



7 PM COMPILATION

March, 2025

Features of 7 PM compilation

- ❖ Comprehensive coverage of a given current topic
- ❖ Provide you all the information you need to frame a good answer
- ❖ Critical analysis, comparative analysis, legal/constitutional provisions, current issues and challenges and best practices around the world
- ❖ Written in lucid language and point format
- ❖ Wide use of charts, diagrams and info graphics
- ❖ Best-in class coverage, critically acclaimed by aspirants
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- ❖ Best cost-benefit ratio according to successful aspirants

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India's Informal Sector- Explained Pointwise

India's informal sector is the backbone of its economy, **employing over 90% of the total workforce** and **contributing nearly 50% of GDP**, as per the **Economic Survey 2022-23**. Despite its critical role, this sector remains largely invisible in policy discussions and economic planning.



According to the International Labour Organization (ILO), India has one of the world's largest informal economies, with over 400 million workers engaged in low-paying, precarious jobs without social security or legal protections. The NITI Aayog highlights that the informal sector is a significant driver of employment, particularly in rural areas, where 80% of informal workers are concentrated.

What is the present status of Informal sector in India?

- 1. Employment Distribution:** The **agriculture and allied sectors employ ~50% of the informal workforce (PLFS, 2022)**. Construction and manufacturing account for 15-20%, with most workers being "contractual" and "migrant." Domestic and gig work are rapidly growing but remain unregulated and precarious.
- 2. Income & Wages:** **Only 10% of informal workers earn above ₹10,000 per month (E-Shram, 2023)**. Wage disparities exist based on gender, caste, and geography. Women in informal work earn 35% less than men (ILO, 2022).
- 3. Social Security Coverage:** Less than 20% of informal workers have access to pensions, health insurance, maternity benefits, or legal protections (NSSO, 2021). Schemes like **PM-SYM (Pension Scheme for Unorganized Workers)** and the **E-Shram Portal** exist but suffer from low enrollment and implementation gaps.
- 4. Migrant Workers & Labour Mobility:** India has over **100 million migrant workers** (Economic Survey, 2020-21). Lack of housing, portability of benefits, and job security exacerbates their vulnerabilities. Interstate

disparities persist, with migrants from Bihar, Uttar Pradesh, Odisha, and Jharkhand dominating low-wage informal sectors.

5. Gig & Platform Economy: The gig economy is expanding rapidly in e-commerce, delivery, and ride-hailing services. However, platform workers lack social security, face algorithmic exploitation, and have no bargaining power (NITI Aayog, 2022).

What is the significance of the Informal Sector in India?

1. Economic Growth: Strengthening the informal workforce is **critical for India's \$5 trillion economy goal**. The informal sector ensures low-cost production, affordable services, and a flexible labour supply for industries.

2. Employment Generation: The informal sector **absorbs rural surplus labour, preventing mass unemployment**. For example, the construction sector, predominantly informal, employs over 50 million workers. During economic downturns, informal jobs often serve as a buffer, as seen during **COVID-19**.

3. Urban Growth & Migration: Informal workers—construction labourers, street vendors, and transport workers—support urban economies. Migrants bridge labour shortages in industrial states like Maharashtra, Gujarat, Tamil Nadu, and Karnataka.

4. Social Safety Net: In the absence of formal employment opportunities, the informal sector acts as a safety net for millions. Street vendors and domestic workers, though poorly paid, provide essential services to urban economies.

5. Cultural & Regional Diversity: The informal sector preserves India's cultural heritage through traditional crafts, handlooms, and small-scale industries. The handloom sector alone employs over **4.3 million workers**, mostly women.

6. Women's Employment & Livelihoods: Women dominate informal sectors such as domestic work, home-based enterprises, and self-employment. Organizations like the **Self-Employed Women's Association (SEWA)** have mobilized millions into cooperative structures.

What are the government Initiatives for the Informal & Unorganised Sector?

MGNREGA	Provides guaranteed wage employment to rural workers.
Pradhan Mantri Rojgar Protsahan Yojana (PMRPY)	Encourages employers to create new jobs and bring informal workers into the formal sector.
Aatmanirbhar Bharat Rozgar Yojana (ABRY)	Supports job creation and social security benefits, especially to recover employment lost during COVID-19.
e-Shram Portal	<p>Launched in 2021 to create a national database of unorganised workers.</p> <p>a. Provides an e-Shram Card with a unique 12-digit number.</p> <p>b. Helps the government track and support informal workers.</p>

Insurance & Pension Schemes	1. PM Jeevan Jyoti Yojana (PMJJBY) – Life insurance for workers. 2. PM Suraksha Bima Yojana (PMSBY) – Accidental insurance cover. 3. PM Shram Yogi Maan-Dhan (PM-SYM) & NPS-Traders – Pension for small traders and self-employed individuals.
Pradhan Mantri Garib Kalyan Yojana (PM-GKAY)	Free food grains for National Food Security Act (NFSA) beneficiaries, especially during crises like COVID-19.

What are the challenges faced by the Informal Sector?

- 1. Lack of Social Security:** Over **76% of informal workers** lack EPF, ESI, pension schemes, or paid leave (ILO's World Social Protection Report 2020-22). Most do not receive minimum wage protections, leading to income instability.
- 2. Exploitation & Low Wages:** Informal workers often endure poor working conditions, with wages below the legal minimum. **For example**, urban construction workers often work 12-14 hours a day for meagre pay.
- 3. Precarious Working Conditions:** Workplace safety is a major issue, with a high risk of accidents in construction, mining, and factories. The **ILO (2021) estimates 48,000 annual workplace deaths in India**—the highest globally.
- 4. Legal & Institutional Barriers:** While the Labour Codes (2020) aim for “universal coverage,” implementation remains weak. Informal workers struggle to unionize, limiting their bargaining power.
- 5. Vulnerability to Shocks:** The informal sector is highly susceptible to economic and environmental disruptions. During the COVID-19 pandemic, millions lost their livelihoods overnight with no safety net.
- 6. Lack of Legal Protection:** Many informal workers are not covered under labour laws. **For instance**, domestic workers are excluded from the **Minimum Wages Act**, leaving them vulnerable to exploitation.
- 7. Health & Safety Risks:** Workers in hazardous sectors like construction, mining, and brick kilns face severe health risks without protective gear or healthcare access.

What is the way Forward?

- 1. Strengthening Social Security:** Implement the **Code on Social Security, 2020**, to extend coverage to informal workers. Expand schemes like **Pradhan Mantri Shram Yogi Maandhan (PMSYM)** and **Ayushman Bharat** to ensure broader inclusion.
- 2. Skill Development & Formalization:** Invest in skill development to transition workers from low-productivity informal jobs to the formal sector. Promote micro-entrepreneurship through schemes like **MUDRA Yojana**.
- 3. Legal Reforms:** Amend labour laws to include informal workers, ensuring minimum wages, workplace safety, and grievance redressal mechanisms. Ratify the **ILO's Domestic Workers Convention (C189)** for domestic worker protections.
- 4. Technology & Data-Driven Solutions:** Leverage the E-Shram Portal to create a comprehensive informal worker database. Use **Geographic Information Systems (GIS)** to **map informal worker** needs for targeted welfare schemes.

5. International Best Practices: Learn from **Brazil's Bolsa Família program**, which provides conditional cash transfers, and **South Africa's Extended Public Works Programme (EPWP)**, which offers temporary employment in public projects.

6. UN & ILO Recommendations: **Implement ILO's Recommendation 204** for transitioning from informal to formal employment. Align with UN Sustainable Development Goals (SDG 8: Decent Work and Economic Growth) for inclusive progress.

Conclusion

India's informal sector workers are the **unsung heroes of its economy**, yet they remain marginalized and vulnerable. As the **ILO** states, "**Decent work is not just a goal; it is a driver of sustainable development.**" The NITI Aayog emphasizes that "the informal sector is not a problem to be solved but a reality to be managed." A multi-pronged approach—legal reforms, social security expansion, skill development, and adoption of global best practices—can transform India's informal sector into a pillar of strength.

As **Mahatma Gandhi** said, "The true measure of any society can be found in how it treats its most vulnerable members."

Read more– [The Indian Express](#)

UPSC Syllabus- GS 3- Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment

Urbanization in India- Significance & Challenges Explained Pointwise

Urbanization in India is at a turning point, with over **35% of the population residing in cities, according to Census 2011**. By 2050, this figure is expected to rise to 50% (UN Habitat). The NITI Aayog's Urban Planning Reform Report (2021) highlights that urban areas contribute nearly 63% to the GDP, a figure projected to reach 75% by 2030.



However, despite rapid urbanization, Indian cities rank low on global urban indices such as the Mercer Quality of Living Index and the Global Livability Index by the Economist Intelligence Unit (EIU). The **Economic Survey 2023-24** underscores urban transformation as essential to achieving the vision of a Viksit Bharat.

What is the present status of urbanization in India?

Infrastructure and Smart Cities	<ol style="list-style-type: none"> 1. Poor road infrastructure and inadequate public transport remain key issues in metropolitan areas (NITI Aayog's Mobility Report 2022). 2. Traffic congestion costs India nearly \$22 billion annually (Ministry of Road Transport and Highways). 3. The Smart Cities Mission (2015) aims to develop 100 smart cities, but only 50% of projects have been completed (NIUA).
Housing and Livability	<ol style="list-style-type: none"> 1. India faces a shortage of 18.78 million housing units, mostly affecting low-income groups (MoHUA). 2. Slums constitute 17% of urban households (Census 2011), leading to poor sanitation and hygiene. 3. Indian cities rank low on Mercer's Quality of Living Index due to inadequate livability conditions.

Urban Governance	<ol style="list-style-type: none"> 1. The number of census towns increased from 1,362 in 2001 to 3,894 in 2011, contributing to urban growth but lacking proper infrastructure. 2. Delayed recognition of urban areas results in haphazard development and regional disparities.
Environmental Sustainability	<ol style="list-style-type: none"> 1. Air pollution levels in Delhi, Mumbai, and Kolkata exceed WHO safety standards (State of Global Air Report 2023), costing India nearly \$95 billion annually (Clean Air Fund). 2. 50% of India's 603 rivers are polluted, with critical contamination in the Yamuna and Ganga (CPCB 2022). 3. Only 30% of wastewater is treated before disposal. 4. Cities face extreme weather events such as flooding in Mumbai and Bengaluru and heatwaves in Delhi (temperatures nearing 50°C). 5. Poor drainage systems and lack of green infrastructure worsen these challenges.
Economic and Employment Hubs	<ol style="list-style-type: none"> 1. Indian cities contribute over 60% of GDP but face high unemployment rates, particularly in the informal sector (PLFS 2022). 2. Delhi, Mumbai, and Bengaluru alone contribute over 30% to national GDP.
Social Inclusion and Safety	<ol style="list-style-type: none"> 1. Women's safety remains a major concern; NCRB data (2022) reports high crime rates in cities. 2. Urban poverty and marginalization hinder equitable development.
Public Services and Livability	<ol style="list-style-type: none"> 1. Only 62% of urban households have piped water supply (Jal Jeevan Mission Report 2023). 2. Sanitation has improved under SBM 2.0, but sewage treatment remains inadequate, affecting water quality.

What is the significance of Urban Transformation in India?

1. Economic Growth and Global Competitiveness

- Well-planned cities attract investment; **examples include Singapore, Dubai, and Shanghai.**
- Smart urbanization can support India's goal of becoming a **\$10 trillion economy by 2035** (NITI Aayog).

2. Benchmarking Global Cities

- **Bangkok:** Efficient metro and tourist-friendly policies.
- **London:** Seamless public transport, green spaces, and cultural hubs.
- **Dubai:** Business-friendly urban planning and investment incentives.
- **Singapore:** Clean governance, smart city initiatives, and sustainability.

3. Improved Livability

- Better urban planning enhances healthcare, education, and public services.
- Sustainable housing and clean environments can improve India's **HDI ranking**.

4. Climate Resilience and Sustainability

- Green infrastructure mitigates urban heat islands and pollution.
- Aligning with **SDG-11**: Sustainable Cities and Communities is essential.

5. Social Equity and Quality of Life

- Better transport, housing, and services can reduce inequality.
- Gender-sensitive planning is crucial, as **95% of women feel unsafe in Delhi** (UN Women 2023).

What are the challenges of urbanization in India?

1. Infrastructure Deficiencies: Unplanned urban sprawl leads to inefficiency. India **needs to invest \$840 billion in urban infrastructure by 2036** (World Bank).

2. Environmental Constraints: Indian cities **generate 62 million tonnes of solid waste** annually, with **only 25% scientifically processed** (Swachh Bharat Mission 2023).

3. Governance Issues: 60% of India's urban areas lack structured development plans (MoHUA 2023).

4. Social and Economic Challenges: **25% of urban dwellers live below the poverty line** (NSSO 2020).

5. Persistent Problems: Pollution, congestion, and poor public services remain unaddressed.

6. Financial Constraints: Municipal revenues contribute only 1% of GDP, compared to 7.4% in South Africa (World Bank 2024).

What is the Way Forward?

1. Sustainable Infrastructure Development: Expand **Metro rail networks** and **BRTS (Bus Rapid Transit System)** for improved public transport. Encourage transit-oriented development to reduce congestion and promote walkability.

