding

- Long-term maintenance
- Continuous system upgrades

Ambition alone will not determine success—execution quality will.

j. Way Forward

i. Strong Data Governance

- Minimal data collection
- Encryption and anonymisation
- Independent audits

ii. Infrastructure Expansion

Digital connectivity and device access must precede or accompany AI rollout.

iii. Pilot-Based Implementation

Small-scale pilots followed by evaluation and refinement.

iv. Human-Centric Design

AI must support creativity, critical thinking and teacher autonomy.

A balanced, phased approach ensures that innovation strengthens rather than destabilises the system.

Conclusion

The Bharat EduAI Stack represents an ambitious step toward integrating Artificial Intelligence into India's school education system. If implemented thoughtfully, it can personalise learning, strengthen foundational skills, promote linguistic inclusion and enhance digital sovereignty.

Yet, technology must remain guided by ethical safeguards, equitable access and strong human oversight. The success of AI in education will not be measured by technological sophistication alone, but by whether it improves learning outcomes for every child while protecting dignity, privacy and fairness.

The future of AI in Indian education therefore depends on balancing innovation with responsibility—ensuring that digital transformation remains inclusive, accountable and human-centric.

Reader's Note — About This Current Affairs Compilation

Dear Aspirant,

This document is part of the PrepAlpine Current Affairs Series — designed to bring clarity, structure, and precision to your daily UPSC learning.

While every effort has been made to balance depth with brevity, please keep the following in mind:

1. Orientation & Purpose

This compilation is curated primarily from the UPSC Mains perspective — with emphasis on conceptual clarity, analytical depth, and interlinkages across GS papers.

However, the PrepAlpine team is simultaneously developing a dedicated Prelims-focused Current Affairs Series, designed for:

- factual coverage
- data recall
- Prelims-style MCQs
- objective pattern analysis

This Prelims Edition will be released separately as a standalone publication.

2. Content Length

Some sections may feel shorter or longer depending on topic relevance and news density.
To fit your personal preference, you may freely resize or summarize sections using any LLM tool (ChatGPT, Gemini, Claude, etc.) at your convenience.

3. Format Flexibility

The formatting combines:

- paragraphs
- lists
- tables
- visual cues

—all optimised for retention.

If you prefer a specific style (lists → paras, paras → tables, etc.), feel free to convert using any free LLM.

4. Monthly Current Affairs Release

The complete Monthly Current Affairs Module will be released soon, optimized to a compact 100–150 pages — comprehensive yet concise, exam-ready, and revision-efficient.