2. Smart and Resilient Urban Planning: Implement Integrated Urban Planning models like **Singapore's Master Plan 2019**. Develop satellite towns and decongest major metropolitan areas.

3. Environmental and Climate Resilience Strategies: Increase green spaces through urban forestry initiatives like **Miyawaki forests**. Implement waste-to-energy plants and circular economy models as seen in Sweden.

4. Strengthening Urban Governance and Financing: Strengthen the financial independence of ULBs through **municipal bonds** and **PPPs**. States must formally recognize census towns as urban areas to ensure access to funding and resources. Implement participatory governance models, drawing from the Curitiba model in Brazil.

5. Leverage the Urban Challenge Fund: Use the ₹1 lakh crore **Urban Challenge Fund** to incentivize cities to adopt long-term planning, invest in mass transit, and enhance sustainability.

6. Green Infrastructure and Sustainability: Develop Blue-Green Infrastructure like urban wetlands, green roofs, and afforestation. Promote electric mobility; **FAME-II** has accelerated EV adoption, but further incentives are needed.

7. UN-Habitat and Global Sustainability Goals: Align urban policies with **UN Sustainable Development Goal (SDG) 11: Sustainable Cities and Communities**. Integrate UN-Habitats New Urban Agenda principles into planning frameworks.

Conclusion

The next decade will shape the future of Indian cities. They can either become smart, green, and livable hubs or struggle with pollution, congestion, and insecurity. By drawing lessons from global cities, leveraging policy initiatives, and addressing governance and infrastructure gaps, India can transform its cities into world-class destinations.

As highlighted in the Economic Survey 2023-24, urban transformation is not just a developmental need but a strategic imperative for economic growth and public well-being.

Read more- [The Indian Express](#)

UPSC Syllabus- **GS 1** – Urbanization in India

Wetland Conservation in India- Explained Pointwise

Wetlands, often referred to as the earth's kidneys, are among the most productive ecosystems, providing critical ecosystem services such as water purification, flood control, and carbon sequestration. Globally, **wetlands cover 6% of the Earth's land surface** and **support 40% of the world's species**, as per the Ramsar Convention. However, since 1970, 35% of global wetland areas have been lost due to human activities like urbanization, agriculture, and pollution. **Wetland Conservation in India**



In India, wetlands are equally vital but face similar threats. The National Wetland Decadal Change Atlas (2017-18) reveals that **India has 27,403 wetlands, covering 18.4% of the country's area**. Despite their ecological and economic significance, wetlands are disappearing at an alarming rate of 2-3% annually, with 50% of India's wetlands already lost.

What is the present status of wetlands?

Global Scenario	Wetlands are declining at a rate of (-)0.78% annually, with 81% of inland wetland species and 36% of coastal species experiencing population declines since 1970, as per the Wetland Extent Trends (WET) index. Since 1900, 50% of global wetland area has been lost, with a decline of 35% between 1970 and 2015.
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Indian Context	<ol style="list-style-type: none"> 1. India has 89 Ramsar sites (wetlands of international importance), covering 1.34 million hectares. However, this represents only a fraction of the total wetland area. 2. Wetlands cover 18.4% of India's land area (excluding rivers); 70% of these are used for paddy cultivation. 3. The coastal wetlands span 6,750 sq. km, with "mangrove ecosystems" concentrated in Sundarbans, Andaman & Nicobar Islands, Odisha, and Gujarat. 4. Southern peninsular wetlands are largely man-made reservoirs, locally known as Yeris (tanks), essential for water storage and biodiversity conservation. 5. 50% of India's wetlands have been lost due to encroachment, land-use change, and pollution. E.g. Pallikaranai Marsh and East Kolkata Wetlands have shrunk drastically due to urbanization. 6. The Wildlife Institute of India reports that 70-80% of freshwater marshes in the Gangetic floodplains have been lost in the last five decades. 7. Urban areas like Mumbai, Chennai, and Kolkata have lost 71%, 85%, and 36% of their wetlands, respectively, due to urbanization and pollution. 8. Indian mangrove areas have shrunk from 700,000 hectares in 1987 to 453,000 hectares in 1995, with only 4,000 sq. km remaining today, as per remote sensing data.
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What is the significance of Wetlands?

1. Ecological Importance: Wetlands are biological supermarkets, supporting a wide range of species, nutrient cycling, hydrological regulation and habitat heterogeneity. Also, it acts as carbon sinks, mitigating climate change by sequestering carbon. They also support biodiversity, hosting 40% of the world's species, as per the Ramsar Convention. E.g. the Sundarbans, a Ramsar site, is home to the endangered Bengal tiger and acts as a natural barrier against cyclones.

2. Economic Value: Wetlands contribute significantly to livelihoods. The East Kolkata Wetlands treat wastewater and support fisheries, generating an estimated \$100 million annually.

3. Climate Resilience: Wetlands act as carbon sinks, sequestering carbon and mitigating climate change. They also regulate floods and droughts, providing "nature-based solutions" for climate adaptation.

4. Cultural & Recreational Value: Wetlands like Chilika Lake, Loktak Lake, and Wular Lake have spiritual, tourism, and aesthetic value.

5. Wetlands as Natural Disaster Buffers: Economic Survey (2020-21) recognizes wetland conservation as a Nature-Based Solution (NbS). Mangrove forests reduce storm surge heights by up to 50% (World Bank, 2021).

What progress has been made so far in wetland conservation?

1. Policy Framework: India is a signatory to the Ramsar Convention (1971) and has designated 85 Ramsar sites. The **Wetlands (Conservation and Management) Rules, 2017**, provide a legal framework for wetland conservation. The National Committee on Wetlands, Mangroves, and Coral Reefs has identified 93 wetlands for priority conservation.

2. Government Initiative: National Plan for Conservation of Aquatic Ecosystems (NPCA), ₹900 crore allocated. **AMRUT 2.0 (2021)**, focus on “urban blue-green infrastructure” for wetlands. **Namami Gange Programme**, wetland rejuvenation along the Ganga River Basin.

3. Judicial Interventions: The National Green Tribunal (NGT) and the Meghalaya High Court have emphasized the need for wetland conservation through suo motu PILs and directives.

4. Global Initiatives: Ramsar **COP14 (2022) in Wuhan** & Geneva highlighted the need to link wetland conservation with global sustainability goals, including the SDGs, IPCC targets, and UN Decade on Ecosystem Restoration, Global Biodiversity Framework.

What are the Challenges in wetland conservation?

1. Urbanization and Land Use Change: Urban expansion has led to the loss of wetlands in cities like Mumbai and Chennai. The **National Wetland Decadal Change Atlas** shows a decline in natural wetlands due to infrastructure development.

2. Pollution: Industrial effluents and untreated sewage have degraded wetlands like the Bellandur Lake in Bengaluru, which famously caught fire due to pollution.

3. Climate Change: Rising temperatures and erratic rainfall patterns threaten wetland ecosystems. For example, the Sundarbans face salinity intrusion due to sea-level rise.

4. Lack of Awareness and Governance: Weak enforcement of conservation laws and limited public awareness hinder effective wetland management.

5. Biodiversity Decline: **81% of inland wetland species populations have declined** since 1970 (WWF, 2022).

What is the Way Forward?

1. Integrated Management: Adopt an ecosystem-based approach to wetland management, as advocated during the Ramsar COP14. Integrate wetland conservation into urban planning and development policies.

2. Strengthening Legal Frameworks: **Amend the Wetlands (Conservation and Management) Rules, 2017**, to include stricter penalties for violations. Ratify and implement global agreements like the ILO's Recommendation 204 on transitioning to sustainable ecosystems.

3. Community Participation: Engage local communities in wetland conservation through programs like **Community-Based Resource Management (CBRM)**. Promote eco-tourism to generate livelihoods while conserving wetlands.

4. Technological Interventions: Use Geographic Information Systems (GIS) and remote sensing for real-time monitoring of wetlands. Develop blue-green infrastructure in urban areas to restore wetland ecosystems.

5. International Best Practices: Learn from the **Netherlands' Room for the River Program**, which integrates wetlands into flood management. Adopt China's Sponge Cities Initiative, which uses wetlands for urban water management.

6. Financial Mechanisms: Allocate funds for wetland conservation in the Union Budget and State Budgets. Leverage international funding mechanisms like the **Green Climate Fund (GCF)**. Wetland Conservation Bonds to raise funds for restoration.

Conclusion

Wetlands are not just ecological assets but are vital for “ecological, economic, and social security.” As the Ramsar Convention aptly states, “Wetlands are essential for a sustainable future.” The Meghalaya High Court’s intervention and the Ramsar COP14’s emphasis on integrating wetlands into global development agendas underscore the urgency of mainstreaming wetland conservation.

India must adopt a holistic approach, combining legal, technological, and community-driven strategies, to conserve its wetlands. As **Mahatma Gandhi** said, “The earth provides enough to satisfy every man’s needs, but not every man’s greed.” Let us strive to protect our wetlands, ensuring a sustainable future for generations to come.

Read more– [The Hindu](#)

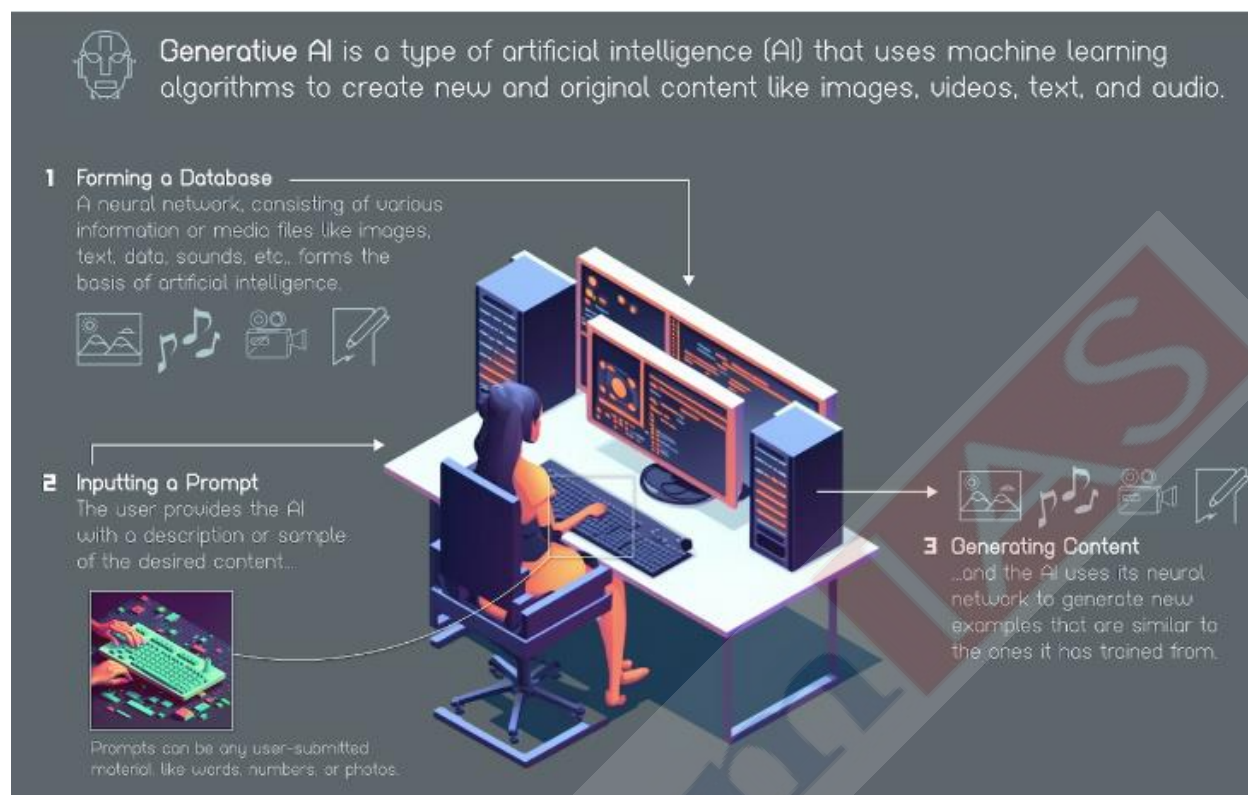
UPSC Syllabus- GS 3– Conservation, environmental pollution and degradation, environmental impact assessment.

Generative AI (Artificial Intelligence)- Explained Pointwise

After the introduction of ChatGPT, the **focus of numerous governments, corporations, and businesses** has shifted towards Artificial Intelligence, particularly in the realm of generative AI. Once just a buzzword, generative AI has quickly become a critical business imperative for Indian organizations, with most **business leaders in India prioritizing AI adoption**, according to a report.

What is Generative AI? Where does Generative AI fit in the AI discipline?

Generative AI- Generative AI is a **type of artificial intelligence technology** that can produce various types of content, including text, imagery and audio. The term ‘Generative’ refers to the **ability of the models to create new data** based on certain input parameters. **For ex-** A generative model is used to generate facial images by providing a set of parameters such as the eyes, hair, or skin colour etc.



Source- WEF

Relation between AI, Machine Learning, Deep Learning & Generative AI

Artificial Intelligence (AI)	AI is a discipline which focuses on formulating theories and methodologies for constructing machines that emulate human thought processes and behaviours.
Machine Learning (ML)	Machine learning is a subfield of Artificial Intelligence. ML involves the development of programs that train models using accessible data from sources such as webpages, articles, books, etc. These trained models are then used to make useful predictions for new and never-seen before data. The most common ML method to train the models is the supervised learning method.
Deep Learning	Deep learning is a subset of Machine Learning. Deep learning is a type of machine learning that uses artificial neural networks. These multilayered and interconnected neurons (inspired by the human brain), are used to process complex data and make predictions.
Generative AI	Generative AI is a subset of deep learning. It uses artificial neural networks to process data using supervised learning methods. This large-scale supervised learning technology is termed the Large Language Model (LLM).

What are the advantages of Generative AI?

1. Writing and advertising- Generative AI is being used as a brainstorming companion by the writers. **For ex-** **Drafting press releases, language translation**, creating new advertisements based on existing ones.

2. Reading- Apart from writing, this technology is used as a reading tool. **For ex-** **Auto Reading customer mails** and segregating them based on complaints.

3. Chatting- Generative AI is also used for many special-purpose chatbot tasks. **For ex-** Government chatbots to help citizens get access to the right information on various schemes and policies.

4. Security Services- This AI technology can create front-on photos from photos taken at different angles and vice versa. This can be used in **face identification systems** to secure the airports, international border checkpoints etc.

5. Enhanced capability of Search Engine Services- Generative Artificial Intelligence has the capability to take search engine services to the next level. **For ex-** **Text to Image translation** to provide search results.

6. Improving Healthcare System- This technology has the potential to revolutionise the healthcare sector by improving the accuracy of diagnosis. **For ex-** Conversion of X-ray or any CT scan images to real images can improve the accuracy of diagnosis.

What are the Challenges with the Technology?

1. Increased Biases- Generative Artificial Intelligence systems can perpetuate and amplify existing biases. These systems can generate biased outputs like offensive language, demeaning imagery, and prejudicial content, if they are trained on biased, non-inclusive data. **For ex-** **US rights group observation** about an AI-based generative imagery programme showing images of only white men for the prompt 'CEO'.

2. Threat of Job Losses- There are fears of job losses as this technology can prove to be more cost-efficient and productive to firms as compared to human capital. **For ex-** **Customer service jobs are under threat from the AI chatboxes** (Zomato's Zia).

3. Use for Malicious Purposes- Generative AI systems can be used to create content for malicious purposes, such as **deepfakes**, disinformation, and propaganda. Nefarious actors may use AI-generated media to manipulate people and influence public opinion, like use for Post Truth Doctrine.

4. Concern over Data Privacy- There are emerging concerns in regard to data privacy in using generative AI technology. **For ex-** Use of AI in healthcare involves collecting private information about individuals, which raises concerns about data privacy.

5. Issues Related to Copyright and plagiarised contents- Generative AI technology has been associated with copyright violations and production of plagiarised content. **For ex-** **Getty Images has sued Stable Diffusion** (Generative AI Company), accusing them of copyright violations.

6. Limitations in Creativity- Generative AI systems lack creativity, originality and human ingenuity as they use past data as a template for future work.

7. Environmental Concerns- AI systems require a lot of computing power, which have grave implications for the environment. **For ex-** According to analysts, training a transformer model just once with 213 million parameters can emit carbon emissions equivalent to 125 flights between New York and Beijing.

What should be the way Forward?

1. De-biasing while training the AI- We must ensure fairness of the information which is being fed into the system, to ensure that AI **doesn't perpetuate** or amplify social biases, like gender and racial biases.

2. Transparency of information- Users should have transparent information about the limitation and risks of AI.

3. Privacy protection- The user data and confidentiality must be protected to ensure user privacy. **For ex-Strict implementation of data protection laws.**

4. Ethical use of AI- We must ensure that AI is used only for beneficial purposes. The push must be made towards **universal adoption of the Bletchley Declaration** by all the countries.

AI has the potential to give society intelligent guidance on how to approach some of the biggest problems, like climate change and pandemics. In the coming times, AI will contribute to longer, healthier, and more fulfilling lives worldwide if used responsibly.

Read more– [Business Standard](#)

UPSC Syllabus- GS 3– Development in the field of IT

Women Representatives in Panchayati Raj Institutions: Significance and Challenges – Explained Pointwise

The **73rd Constitutional Amendment Act of 1992** marked a historic step in India's democratic decentralization by institutionalizing Panchayati Raj Institutions (PRIs). It **mandated 33% reservation for women in Gram Panchayats, Block Samitis, and Zilla Parishads**, later increased to 50% in many states. **Women Representatives in Panchayati Raj Institutions: Significance and Challenges**



However, despite legal empowerment, a regressive practice known as **“Pradhan Pati” (Proxy Sarpanch)** has emerged, where male relatives—husbands, fathers, or brothers—control the decision-making process instead

of the elected female representatives. This undermines the very essence of women's political empowerment at the grassroots level.

What is the present status of women participation in Local governance?

Women in PRIs	<ol style="list-style-type: none"> 1. As of 2023, India has over 1.45 million elected women representatives (EWRs) in 2.5 lakh Panchayats, constituting over 46% of all elected members. 2. The 73rd Constitutional Amendment mandates 33-50% reservation for women in PRIs, bringing more women into local governance.
States with 50% Reservation	Bihar, Madhya Pradesh, Chhattisgarh, Rajasthan, Odisha, Maharashtra, and Kerala have implemented 50% reservation for women in PRIs.
Global Gender Gap Report 2023	<ol style="list-style-type: none"> 1. For the first time, the report included women's participation in local governance as an indicator. Globally, only 18 out of 146 countries have achieved over 40% representation of women in local governance. 2. India ranks among the highest, with above 44% participation of elected women representatives in PRIs.

What is the significance of ending proxy leadership in PRIs?

1. **Gender Empowerment** – Ensuring that women sarpanches exercise real authority aligns with the spirit of reservation policies.
2. **Inclusive Development** – Women leaders prioritize issues related to women, children, and marginalized groups, leading to holistic rural development.
3. **Democratic Integrity** – Empowering women sarpanches strengthens grassroots democracy and restores public trust in local governance.
4. **Economic Growth** – Women's participation in governance drives economic growth by addressing gender-specific challenges and promoting inclusive policies.
5. **Policy Prioritization for Women & Children** – Studies indicate that villages led by women sarpanches prioritize **maternal health, school infrastructure, and nutrition programs** more effectively than male-led ones.
6. **Enhanced Accountability & Transparency** – According to the **Institute of Rural Management Anand (IRMA)**, panchayats with strong female leadership demonstrate **lower corruption levels** and **better fund utilization**.
7. **Economic Survey & Budget 2023-24 Emphasis** – The **Economic Survey 2023-24** acknowledged the role of **women-led development**, stating that enhancing female participation in governance is key to **economic resilience**.

What are the challenges in ending proxy leadership in PRIs?

1. **Patriarchal Mindset** – Women are often seen as 'nominal' leaders, while their husbands make decisions.
2. **Low Literacy & Awareness** – Many elected women representatives lack formal education and political training.

3. Male Domination in Decision-Making – Even in reserved seats, men influence policy decisions.

4. Lack of Political Will – Few mechanisms exist to monitor and prevent proxy governance.

5. Limited Digital & Financial Independence – Many women sarpanches lack access to smartphones, official transport, and dedicated assistants.

6. Complex Documentation – Lack of digital literacy prevents women from fully engaging with administrative functions.

7. Gender-Based Violence & Intimidation – Women leaders often face threats or coercion from male counterparts. E.g., Reports from Bihar, Rajasthan, and UP highlight cases where female sarpanches were forced to resign due to local power group pressure.

8. Low Remuneration – The honorarium for sarpanches is shockingly low (e.g., ₹4,500/month in Rajasthan), discouraging serious participation.

9. Misuse of Whistleblowing Mechanisms – Poorly implemented reporting systems allow political opponents to falsely accuse women leaders.

What are the government and other initiatives to increase women participation in PRIs?

1. Constitutional Provisions – The 73rd Amendment mandates one-third reservation for women in PRIs, with some states extending it to 50%.

2. Capacity Building Programs – The Ministry of Panchayati Raj conducts training programs under the Rashtriya Gram Swaraj Abhiyan (RGSA) to enhance women representatives' governance skills.

- **Sashakt Panchayat-Netri Abhiyan**: Launched to train women elected representatives of PRIs.
- States are advised to hold separate **Mahila Sabhas and Ward Sabhas** to boost women's participation.

3. Digital Literacy Initiatives – Programs like Digital India and e-Panchayat equip women leaders with digital tools for better governance.

4. NGO Interventions – Organizations like PRIA (Participatory Research in Asia) and UN Women provide training, mentorship, and networking support for women sarpanches.

5. State-Level Innovations – Kerala and Rajasthan have introduced gender-sensitive policies and support systems for women leaders.

6. Committee on Proxy Representation (2023) – The Ministry of Panchayati Raj formed a committee in 2023 to examine cases of proxy leadership.

- **Exemplary Penalties**: Recommended for proven cases of proxy leadership, though the nature of penalties (monetary or physical) remains unspecified.
- **Multi-Pronged Strategy**: Suggested interventions include policy reforms, technological monitoring, peer support programs, and punitive actions.
- **Gender-Exclusive Quotas & Public Swearing-In**: Inspired by Kerala, the committee proposed exclusive women's quotas in panchayat subject committees and public oaths for women pradhans.

What is the way forward?

1. Legal Reforms & Institutional Strengthening

- Enforce **strict implementation** of the **73rd amendment** with stronger monitoring mechanisms.
- Introduce **legal penalties** for “Pradhan Pati” cases.
- Establish **Women’s Help Desks** at **Block & District levels**.
- Recognize efforts against proxy leadership through **awards like “Anti-Pradhan Pati Champions.”**

2. Capacity Building & Education

- Digital literacy and governance training for all women sarpanches.
- Gender sensitization programs to change community perceptions.
- Introduce a **minimum education qualification** (e.g., 12th grade) for sarpanches to ensure independent governance.

3. Financial & Administrative Empowerment

- **Direct fund transfers** to women leaders for financial autonomy.
- Simplify **paperwork and administrative procedures** for easy governance.

4. Political & Community Support

- Senior women leaders should **mentor new representatives**.
- Strengthen **Self-Help Groups (SHGs) & Mahila Panchayats** to support women leaders.

5. Successful Examples of Women Leadership

- **Chhavi Rajawat (Rajasthan)** – India’s first MBA sarpanch who implemented **rainwater harvesting & digital literacy programs**.
- **Minati Barik (Odisha)** – Improved **sanitation, health facilities, and women’s safety** in her Panchayat.

Conclusion

Ending proxy leadership in panchayats is crucial for real empowerment and strengthening democracy. Addressing systemic weaknesses, providing institutional support, and fostering capacity-building can ensure that women sarpanches exercise real authority and drive inclusive development. While government initiatives are a game-changer, success depends on sustained efforts to tackle deep-rooted biases and create an enabling environment for women leaders. The time has come to transform symbolic representation into real empowerment.

Read more– [The Indian Express](#)
UPSC Syllabus- GS 2- Governance

Women in Corporate Leadership- Explained Pointwise

The representation of women in corporate leadership remains a persistent issue despite global efforts to promote gender inclusivity. However, despite initiatives aimed at fostering diversity, equity, and inclusion (DEI), women continue to be significantly underrepresented in senior management and boardroom roles.

Women in Corporate Leadership



In 2023, **only 34,879 women held senior management positions in India**, compared to 186,946 men, according to the Ministry of Statistics and Programme Implementation. Globally, the situation is similar, with women occupying just **7% of CEO roles** and 17% of finance director positions in developed countries, as per Equileap's 2023 survey.

What is the present status of women's participation in Corporate leadership?

Leadership Gap	According to the World Economic Forum's Global Gender Gap Report 2023 , only 32% of leadership roles globally are occupied by women
Senior Management	In India, the Economic Survey 2022-23 highlighted that women hold less than 5% of CEO or MD positions in NIFTY 500 companies
Promotions	The McKinsey Women in the Workplace Report reveals that for every 100 men promoted to managerial roles, only 87 women receive similar promotions
Board Positions	Women's representation in Indian boardrooms stands at 17.1% , lower than the global average of 19.7% (Deloitte Women in the Boardroom Report 2023).

Industry Variations in India	<p>1. Highest representation: Education (30%) and Government Administration (29%)</p> <p>2. Moderate representation: Technology, Information, Media, and Financial Services (19%)</p> <p>3. Lowest representation: Construction, Oil, Gas, Mining, and Utilities (11%)</p>
India-Specific Growth	<p>1. The inclusion of women directors on NSE 500-listed companies increased from 5% in 2011 to 18% in 2023.</p> <p>2. Women-led startups grew from 1,528 in 2017 to 17,001 in 2023.</p> <p>3. Women-led startups now constitute 47.6% of all startups recognized by DPIIT.</p>
European vs. Indian Progress	<p>European countries have shown more significant growth in women's representation on corporate boards compared to India. For example, Portugal increased its share of women directors from 5.9% in 2013 to over 35% by 2022, while India only reached 18.23%.</p>
Global Statistics	<p>According to Equileap research, only 7% of CEOs and 17% of finance directors in large companies in developed countries are women.</p>

What is the significance of women's participation in Corporate leadership?

- 1. Economic Growth Multiplier:** A Boston Consulting Group (BCG) study found that companies with higher gender diversity reported **19% higher revenue due to innovation**.
- 2. Better Decision-Making:** Diverse leadership teams contribute to balanced risk assessment and enhanced corporate governance.
- 3. Inclusive Work Culture:** Women leaders promote empathetic leadership and employee-friendly policies, improving overall productivity.
- 4. Investor and Consumer Confidence:** Companies with strong gender diversity often achieve **higher ESG (Environmental, Social, and Governance) ratings**, positively influencing investment decisions.
- 5. Risk Management:** Women's considered approach to risk-taking enhances company efficiency, particularly during crises.
- 6. Innovation:** Gender-diverse leadership teams demonstrate higher rates of innovation and creative problem-solving.
- 7. Stakeholder Relationships:** Women leaders prioritize relationship-building and stakeholder engagement.

What are the challenges obstructing women's participation?

1. India's Half-Hearted Approach: While the **Companies Act, 2013**, and **SEBI regulations** have increased women's board representation, the absence of binding quotas and enforcement mechanisms has limited progress.

2. Unconscious Bias & Stereotypes: Women are often perceived as less assertive or unsuitable for risk-taking roles.

- For example, women hold only **18% of board positions** in the private sector and **13% in the public sector**.
- In the judiciary, women constitute just **14% of High Court judges** and **9% of Supreme Court judges**.

3. Glass Cliff & Tokenism: About **50% of private companies** and **30% of public companies** in India have only one female board member, indicating tokenism rather than genuine inclusion.

4. Old Boy Networks: Entrenched corporate networks continue to perpetuate gender gaps.

5. Work-Life Balance Dilemma: The double-burden syndrome forces many women to exit mid-career due to inadequate parental leave policies and inflexible work structures.

6. Pipeline Leakage Problem: A lack of women in middle management positions results in a smaller talent pool for leadership roles.

7. Wage Disparity: The **Global Gender Pay Report 2023** indicates that women in leadership earn **20-25% less** than their male counterparts.

What is the way forward?

1. Gender-Responsive Policies: Implement progressive maternity benefits, paternity leave, and family support structures to retain female talent.

2. Mandatory Boardroom Quotas: Countries like Norway have set **40% boardroom representation quotas**, a model India could consider.

3. Indian Regulations:

- The **Companies Act, 2013** mandates at least one woman director on the boards of certain public companies.
- **SEBI** requires at least one independent woman director on the boards of India's top 1,000 listed companies.

4. Equal Pay Legislation: Strengthening wage transparency laws to close the gender pay gap.

5. Leadership Training & Mentorship: Establish targeted training programs and women-exclusive professional networks to build leadership pipelines.

6. Bias-Free Hiring: Promote anonymous hiring processes to eliminate gender bias.

7. Incentivizing Companies: Offer tax benefits or funding support to organizations actively promoting gender diversity.

8. Implementation Approaches to Increase Women's Representation:

- **Mandatory inclusion:** Austria, Germany, France, etc.
- **Comply or explain approach:** Switzerland, Poland, Spain, UK

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- **Self-regulatory approach:** Denmark, Ireland, Luxembourg, etc.

Conclusion

Achieving true gender equity in corporate leadership requires a fundamental shift in mindset, policy reforms, and structural support. While progress has been made, breaking the glass ceiling demands collective action from governments, businesses, and society. The goal is not merely to increase the number of women in leadership but to foster **transformative leadership** that champions inclusivity, innovation, and long-term corporate sustainability.

Read more– [The Hindu](#)

UPSC Syllabus- GS 2– Issues related to women

Women Empowerment- Economic Political and Social- Explained Pointwise

8th march of each year is celebrated as **International Women's Day**. This day is to celebrate women power and remind us the crucial role women play in every domain of human life. However, women have been marginalised as a community, and they have been engaged in a long-drawn battle for equal women's rights. '**Women empowerment**' is the only way forward to improve the status of women in the society. **Women Empowerment**



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What is Women Empowerment? What are the different components?

Women Empowerment- Women empowerment is the promotion of women's sense of self-worth, their **ability to determine their own choices** and their **right to influence social change for themselves and others**. It is rightly said that empowering a man leads to empowering an individual but empowering a woman empowers an entire generation.

Types of Women Empowerment

1. Economic Empowerment- Economic empowerment means having **equal access to work opportunities** and ensuring their participation in all kinds of markets. This will help women break down all the barriers of inequality and defy traditional roles.

2. Political Empowerment- Political empowerment means women having equal access to leadership role in the political sphere. It also gives **increased strength to women's right voices** and issues in the political sphere.

3. Social Empowerment- Social empowerment aims to uplift the social status of women. Social empowerment aims to provide women equal say in the health, family decisions, marriage decisions, childbirth.

What are the advantages of Women Empowerment?

Economic Empowerment

1. When more women work, economies grow- Women's economic empowerment increases **economic diversification** and **income equality** for shared prosperity. According to UN Women, it is estimated that closing the gender gap could give the **global economy a USD 7 trillion boost**.

2. Growth of businesses- Business companies greatly benefit from increasing employment and leadership opportunities for women, which is shown to increase organizational effectiveness and growth. **For ex-** According to estimates, **Companies with three or more women in senior management functions** score higher in all dimensions of organizational performance

Political Empowerment

1. Proper functioning of Democracy- Women's political participation is a fundamental prerequisite for gender equality and genuine democracy. It facilitates women's direct engagement in public decision-making and is a means of ensuring better accountability to women. **For ex- Women led SHGs and women rights movement.**

2. Gender-sensitive policies- Political empowerment leads to gender-sensitive governance reforms. It makes the elected officials more effective at promoting gender equality in public policy and ensuring their implementation. **For ex- Law to protect Sexual harassment at workplace**

Social Empowerment

1. Social Justice- Women's Social empowerment is essential for achieving social justice. It helps in ending gender based discrimination, violence, and other forms of oppression. It also helps to create a more just and equitable society.

2. Sustainable Development Goals- Promotion of social empowerment of women will help in achieving the Sustainable Development Goals in accordance with 2030 Agenda for Sustainable Development.

What are the Challenges with empowerment of Women?

Economic empowerment

1. Unequal employment opportunities- Globally, the **gender gap in labour force participation has been around 30% since 1990**, with men's participation at around 80% and women's at 50%. Women also experience 'motherhood penalty' with reduction in employment opportunities for women having babies.

2. Employment in informal and vulnerable sectors- According to research by UN Women, nearly **60% of women's employment globally is in the informal economy**. In low income countries it is as high as 90%.

3. Lack of pay parity- Women are paid less than men. The gender wage gap is estimated to be 20%. Women face the challenges of motherhood wage penalty and unpaid care works.

Political Empowerment

1. Low Representation of Women in Legislature- The representation of women in different legislative bodies **remains low** across India. **For ex-** According to the report of Inter-Parliamentary Union (IPU) and UN Women, India ranks 148 out of 193 countries in the number of elected female representatives in parliament.

2. Lack of intra party democracy- The political parties lack intra party democracy, which prevents the development of top women leaders. The **patriarchal nature** of politics is a major challenge to women political empowerment.

Social Empowerment Challenges

1. Gaps in Male Female Literacy Rate- Lack of good girls schools with proper toilets, female infanticide, early child marriage and dowry have led to the educational disenfranchisement of women.

2. Health care Burden- **Lack of access to sanitary products, menstrual hygiene** and high incidence of cervical and breast cancers have increased the health burden on women in India.

3. Social Safety Concerns- Women are threatened by various acts such as feticides, domestic violence, rape, trafficking, forced prostitution, honour killings, sexual harassment at workplace. These have led to the marginalisation of women in the social sphere.

Read More- [\[Yojana September 2023 Summary\]Women Empowerment-Explained Pointwise](#)

What have the achievements of Indian Women?

1. Avani Chaturvedi – Sky Warrior

Avani Chaturvedi became the first Indian proud woman to fly solo a fighter aircraft. She flew a MiG-21 'Bison', an aircraft known for its highest landing and take-off speed in the world.

2. Mithali Raj – Lady Tendulkar of Indian Women's cricket

During India's series against New Zealand Women – Mithali Raj became the first Indian woman who made India proud by playing in 200 ODI match.

3. Mary Kom – Ms. Knock-out

Mary Kom is the woman who made india proud by becoming World Amateur Boxing champion for a record six times, and the first woman from the country to win a medal in boxing at the Olympics.

4. Gita Gopinath – The Fiscal Scholar

An Indian-American economist, Gita Gopinath became the First Woman Chief Economist at the IMF (International Monetary Fund).

5. Arunima Sinha – The Mount Everest Girl

Arunima Sinha became the world's first woman amputee to climb Mount Everest in 2013.

6. Usha Kiran – Youngest Female CRPF Officer

Usha Kiran became CRPF's first woman officer to be posted in the insurgency-affected Bastar region of Chhattisgarh.

7. Tessy Thomas – Missile Woman of India

Tessy Thomas is the first woman who made India proud to head an Indian missile project. Adding to it, with the successful launch of the Agni-V missile project, she also achieved a career milestone.

What are the government initiatives?

Economic Empowerment	<ol style="list-style-type: none"> 1. Governments has been promoting equal pay for equal work through the four new labour codes. 2. Government has established maternity leave and childcare policies through the Maternity Benefit (Amendment) Act 2017. 3. It has also provided access to finance and entrepreneurship training for women, like the Mudra Yojana and the Mahila Udyam Nidhi Yojana.
Political Empowerment	<ol style="list-style-type: none"> 1. Nari Shakti Vandana Adhiniyam (Women reservation Act)- Passed to provide 33% reservation for women in the Lok Sabha and state legislative assemblies. 2. 73rd and 74th amendment Act- Provided 33% reservation to women in local bodies. Some states like Bihar have increased the women reservation in the local bodies to 50%. 3. Govt has been encouraging political parties to nominate more women candidates and has been providing leadership training.
Social Empowerment	<ol style="list-style-type: none"> 1. Government has focused on ending child marriage and safeguarded sexual and reproductive health rights through The Prohibition of Child Marriage Act, 2006 and Medical Termination of Pregnancy Amendment Act of 2021. 2. Government has been protecting women's land rights through Digital India Land Records Modernisation Programme (DILRMP) and implementing gender-responsive budgeting, which are crucial steps towards achieving gender equality.

What should be the way Forward?

1. Better Education Opportunities- Better implementation of **New Education Policy** to ensure the protection of girls right to education and their right to be free from discrimination within educational institutions.

2. Skilling and Micro Financing- Training women in non-traditional skills in accordance with the market demand, like machine textiles. Also, we need to focus on creating more public and private sector jobs for women.

3. Women's Safety- There must be strict implementation of Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 to ensure safe working spaces for women. Also Panic Button, Nirbhaya Police Squad are some good steps in the direction of women's safety.

5. Improvement in Basic Amenities at Rural Level- The improvement in the health and education standards of women in rural areas will lead to all round development of women and a productive women workforce.

5. From Women Development to Women Led Development- Women should be reimagined as architects of India's progress and development, rather than being passive recipients of the fruits of development.

Read More– [UN Women](#)

UPSC Syllabus- GS 1– Issues related to women

India-Mauritius Relations- Explained Pointwise

Prime Minister Narendra Modi's forthcoming visit to Mauritius on March 11-12, 2025, to attend the country's Independence Day celebrations, underscores the deep and enduring ties between the two nations. With a new government led by Navinchandra Ramgoolam in power, this visit offers an opportunity to reaffirm and deepen the strategic partnership, ensuring it remains a cornerstone of India's foreign policy in the Indian Ocean Region (IOR). **India-Mauritius Relations**



What is the historical evolution of India-Mauritius Relations?

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India and Mauritius share an umbilical relationship, deeply rooted in history, demography, and culture. With nearly **70% of Mauritius' 1.2 million** population of Indian origin, the bond extends beyond diplomacy to people-to-people and civilizational ties. India has been **among the largest trading partners of Mauritius since 2005**, and the relationship has evolved into a robust partnership spanning multiple areas.

Colonial Era & Early Connections (Pre-1947)	<ol style="list-style-type: none"> 1. The Indian-Mauritian relations seeds were sown by the Indian indentured labourers who arrived in Mauritius under the British Rule. 2. Mahatma Gandhi's visit in 1901 influenced the political consciousness of the Indian diaspora residing in Mauritius
Post-Independence Era (1947–1968)	<ol style="list-style-type: none"> 1. India supported anti-colonial movements in Mauritius. India supports Mauritius in its territorial claim over the Chagos Archipelago. 2. In 1968, Mauritius gained independence and India established its diplomatic relations with India.
Strengthening Bilateral Investment and Economic Ties (1970s–2000s)	<p>India and Mauritius signed several key cooperation agreements.</p> <ol style="list-style-type: none"> 1. Double Taxation Avoidance Agreement (DTAA) was signed in 1983, making Mauritius a major route for Foreign Direct Investment (FDI) into India. 2. Establishment of cultural institutions like Mahatma Gandhi Institute and the Indian Cultural Centre. 3. Bilateral Investment Promotion and Protection Agreement (BIPA) was signed.
Expanding Cooperation (2000–2010)	<p>India supports Mauritius' satellite and IT development initiatives and also donates patrol boats to strengthen Mauritius' maritime security, defense cooperation agreement signed. India helps set up the Mauritius National Coast Guard Headquarters.</p>
Strategic & Economic Deepening (2011–2020)	<ol style="list-style-type: none"> 1. DTAA was amended to prevent tax evasion and round-tripping of funds, Mauritius joins India's SAGAR (Security and Growth for All in the Region) initiative. 2. India provides financial assistance for the Metro Express Project and Social Housing Scheme in Mauritius.

Recent Development (2021-Present):	<p>2021- India and Mauritius signed the Comprehensive Economic Cooperation and Partnership Agreement (CECPA), India's first trade agreement with an African nation. Mauritius was included in India's Indo-Pacific strategy, boosting maritime security cooperation.</p> <p>2022: India assists in launching Mauritius' first satellite under ISRO collaboration.</p> <p>2023: Strengthening of digital partnerships in cybersecurity and fintech.</p> <p>2024: Expansion of India's Blue Economy cooperation with Mauritius. Both signed a protocol in March 2024 to amend their DTAA, incorporating a Principal Purpose Test (PPT) to combat treaty abuse and align with the OECD's Base Erosion and Profit Shifting (BEPS) framework.</p>
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What is the significance of Mauritius for India?

1. Geo-Economic Significance:

- **Mauritius as India's FDI Hub:** Mauritius has been a major source of Foreign Direct Investment (FDI) into India, which contributed **\$175 billion since 2000** under the Double Taxation Avoidance Convention (DTAC). This bilateral trade has grown from \$206 million (2005) to \$851 million (2023-24).
- **Economic Gateway to Africa:** Mauritius' bilingual population (English & French) and strong financial sector make it a bridge for Indian businesses entering Francophone Africa.

2. Geo-Political Significance:

- **Regional Cooperation:** Mauritius is a key partner in India's **Indo-Pacific strategy** and IORA (Indian Ocean Rim Association) which makes it central to the diplomatic engagement in the Indian ocean countries.
- **Support for Mauritius Sovereignty:** India supports Mauritius' sovereignty claim over the **Chagos Islands**, in line with its principled stand on decolonization and support for the sovereignty and territorial integrity of nations, as well as its longstanding and close partnership with Mauritius

3. Security & Strategic Significance:

- **Indian Ocean Security:** The two countries have strong **maritime security cooperation**, given Mauritius' strategic location in the Indian Ocean. It's strategic location is very significant for India's SAGAR (Security and Growth for All in the Region) initiative.
- **Countering China's Influence:** India's strengthening defense cooperation with Mauritius is indeed seen as a strategic move to counter China's growing influence in the Indian Ocean Region (IOR).
- **Maritime Surveillance & Intelligence Sharing:** To enhance maritime surveillance and intelligence sharing, India has established a **coastal radar chain** in Mauritius and **upgraded facilities on Agaléga Island** for joint surveillance purposes. Furthermore, Mauritius has joined the **Information Fusion Centre – Indian Ocean Region (IFC-IOR)** located in Gurugram.

- **Regional Security Cooperation:** Mauritius actively participates in the **Colombo Security Conclave**, collaborating with **India, Sri Lanka, Maldives**, and **Bangladesh** to address shared regional security concerns, including maritime security, counter-terrorism, and disaster management. This engagement underscores Mauritius's commitment to collective security in the IOR.

4. Indian Diaspora & Cultural Significance:

- **Historical & Cultural Ties:** With nearly **70% of its population of Indian origin**, Mauritius shares deep historical and cultural ties with India.
- **Diaspora Benefits:** The extension of Overseas Citizenship of India (OCI) privileges to Mauritians with Indian ancestry traceable up to the 7th generation significantly strengthens the enduring bond between the two nations, fostering deeper people-to-people ties and facilitating cultural and economic exchange through the diaspora.
- **Education & People-to-People Ties:** Through initiatives like **ITEC and ICCR scholarships**, as well as the **Know India Programme (KIP)**, India actively engages Mauritian youth, fostering educational and training opportunities while connecting them with India's rich cultural heritage.

What are the areas of cooperation between India and Mauritius?

1. Economic Cooperation

- **Trade & Investment:** India has been one of Mauritius' largest trade partners, with exports including **petroleum products, pharmaceuticals, textiles, and food items**.
- **DTAA & CECPA:** In order to address concerns regarding **tax evasion and Base Erosion and Profit Shifting (BEPS)** through Mauritius, India revised the DTAA in 2016 while subsequently, the CECPA in 2021 was implemented to facilitate smoother and more **transparent trade and investment** flows between the two nations.
- **Financial & Business Collaboration:** Mauritius has a well-developed banking sector, making it a financial hub destination for Indian businesses, like Mauritius is adopting India's UPI to make seamless, cashless payments in their country.
- **Indian PSUs:** Indian companies and PSUs play a crucial role in banking, construction, telecommunications, and energy sectors.

2. Infrastructure & Development Cooperation: India's commitment to Mauritius's development is demonstrated through a **Special Economic Package of \$353 million**, supporting key infrastructure projects like the **Metro Express**, alongside a **\$500 million Line of Credit** for ten priority initiatives, including the **National Archives, Mauritius Police Academy**, and the establishment of the **first overseas Jan Aushadhi Kendra**.

3. Military & Security Cooperation

- **Maritime Security:** India supplies **patrol vessels (CGS Barracuda & CGS Victory)** and assists in securing Mauritius' **Exclusive Economic Zone (EEZ)**. Mauritius participates in India-led **VARUNA & MILAN naval drills**. Oceanographic surveys through India's INS Sarvekshak mapped 25,000 sq. km of Mauritius' oceanic territory.
- **Anti-Piracy & Regional Stability:** **Surveillance & intelligence sharing using** coastal radar networks and **Agaléga Island** surveillance enhance maritime domain awareness.

4. Humanitarian Assistance & Disaster Response

- **COVID-19 Assistance:** India supplied 1 lakh free Covishield vaccines (2021) and additional doses. Sent 13 tonnes of medicines and an Indian Medical Team (2020).
- **Wakashio Oil Spill (2020):** India dispatched 30 tonnes of technical equipment, a 10-member response team, and INS Nireekshak for salvage operations.

What are the challenges in India-Mauritius Relations?

1. **Declining FDI Inflows from Mauritius:** The 2016 amendment of the DTAA reduced the attractiveness of Mauritius as an FDI conduit to India. E.g. FDI from Mauritius declined from \$15.72 billion in 2016-17 to \$6.13 billion in 2022-23, making Mauritius India's third-largest FDI source after Singapore and the USA.
2. **Trade Imbalance & Limited Diversification:** India's exports to Mauritius are significantly higher than Mauritian exports to India. E.g. In 2023-24, India's exports to Mauritius were \$778 million, while Mauritius' exports to India were only \$73 million, leading to a tenfold trade imbalance.
3. **China's Expanding Influence:** China has been increasing its economic and strategic presence in Mauritius, challenging India's influence. E.g. China built the Mauritius Supreme Court and has provided infrastructure loans, raising concerns over debt dependency.
4. **Security Challenges: Maritime Issues & Drug Trafficking:** The Indian Ocean Region (IOR) faces growing security concerns, including drug trafficking and illegal fishing. E.g. Mauritius has been a transit hub for drug trafficking networks in the Indian Ocean, which poses a security risk for India's maritime interests.
5. **Slow Execution of Infrastructure Projects:** Some India-funded projects in Mauritius have faced delays due to bureaucratic hurdles and implementation issues. E.g. The Metro Express Project, a key initiative under India's \$500 million Line of Credit, faced initial considerable delays.
6. **Concerns over Chagos Archipelago & Regional Diplomacy:** India initially hesitated to support Mauritius' claim over the Chagos Archipelago, a British-controlled territory, due to strategic relations with the UK and the US. Mauritius expected stronger Indian diplomatic backing at the International Court of Justice (ICJ), but India maintained a diplomatic cautious stance, which led to some diplomatic friction.

What is the way forward?

1. **Maritime Security & Strategic Cooperation:** Strengthening maritime domain awareness through coastal radar networks, joint naval exercises, and real-time intelligence sharing. E.g. Similar to the White Shipping Agreement with France, while expanding the Colombo Security Conclave (CSC) to include more IOR nations.
2. **Advanced Economic & Trade Partnerships:** Revising the DTAA to boost FDI flows, as seen in the India-UAE CEPA, while expanding CECPA to include IT, fintech, and renewable energy, following the India-Singapore CECA model. E.g. Leveraging Mauritius' SADC, COMESA & AfCFTA trade agreements to access African markets.
3. **Unified Diaspora & Cultural Engagement:** Strengthening institutions like the Mahatma Gandhi Institute and World Hindi Secretariat, similar to cultural preservation models in Fiji & Trinidad, while engaging the Indian-origin diaspora through business forums, academic exchanges, and Pravasi Bharatiya Divas-style summits.
4. **Resilient Diplomatic Relations:** Countering China's expanding influence through infrastructure grants, technology partnerships, and soft power, following India's successful diplomatic model in the Maldives, while ensuring regular high-level engagements. E.g. Like India-Japan Annual Summit, to maintain long-term trust and collaboration.

5. Innovation-Driven Development & Skill Building: Enhancing youth and skill development programs through educational exchanges, following the India-UAE Skill Development MoU, while promoting fintech and digital payment integration, similar to India's UPI expansion into foreign markets.

6. Strategic Vision for the Future: Developing a **25-year roadmap** for a “**New India-Mauritius Partnership**,” similar to **India-UAE Vision 2030**, while integrating successful models like the **India-Singapore Smart City Collaboration** for Mauritius' urban development.

Read more– [The Hindu](#)

UPSC Syllabus- GS 2- India and its neighborhood- relations

Tribunals in India- Explained Pointwise

Tribunal is a specialized, **quasi-judicial body** established to resolve specific disputes, such as administrative or tax-related issues. It **adjudicates disputes, determines rights, and reviews administrative decisions**. The number of pending cases in India exceeds 4.5 crore (as per the National Judicial Data Grid, 2024), highlighting the dire need for an efficient system. According to the **Tribunals Reforms Act, 2021**, the Government has merged and rationalized several tribunals, aiming to improve efficiency. **Tribunals in India**



What are the constitutional and legal provisions related to Tribunals in India?

The original Constitution did not include provisions related to tribunals. However, the **42nd Amendment Act of 1976** introduced **Part XIV-A**, titled “**Tribunals**,” which consists of two articles:

- **Article 323A** – Pertains to administrative tribunals.
- **Article 323B** – Covers tribunals for other specific matters

Provisions	Description
Article 323A	Grants Parliament the power to establish administrative tribunals for resolving disputes related to recruitment and service conditions of individuals employed in the Central and state governments, local bodies, public corporations, and other public authorities
Article 323B	Authorizes both Parliament and state legislatures to create tribunals for various matters, including industrial and labor disputes, foreign exchange, land reforms, elections, rent and tenancy rights, and more.

Administrative Tribunals Act, 1985

To implement Article 323A, Parliament enacted the Administrative Tribunals Act, 1985, empowering the Central Government to establish:

- **Central Administrative Tribunal (CAT)** for central government employees.
- **State Administrative Tribunals (SATs)** for state government employees.

What are the landmark judgement's related to tribunals in India?

S.P. Sampath Kumar v. Union of India (1987)	Recognized tribunals as substitutes for High Courts and upheld their constitutional validity .
L. Chandra Kumar v. Union of India (1997)	Declared that tribunals cannot act as substitutes for High Courts and must be subject to judicial review under Article 226 and 227 .
Madras Bar Association v. Union of India 2014	Administrative support for all tribunals should come under the Ministry of Law and Justice.
Roger Mathew versus South Indian Bank Limited & ors, 2019	The impact of amalgamation of tribunals should be analysed with judicial impact assessment .
Madras Bar Association versus Union of India, 2020	National Tribunals Commission should be set up to supervise appointments, as well as functioning and administration of tribunals.
Madras Bar Association versus Union of India, 2021	Struck down various provisions in tribunal reforms that undermined judicial independence.

What are the key developments in the Indian tribunal system?

Pre-Independence Era (Before 1947)	The Income Tax Appellate Tribunal was established as India's first tribunal to reduce court workload and expedite tax dispute resolution
Post-Independence Era (1947–1980)	<p>1950: Industrial Disputes (Appellate Tribunal) Act provided for an appellate tribunal to handle industrial disputes.</p> <p>1969: The First Administrative Reforms Commission recommended Civil Services Tribunals at national and state levels for service-related disputes.</p> <p>1974: The Sixth Law Commission suggested high-powered tribunals to reduce High Court case backlogs.</p> <p>1976: The Swaran Singh Committee recommended setting up</p> <ul style="list-style-type: none"> a. Administrative Tribunals ((both at national level and state level) for service-related cases. b. All-India Appellate Tribunal for labor disputes. c. Sector-specific tribunals for revenue, land reforms, and essential commodities. d. Supreme Court oversight for tribunal decisions.
Golden Era of Tribunalization (1980–2000)	<p>Establishment of several tribunals, including:</p> <ul style="list-style-type: none"> a. Central Administrative Tribunal (CAT) – for administrative matters. b. Securities Appellate Tribunal (SAT) – for financial sector disputes. c. Film Certification Appellate Tribunal – for film certification disputes. d. Appellate Tribunal for Electricity – for tariff-related cases.
2000–2016: Expansion of Tribunals	<p>2000: Debt Recovery Tribunal (DRT) – for resolving disputes between banks and borrowers.</p> <p>2002: Competition Commission of India (CCI) and Competition Appellate Tribunal (COMPAT) – to regulate fair competition.</p> <p>2010: National Green Tribunal (NGT) – for environmental disputes.</p> <p>2016: National Company Law Tribunal (NCLT) & National Company Law Appellate Tribunal (NCLAT) – for corporate and insolvency matters.</p>

2017- Merger of COMPAT with NCLAT	The Finance Act, 2017 reduced the number of tribunals from 26 to 19 based on functional similarity. It gave the central government authority to define qualifications, appointments, and service conditions for tribunal members.
Tribunal Reforms Act, 2021	The Tribunals Reforms (Rationalization and Conditions of Service) Bill, 2021 aimed to streamline the tribunal system . Nine tribunals were abolished , transferring their functions to existing judicial bodies, mainly High Courts.

Why are tribunals important, and what is their significance?

- 1. Speedy Justice:** Tribunals are designed to offer **faster dispute resolution** compared to traditional courts. **E.g.** The **Consumer Disputes Redressal Commissions** resolve cases within 3-6 months, NCLT expedited cases under the **Insolvency and Bankruptcy Code (IBC), 2016**, ensuring faster debt recovery.
- 2. Specialized Expertise:** Tribunals were designed to handle complex, sector-specific disputes requiring technical expertise. **E.g.** **Power sector (APTEL), taxation (ITAT), corporate law (NCLAT), copyright (IPAB).**
- 3. Reducing Court Burden:** By handling **specialized cases**, tribunals reduce the workload of **high courts** and the **Supreme Court**. **E.g.** The **Central Administrative Tribunal (CAT)** has significantly reduced litigation burden in service-related disputes.
- 4. Economic Governance:** Tribunals like the **NCLT** and **DRT** play a critical role in ensuring economic stability and ease of doing business. **E.g.** Creditors have recovered approximately Rs 3.55 lakh crore by resolving 1,068 insolvency cases under the IBC, 2016, as of September 2024 since 2016.
- 5. Environmental Protection & Protecting Fundamental Rights:** The **National Green Tribunal (NGT)** has played a pivotal role in environmental protection cases like the **Vizag Gas Leak (2020)**. It is also instrumental in addressing environmental issues, such as the Yamuna pollution case and illegal mining in Aravalli Hills.
- 6. Access to Justice:** Tribunals provide a cost-effective and accessible forum for resolving disputes, especially for **marginalized groups**.
- 7. Alternative Dispute Resolution (ADR):** Tribunals provide an alternative dispute resolution mechanism, which can be less adversarial and more conducive to finding mutually agreeable solutions.

What are various challenges faced by Tribunals in India?

- 1. Case Backlogs Rising:** As of 2023, the **Debt Recovery Tribunal (DRT)** has over **215,431 pending cases**, with an asset recovery rate of just **9.2%** in 2022-23, far below the desired efficiency.
- 2. Mergers and Abolitions Causing Hindrance:** The merger of tribunals like **COMPAT** with **NCLAT** has led to overburdened benches and loss of specialization.
- 3. Lower Vacancies and Poor Infrastructure:** Tribunals like **APTEL** face chronic vacancies and lack adequate infrastructure, leading to delays. **NCLT** operated **at 50% capacity in 2023**, delaying crucial insolvency resolutions. Many tribunals lack digital case management systems, affecting efficiency.
- 4. Judicial Overreach:** The **Supreme Court's** intervention in the **Telecom Disputes Settlement and Appellate Tribunal (TDSAT)** ruling on the **Adjusted Gross Revenue (AGR)** dispute has raised questions about the legal standing of tribunals.

5. Appointment Concerns: The trend of appointing **retired judges and bureaucrats** raises questions about post-retirement placements and expertise. **E.g. The Ministry of Law and Justice** controls appointments and budgets which reduces the administrative independence.

6. Lack of Uniformity: Different tribunals follow varying procedures, leading to inconsistency. For instance, the **Armed Forces Tribunal (AFT)** and **Central Administrative Tribunal (CAT)** have different rules for evidence submission.

7. Ineffective Implementation: The appointment process for tribunal members is slow and opaque, leading to prolonged vacancies. **E.g. The Law Commission's 272nd Report (2017)** recommended a **central nodal agency**, but no progress has been made.

8. Economic Impact: Delays in tribunal decisions have significant economic consequences. **E.g. unresolved tax disputes worth ₹12 lakh crore** are pending before various tribunals, affecting government revenue and investor confidence.

What is the Way Forward?

1. Establish an Independent Tribunal Oversight Body: Inspired by the National Judicial Appointments Commission (NJAC), a **Tribunal Commission** should oversee appointments, funding, and administration. **E.g. The Law Commission's 162nd Report** suggested a **National Administrative Appellate Tribunal** above High Courts—an idea that needs revisiting.

2. Structured Tribunal Management System: A **Central Tribunal Division** within the Ministry of Law and Justice should be implemented to streamline operations. Case management technology and AI-based analytics should be deployed to track tribunal performance.

3. Implement a Double-Shift System to Expedite Disposal: To clear the backlog, tribunals should operate in two shifts, a proposal discussed in 2011 but never implemented. This would increase case disposals without increasing infrastructure costs.

4. Strengthen the Specialization and Independence of Tribunals: Instead of appointing retired bureaucrats, **tribunals must have domain-specific technical panels** to ensure **subject matter expertise**. Reduce judicial interventions by strengthening tribunal autonomy under the **Tribunals Reforms Act**.

5. Digital Transformation of Tribunals: Fully digitalize tribunal processes through an **e-Tribunals initiative**, ensuring real-time case tracking. Integrate **online dispute resolution (ODR) mechanisms** to reduce case inflow into traditional tribunals. **E.g. The UK's HM Courts & Tribunals Service**.

6. Minimizing Executive Control: The legislature should reduce bureaucratic control over tribunal functioning, as recommended in **Roger Mathew (2019) case**.

7. Enhancing Judicial Autonomy: Ensure tribunals operate with **minimal interference** from higher courts, as emphasized in the **L. Chandra Kumar vs Union of India (1997) case**.

Read more– [Live mint](#)

UPSC Syllabus- GS 2– Quasi-judicial bodies

Rise of Quick commerce in India- Explained Pointwise

Quick commerce is altering India's retail and last-mile delivery landscape. It stands out as a prominent trend in the country's e-commerce sector, leveraging the widespread availability of mobile internet and the rise of e-commerce. The sector is poised for massive growth, with **India's quick commerce market expected to reach US\$5 billion by 2025 and US\$9.94 billion by 2029 as per some estimates**. Key growth drivers include changing consumer preferences, increased e-commerce adoption, and demand for convenience among millennials and Gen Z.



Fig: As per IIM Ahamdabad, Future of Quick commerce in the Indian market.

What is a Quick Commerce?

Quick commerce, or Q-commerce, in India, refers to **ultra-fast delivery (often within 10-30 minutes)** of essential **goods like groceries and personal care items**, leveraging hyper-local fulfillment networks and technology. It's a growing trend driven by consumer demand for convenience and immediacy in urban areas.

Feature	Traditional E-commerce	Quick Commerce
Delivery Speed	Typically, 1-7 days or more	Few minutes to 1-2 hours
Delivery Range	Wide geographical coverage (national, international)	Limited to a small, local area (city, neighborhood)
Product Focus	Wide range of products (electronics, apparel, home goods, etc.)	Primarily daily essentials, groceries, convenience items, and ready-to-eat food

Inventory Management	Centralized warehouses, distributed fulfillment centers	Localized micro-warehouses or dark stores
Order Size	Often larger, planned purchases	Smaller, immediate needs, impulse buys
Customer Needs	Planned purchases, variety, price comparison	Immediate gratification, convenience, urgent needs
Pricing Strategy	Competitive pricing, discounts, promotions	May have slightly higher prices for convenience and speed
Logistics	Long-haul transportation, standard delivery services	Hyperlocal delivery, bike couriers, dedicated delivery fleets
Technology Focus	Website/app-based ordering, standard logistics tracking	Real-time inventory management, route optimization, rapid delivery tracking
Operational Cost	Lower operational costs per unit	Higher operational costs per unit due to rapid delivery and hyperlocal logistics
Examples	Amazon, Flipkart, eBay	Zepto, Blinkit (formerly Grofers), Dunzo, Swiggy Instamart
Target Audience	Wide spread audience	Urban, time-sensitive customers

What is the current status of quick commerce in terms of market size and growth?

- 1. Market Size:** The Indian Q-commerce market, valued at \$3.34 billion in FY 2024, is **projected to reach \$9.95 billion by 2029**, growing at a staggering 76% YoY (Grant Thornton Bharat).
- 2. Market Growth:** According to Chryseum Financial Services the Gross Merchandise Value (GMV) of quick commerce **surged from \$0.5 billion in FY22 to \$3.3 billion in FY24**, marking a staggering 280% growth over two years.
- 3. Market Leaders:** The top three players, **Zomato-owned Blinkit (46% market share)**, **Zepto (29%)**, and **Swiggy Instamart (25%)**—dominate the sector (Motilal Oswal, FY 2025 Q1).
- 4. Consumer Base:** Quick commerce caters primarily to urban households, with **20 million addressable households** in metro and Tier 1 cities
- 5. Consumer Preferences:** A **Deloitte Consumer Survey (2024)** found that **12% of urban consumers prefer Q-commerce**, especially for food and beverages, driven by impulse purchases and immediate needs.

6. FMCG Sales: According to Deloitte, large FMCG brands have seen a two-fold increase in Q-commerce sales, now comprising 35% of their total online sales.

7. Adoption Trends: Quick commerce platforms are growing at a rate of 20-25% faster than traditional e-commerce platforms, reflecting a significant shift in consumer behavior.

Why is Q-Commerce so effective, and what makes it successful?

1. Improving Urban Convenience: Q-commerce caters to late-night needs and unaddressed demand, offering services when traditional retail shops are closed (EY-Parthenon). With India's internet user base expected to exceed 900 million by 2025, increasing digital adoption will further fuel e-commerce expansion.

2. Dark Stores: The Backbone of Speed: These strategically located warehouses enable hyperlocal fulfillment, ensuring sub-20-minute deliveries.

3. Data-Driven Demand Forecasting: Platforms use customer app activity to predict seasonal trends, optimize inventory, and curate personalized recommendations.

4. Brand Awareness: According to IIM Ahmedabad, Q-commerce enhances brand visibility and consumer engagement for retailers.

- **Workforce Availability:** The availability of low-cost, employable manpower has been a key driver of Q-commerce's efficiency and growth in India (EY-Parthenon).
- **Expanding Reach to Tier-2 and Tier-3 Cities:** Quick commerce is extending its footprint beyond metros, catering to rising digital penetration in smaller cities. Tier-2 and Tier-3 cities accounted for 60% of India's total e-commerce demand in 2023, with a projected annual growth of 30% by 2025.

5. Employment Growth and Strengthening the Gig Economy:

- The sector is generating vast employment opportunities, especially for delivery personnel and warehouse workers. NITI Aayog's report on the gig economy projects 23.5 million gig workers by 2029-30, making up a significant share of non-agricultural employment.
- The availability of low-cost, employable manpower has been a key driver of Q-commerce's efficiency and growth in India (EY-Parthenon).
- No Time Restrictions, unlike retail stores that shut by 8 PM, Q-commerce fulfills late-night demand, capturing a previously unaddressed market segment.

6. Facilitating Emergency and Essential Deliveries:

- These platforms played a crucial role during Covid-19 lockdowns, ensuring uninterrupted supply of essential goods. Swiggy Instamart's partnership with Earth Fokus during Bengaluru's 2024 water crisis enabled the rapid distribution of water-saving aerators.
- Food, beverages, and daily essentials drive demand, while traditional e-commerce remains dominant for planned purchases (Deloitte, 2024).

What are the different challenges does quick commerce pose?

1. Anti-Competitive Practices: Quick commerce platforms face accusations of predatory pricing and deep discounting, aimed at eliminating competition (AICPDF complaint to CCI). Traditional retailers claim these practices create an uneven playing field, forcing small businesses to shut down.

2. Algorithmic Price Manipulation & Differential Pricing: Platforms allegedly use **customer data** (location, device type, purchasing behavior) to implement **differential pricing**, disadvantage certain consumers. This raises concerns about fairness and transparency in pricing strategies.

3. Threat to Traditional Retail: Millions of **Kirana stores** and distributors face **losses** or **closure** due to the aggressive strategies of Q-commerce platforms (AICPDF). The shift in consumer preferences toward **ultra-fast deliveries** and **discounts** has reduced footfall in local shops.

4. Worker Exploitation & Delivery Rider Risks: **Gig workers** face **poor working conditions**, **low wages**, and **road safety hazards** due to high-pressure delivery targets. Protests by delivery riders in cities like Bengaluru and Mumbai highlight the **lack of social security, insurance, and fixed salaries**.

5. Unsustainability of the Business Model: Quick commerce relies heavily on **discounts**, **cash burn**, and **investor funding**, making it unsustainable in the long term. **E.g. Zepto reportedly burned through ₹1,200 crore in Q4 2024**, averaging ₹400 crore per month (Industry reports).

6. Environmental Impact of Rapid Deliveries: The sector contributes to **carbon emissions** and **packaging waste** due to reliance on **motorbikes and single-use plastics**. Despite initiatives like **plastic-neutral deliveries**, implementation remains inconsistent (Zomato, Swiggy).

7. Carbon Footprint of Rapid Deliveries: The quick commerce sector is contributing to rising carbon emissions and packaging waste, with most deliveries relying on non-sustainable practices. **E.g. E-commerce transportation** contributes significantly to **CO2 emissions**, with India accounting for 285g CO2 per parcel, making up 51% of total delivery emissions.

What are the Solutions for a Sustainable Quick Commerce Ecosystem?

1. Fair Competition & Regulatory Oversight: CCI intervention is essential to curb predatory pricing while fostering innovation (AICPDF complaint to CCI). Establish a **National E-Commerce Regulatory Authority** to monitor pricing, data protection, and monopolistic practices. **E.g. EU Digital Markets Act & Digital Services Act.**

2. Hybrid Retail Models & MSME Integration: **Kirana store partnerships** can blend hyperlocal expertise with Q-commerce efficiency (ONDC framework). Platforms should source inventory from MSMEs to ensure fair market access. **E.g. China's JD Daojia & Alibaba's Freshippo.**

3. Stronger Gig Worker Protections: Enforce **Code on Social Security, 2020** to mandate fair wages, insurance, and safety measures. Diwali delivery worker video (2024) sparked debate on low pay; gig workers need fixed hours and accident coverage. **E.g. California's Proposition 22.**

4. Delivery Time & Safety Standards: Regulate **minimum delivery timelines for non-essential goods** to prevent over-speeding and rider fatigue. Bengaluru traffic police fined riders ₹30.57 lakh in Nov 2024, highlighting risks of rushed deliveries. **E.g. South Korea's Delivery Speed Regulation: Caps maximum daily working hours.**

5. Sustainable Logistics & Green Supply Chains: Introduce **eco-friendly packaging mandates** and promote **EV-based delivery fleets** under the FAME scheme. India's e-commerce CO₂ emissions: 285g per parcel (51% of total delivery emissions); urgent shift to green logistics needed. **E.g. Germany's DHL GoGreen Initiative.**

6. Data Privacy & Consumer Protection: Enforce **Digital Personal Data Protection Act, 2023** to regulate customer data usage and pricing transparency. 48% of shoppers reported incorrect deliveries; 20% received counterfeit products—stricter consumer protection needed.

7. Standardized Grievance Redressal Mechanisms: Mandate **transparent escalation processes** for refunds, damaged goods, and complaints. A **central ombudsman for consumer issues** can speed up resolutions and boost trust.

Read more– [The Hindu](#)

UPSC Syllabus- GS 3– Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment

Public Health Education in India- Explained Pointwise

The **decision by the United States to withdraw from the WHO** and drastically **reduce the scale of the USAID** has sent shock waves through the public health world, disrupting health-care services in many low and middle income countries. The US withdrawal/pullout will directly impact the public health job market in India, reducing opportunities for thousands who are pursuing their Master of Public Health (MPH) and similar postgraduate courses. **Public Health Education in India.**



What is Public Health and Public Health Education?

Public Health- According to WHO, Public health refers to all **organized measures to prevent disease, promote health, and prolong life** among the population as a whole.

Public health education (PHE) is the process of equipping **individuals and communities** with the **knowledge, skills, and attitudes** necessary to make informed decisions and promote healthy behaviors, ultimately aiming to improve population health and well-being. PHE differs from **clinical health education** in that it **focuses on the health of entire populations**, rather than **individual patients**.

What steps have been taken in the direction of improvement of Public Health Education in India?

1. Expansion of Public Health Institutional Framework– There has been a growth in dedicated **public health institutions**, from just 23 institutions offering public health courses in 2000 to over 90 today. **E.g. Public Health Foundation of India (PHFI) and Creation of Indian Institutes of Public Health (IIPH)** in multiple states.

2. Diversification of Public Health Educational Programs- Introduction of **Master of Public Health programs (MPH)** across various universities, and specialized courses in epidemiology, health economics, health systems management and short-term certificate courses for working professionals. **E.g. JIPMER Puducherry's integrated MD-MPH program combines clinical and public health training.**

3. Multidisciplinary Approach to Public Health Care– There has been increasing focus One Health approach connecting human, animal, and environmental health. Further, steps have been taken towards the Interdisciplinary integration of programs like combine epidemiology, biostatistics, social sciences, and management. **E.g. Tata Institute of Social Sciences (TISS) Health Systems Studies program** incorporating economics, sociology, and anthropology.

4. Industry-Academia Partnerships– Collaboration with **international organizations** like (WHO, UNICEF, World Bank), public-private partnerships for training and research and **NGO** involvement in practical training and field exposure.

5. Increased emphasis on research and Capacity Building- There has been a 5-fold increase in public health research publications from India between 2000-2020. **E.g. National Centre for Disease Control's Field Epidemiology Training Program.**

6. Digital Health Integration/Health Informatics: Expansion of training in health informatics and digital health technologies along with skill development for telemedicine and remote healthcare delivery. **E.g. IIT Kharagpur's Certificate Program in Healthcare Informatics.**

7. Emphasis on Field Experience: Increased focus on mandatory fieldwork and community-based learning, rural and urban health internships with exposure to primary healthcare centers and district health systems. **E.g. PHFI's evaluation of public health graduates, 2022 reported 76% adequate field experience in PHE, up from 43% in 2012.**

8. Global Health Perspective: International collaborations with leading global health institutions and curriculum alignment with **global competency frameworks** have been increased. **E.g. Joint MPH degree between Johns Hopkins and IIPH-Delhi.**

What is the Significance of Public Health Education?

1. Essential for the development of Healthcare Workforce: Public health professionals play a **vital role in disease prevention, epidemiology, and policy-making**, beyond traditional medical practice.

2. Strengthened public health outcomes: Countries with **strong public health cadres**, such as the **United Kingdom NHS and the United States CDC**, have demonstrated better health outcomes.

3. Minimising the epidemic losses: The pandemic underscored **India's shortage of trained public health personnel**, leading to delays in disease surveillance and response mechanisms.

4. Bridging the Gap in Rural Health Services: Programs like **National Rural Health Mission NRHM** require a trained public health workforce to enhance primary healthcare delivery.

5. Seed for Research & Development: Public health education supports **evidence-based policymaking**, crucial for disease prevention and health system planning.

6. Reduction of Out of Pocket Health Care Expenditure: According to the **World Bank**, every **\$1 invested in public health yields a return of \$14** by reducing disease burden and healthcare costs.

7. Fulfillment of the Constitutional Mandate- The development of a dedicated public health workforce in India is a step towards the fulfillment of the state's responsibility of improving public health care under **Art 47 of the constitution**.

What are the challenges?

1. Limited Employment Opportunities- Despite the increase in the institutions offering **Master of Public Health MPH** degrees, the public sector hiring has plateaued, leaving thousands of graduates without viable employment.

2. Low Government Investment in Healthcare- According to the **Economic Survey 2023-24**, India's **public health expenditure** remains at just **2.1% of GDP**, significantly lower than the **WHO-recommended 5%**.

3. International Aid & Funding Constraints- The **shrinking of USAID and WHO funding** has impacted research and public health projects.

4. Neglect of public health specialists by the Private Sector- With the private sector prioritizing hospital and business management professionals over public health specialists, the non-clinical public health professionals face an increasingly competitive job market.

5. Unequal Distribution of Public Health Institutes- Large states like **Bihar, Assam, and Jharkhand** have few or no institutions offering MPH degrees, creating regional disparities in public health education.

6. Lack of Regulation: Currently, **MPH courses are not mandatorily regulated** by any statutory body like the **National Medical Commission (NMC)** or **University Grants Commission (UGC)**. The absence of a standardized curriculum results in **inconsistencies in training**.

What should be the way forward?

1. Establish a Dedicated Public Health Cadre: Create a **state-level public health management cadre**, similar to the Indian Administrative Service (IAS), to absorb trained professionals into government roles. **E.g. UK's National Health Service NHS Public Health Specialty Training.**

2. Introduce a Regulatory Framework: Establish a **public health education board** under NMC or UGC to standardize MPH curricula, faculty training, and accreditation. **E.g. U.S. Council on Education for Public Health CEPH.**

3. Expand Government Recruitment: Increase **public health job opportunities** in primary healthcare, epidemiology, and health policy sectors. **E.g. Thailand's Health Promotion Foundation ThaiHealth, which integrates trained public health workers into government programs.**

4. Enhance Practical Learning: Introduce mandatory field training in district health offices, research institutes, and public health projects. **E.g. USA CDS's Epidemic Intelligence Service EIS.**

5. Incentivize Research & Development: Increase domestic research funding through **ICMR and DBT**, reducing dependence on foreign grants. **E.g. Germany's Helmholtz Association of Public Health Research.**

6. Public-Private Partnerships PPP: Encourage collaborations between public health institutes and corporate CSR initiatives to create employment avenues. **E.g. Singapore's PPP model for health promotion and capacity building.**

7. Increase MPH Seats in Underserved States: Prioritize MPH program expansion in Bihar, Assam, Jharkhand, and North-Eastern states.

8. Community Involvement and Feedback Mechanisms: Initiatives like **Mera Aspataal** allow patient feedback, helping improve the quality of services in public and private health facilities. Community involvement in health programs builds trust and ensures that health education meets local needs.

Read more– [The Hindu](#)

UPSC Syllabus- GS 2– Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources

Universal Health Coverage (UHC) in India- Explained Pointwise

India aims to ensure universal health coverage with the opening of Jan Aushadhi Kendras under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP). The scheme reaffirms the government's commitment to **Universal Health Coverage (UHC)** and to ensure that no citizen is left behind in availing quality health services.



Source- WHO

What is Universal Health Coverage (UHC) and its Key Principles?

Universal Health Coverage (UHC)– According to the **WHO**, UHC means that all people have **access to the full range of quality health services they need, when and where they need them**, without financial hardship. It is embedded in **the Sustainable Development Goals (SDG target 3.8)**.

UHC covers the full continuum of essential health services, from health promotion to **prevention, treatment, rehabilitation, and palliative care** across the life course. It is guided by the **principles of equity, non-discrimination, and the right to health**, focusing on reaching marginalized populations to ensure **no one is left behind**.

UHC = All People Have Access to Quality + Affordable Health Services (World Bank)

Key Aspects and Principals of UHC

1. Equitable Access- Healthcare services should be accessible to everyone, regardless of socio-economic status.

2. Quality Healthcare- Services must be of good quality to improve health outcomes.

3. Financial Protection- No one should be forced into financial distress due to medical expenses.

What has been the evolution of UHC globally and in India?

Alma-Ata Declaration (1978)	The WHO conference emphasized Health for All as a global priority.
Sustainable Development Goals (SDGs) (2015)	SDG 3.8 (2015): UHC was officially included in the UN SDGs, with a commitment to achieving it by 2030. E.g. Countries like Thailand, Rwanda, and Costa Rica became global examples of successful UHC implementation.
Global Action Plan (2019)	The first UN High-Level Meeting on UHC adopted a Global Action Plan to support countries in achieving SDG 3.8.

Evolution of UHC in India

India's commitment to UHC is reflected in its policies, programs, and constitutional provisions. **Articles 39(e), 42, and 47** of the Indian Constitution **mandate the State to improve public health and ensure access to quality healthcare**. Some significant initiatives under the UHC which has evolved over decades include-

Early post-Independence Era (1950s-1980s): Focus on Public Health Infrastructure	<p>Bhore Committee (1946, implemented post-1950s)-Recommended a state-funded, free healthcare system, leading to the establishment of a three-tier system-Primary Health Centres (PHCs), Community Health Centres (CHCs), and District Hospitals.</p> <p>First Five-Year Plan (1951-1956): Laid the foundation for a public healthcare system, emphasizing primary healthcare and rural health centers.</p> <p>National Health Programs (1950s-1980s): Introduced for diseases like malaria, tuberculosis, and leprosy, reflecting a disease-centric rather than a holistic UHC approach.</p>
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Economic Liberalization & Rise of Private Healthcare (1990s-2000s)	<p>1991 Economic Reforms: Shifted focus towards privatization, leading to rapid growth in private hospitals and health insurance. However, there was a stagnation in Public healthcare investment.</p> <p>1997 RSBY (Rashtriya Swasthya Bima Yojana): Health insurance scheme for Below Poverty Line (BPL) families, marking a shift toward demand-side financing rather than direct service provision.</p> <p>National Rural Health Mission (NRHM)-2005: Expanded healthcare access in rural areas, strengthened PHCs, and introduced ASHA (Accredited Social Health Activist) workers, bringing UHC-like principles into maternal and child healthcare.</p>
Accelerating UHC Efforts (2010s-Present)	<p>National Health Policy (NHP) 2017: Explicitly emphasized UHC, proposing strategic purchasing of healthcare services from both public and private sectors.</p> <p>Ayushman Bharat (2018-Present): India's most ambitious step toward UHC, focusing on:</p> <ul style="list-style-type: none"> • PM-JAY (Pradhan Mantri Jan Arogya Yojana): Free health insurance covering 50 crore (500 million) low-income citizens. • Health & Wellness Centres (HWCs): Upgrading PHCs to provide comprehensive primary healthcare, including non-communicable diseases (NCDs) and mental health. <p>Ayushman Bharat Digital Mission (ABDM)- It will enhance equitable access to quality healthcare. This is by promoting technologies like telemedicine and ensuring national portability of health services through the creation of ABHA (Ayushman Bharat Health Account) numbers for citizens.</p> <p>Other important schemes and programmes- Include the National Mental Health Programme (NMHP), National Programme for Health Care of the Elderly, POSHAN 2.0 for nutrition, and Fit India Campaign for promoting healthy lifestyles.</p> <p>The Universal Health Care Bill (2021) aims to provide quality healthcare to all citizens, integrate primary healthcare into government schemes, and enhance transparency in the healthcare system.</p>

What is the Significance of UHC in India?

1. Economic Growth- Countries that invest in UHC experience faster economic growth due to improved workforce productivity and reduced poverty. E.g. **China's UHC reforms** (1990s–2010s) significantly reduced poverty and boosted economic gains, showcasing how strong healthcare systems can support national economic growth.

2. Reduction in Out-of-Pocket (OOP) Expenditure- Healthcare costs push millions into poverty every year. UHC ensures that no one has to choose between healthcare and financial stability. **E.g.**

- a. Countries with **strong UHC models** (e.g., Thailand's Universal Coverage Scheme) have reduced OOP expenses to below 15% of total health spending.
- b. India's **AB-PMJAY**, has resulted in **₹1.25 lakh crore in OOP savings**, significantly reducing catastrophic health expenditure (CHE) for inpatient care.

3. Improved Health Outcomes- UHC enhances population health by **improving access to preventive, primary, and specialized care**. States with **higher public health expenditure** (Kerala, Tamil Nadu, Himachal Pradesh) have better health indicators compared to states with high AB-PMJAY enrollment but weaker public health infrastructure.

4. Disease Burden Reduction- As per **World Bank** preventive healthcare and early screening can save **₹4.8 lakh crore in productivity losses** by 2030 by addressing non-communicable diseases (NCDs) like diabetes, hypertension, and heart diseases.

5. Social Equity & Reducing Healthcare Disparities- UHC ensures that healthcare is not a privilege but a right, especially for vulnerable groups such as Scheduled Tribes, women, and low-income communities. **E.g.** According to the NSS 75th Round, marginalized communities bear the highest OOP expenses, making UHC critical for reducing health inequities.

6. Boosting Medical Tourism & Global Healthcare Leadership- India's medical tourism sector generated \$7.69 billion in 2024, with projections to reach \$14.31 billion by 2029. Affordable, high-quality healthcare and advanced medical procedures attract international patients, reinforcing India's status as a global healthcare hub.

What are the Challenges in Achieving True UHC?

1. Inadequate Public Health Expenditure- India's public health expenditure (PHE) remains low at 1.9% of GDP (Economic Survey 2024-25), below the WHO-recommended 5% GDP target. This results in substandard quality of public healthcare. **E.g.** India **loses 6% of GDP annually** due to premature mortality and morbidity (Lancet Report)

2. Regional Disparities- Healthcare infrastructure is unevenly distributed, with urban areas having access to superior facilities compared to rural areas. **E.g.** While 70% of India's healthcare professionals are located in urban regions, 65% of the population resides in rural areas.

3. OOP Expenditure & Financial Risk Protection- OOP spending accounts for **48.2% of total health expenditure** (National Health Accounts 2022). Over 60 million people are pushed into poverty annually due to healthcare costs.

4. Limited Coverage of Outpatient Care- AB-PMJAY (World's Largest PFHI Scheme), covers only inpatient care, neglecting outpatient services (OPD), diagnostics, and medicines, which accounts for the largest share of OOP expenses, which remains largely unaddressed.

5. Government vs. Private Sector Dependence- Two-thirds of outpatient care is provided by the private sector, leading to **heavy private-sector dependency** in UHC expansion. Government health insurance schemes like **Employees' State Insurance** (ESI) and **CGHS**, outperform AB-PMJAY in financial risk protection due to OPD inclusion but are limited in scope (i.e., only for salaried workers).

6. Neglect of Primary Health Care- The National Health Mission (NHM) allocations have stagnated, while AB-PMJAY's budget has grown. This has led to a widening gap between primary and hospital care.

7. Low Focus on Preventive Healthcare- Preventive measures like immunization, screening, and lifestyle changes remain underused despite being cost-effective. **E.g.** According to **NFHS-5**, in 2021, India's full immunization coverage was just 76.4%, leaving many children at risk.

8. Low Health Awareness- Factors like low educational levels, poor functional literacy, and limited focus on health contribute to low awareness about personal well-being. **E.g.** Many Indian women remain unaware of the benefits of exclusive breastfeeding for children, resulting in issues like stunting and malnutrition.

9. Quality & Accessibility Issues- Many AB-PMJAY empaneled hospitals are **concentrated in urban areas**, limiting access for rural populations. Supply-side constraints (doctors, hospital beds, diagnostic facilities) reduce the scheme's efficiency.

10. Low Insurance Penetration- According to NHFS-5, only 41% of Indian households had a member with health insurance or financial coverage.

What should be the way forward for strengthening UHC in India?

1. Increase Public Health Spending- Raise public health spending to 3-5% of GDP over the next decade. Implement taxation-based financing (sin taxes, corporate health levies) and Increase state-level autonomy in healthcare financing. **E.g.** **NHS Model UK**.

2. Strengthen Primary Healthcare (PHC) & Preventive Care- Increase NHM funding & integrate outpatient services in Ayushman Bharat, expand PHCs with 24/7 services & focus on disease prevention. **E.g.** **Tamil Nadu's PHC Model** which have robust PHCs with decentralized planning & drug supply chain.

3. Integrating Outpatient Care in PFHI- Introduce co-payment models where patients share costs only for OPD services, ensuring financial sustainability.

4. Improve Healthcare Financing through Risk Pooling & Insurance Expansion- Integrate fragmented insurance schemes into a single national framework, and expand contributory health insurance for informal sector workers. **E.g.** **Japan's Universal Insurance Model**.

5. Strengthen Public Health Infrastructure & Human Resources- Increase medical college seats & incentivize rural postings, expand nurse-led PHCs & mid-level health providers. **E.g.** **Canada's Decentralized Healthcare Model**.

6. Leverage Digital Health & Telemedicine- Scale up ABDM for seamless health data integration, expand AI-driven disease surveillance & diagnostics. **E.g.** **Estonia's Digital Health Model** which has 100% electronic health records (EHRs) linked to national ID.

India's journey towards UHC is at a critical juncture. While Ayushman Bharat has expanded financial protection for inpatient care, gaps in outpatient services, primary healthcare, and financial sustainability persist. As Economic Survey 2024-25 notes, UHC must be seen as a long-term commitment, not a quick-fix insurance model. To truly achieve Health for All, India must ensure that UHC does not merely shift costs but genuinely alleviates the financial burden of healthcare.

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UPSC Syllabus- GS 2- Issues Related to Health

Land Reforms in India- Explained Pointwise

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The government of **Andhra Pradesh** has introduced a series of land reforms aimed at overhauling land administration, ensuring transparency, and protecting property rights. These reforms include legislative changes, policy amendments, and administrative modifications to streamline land records and resolve disputes.

Land Reforms in India



In this article, we delve into the land reforms, their evolution in India, their significance, and the challenges in their implementation.

What are Land Reforms and how land reforms evolved in India?

Land reforms refer to various reforms in regulations regarding land ownership and property rights for the benefit of the community as a whole. The main objective of the land reforms is to do away with the existing inequalities in the system of landholding and to increase agricultural productivity.

Evolution of land reforms in india

Pre-Independence Period (Before 1947): Colonial Land Systems	<p>1. Permanent Settlement (1793): Introduced by Lord Cornwallis in Bengal, Bihar, and Odisha, it created Zamindars (landlords) who collected revenue from peasants but led to tenant exploitation.</p> <p>2. Ryotwari System (Madras & Bombay): Direct revenue settlement between British and cultivators (Ryots), but with high taxation.</p> <p>3. Mahalwari System (North India): Village-based revenue collection, yet exploitation remained.</p>
First Phase: Abolition of Intermediaries (1947–1950s)	<p>Government prioritized land reforms to address historical injustices.</p> <p>Key Measures:</p> <p>1. Abolition of Zamindari System: States enacted laws to abolish Zamindari and other intermediary systems. E.g. Uttar Pradesh Zamindari Abolition and Land Reforms Act, 1950.</p> <p>2. First Five-Year Plan (1951–1956): Emphasized the need for land reforms to achieve social justice and equitable distribution.</p>
Second Phase: Tenancy Reforms (1950s–1960s)	<p>Aimed to protect tenants and provide them with ownership rights.</p> <p>Key Measures:</p> <p>1. Regulation of Rent: Laws were enacted to regulate rent and prevent exploitation.</p> <p>2. Security of Tenure: Tenants were given permanent rights over the land they cultivated. E.g. Operation Barga in West Bengal (1978) registered sharecroppers and gave them legal rights.</p> <p>3. Second Five-Year Plan (1956–1961): Focused on tenancy reforms and redistribution of surplus land.</p>

Third Phase: Land Ceiling Laws (1960s-1970s)	<p>Introduced to limit land ownership and redistribute surplus land to the landless.</p> <p>Key Measures:</p> <ol style="list-style-type: none"> 1. Land Ceiling Acts: States imposed limits on land ownership. E.g. Kerala Land Reforms Act, 1963 successfully redistributed land to tenants. 2. Redistribution of Surplus Land: Surplus land was taken from landlords and distributed to landless farmers. E.g. Over 2 million acres were redistributed nationwide by the 1970s. 3. Third Five-Year Plan (1961-1966): Highlighted the need for effective implementation of land ceiling laws.
Fourth Phase: Green Revolution and Shift in Focus (1960s-1980s)	<p>The Green Revolution shifted focus from land redistribution to increasing agricultural productivity.</p> <p>Key Measures:</p> <ol style="list-style-type: none"> 1. Bhoodan and Gramdan Movements: Led by Vinoba Bhave, these movements encouraged voluntary land donations. E.g. Over 4 million acres were donated, but the impact was limited. 2. Consolidation of Land Holdings: Aimed to consolidate fragmented land holdings for better productivity. E.g. Successful in states like Punjab and Haryana. 3. Report of the Task Force on Agrarian Relations (1973): Highlighted the need for effective implementation of land reforms.
Fifth Phase: Stagnation and Challenges (1980s-1990s)	<p>Land reforms lost momentum due to political resistance and bureaucratic inefficiency.</p> <p>Key Issues:</p> <ol style="list-style-type: none"> 1. Ineffective implementation of land ceiling laws. 2. Growing commercialization of agriculture marginalized small farmers. 3. Fourth and Fifth Five-Year Plans: Emphasized the need for land reforms but faced implementation challenges

<p>Sixth Phase: Contemporary Developments (2000s–Present)</p>	<p>Recent land reforms focus on addressing new challenges like urbanization, industrialization, and land acquisition.</p> <p>Key Measures:</p> <ol style="list-style-type: none"> 1. Forest Rights Act, 2006: Recognized the rights of tribal communities and forest dwellers over forest land. E.g. Implementation in states like Odisha and Chhattisgarh. 2. Land Acquisition and Rehabilitation Acts: Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013: Ensured fair compensation for displaced farmers. E.g. protests against land acquisition in Singur (West Bengal) and Nandigram. 3. Digital Land Records: Initiatives like the Digital India Land Records Modernization Programme (DILRMP) aimed to digitize land records. E.g. Bhoomi Project in Karnataka. 4. National Commission on Farmers (2004–2006): Chaired by Dr. M.S. Swaminathan recommended land reforms to protect small and marginal farmers. 5. Land Acquisition Act (2013): Replaced 1894 Act, ensuring fair compensation & rehabilitation. 6. NITI Aayog's Land Leasing Model (2016): Encouraged lease markets for small farmers.
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What is the significance of Land Reforms for India?

1. Ensuring Food Security & Agricultural Productivity: With India's population projected to reach ~1.6 billion by 2047, increasing food production requires land consolidation, digital land records, and sustainable farming. Land leasing reforms can encourage corporate farming, contract farming, and agri-tech investments, while precision farming and agroforestry can improve yields. **E.g.** **Punjab and Haryana's Green Revolution (1960s)** demonstrated how land reform-linked mechanization transformed productivity.

2. Reducing Rural Poverty & Strengthening Livelihoods: Around **58% of rural households remain landless (SECC 2011)**, and land distribution can uplift millions from poverty. Strengthening tenancy rights, tribal land security, and women's land ownership ensures equitable growth. Secure land tenure improves access to credit, increasing investment in agriculture and MSMEs. **E.g.** **West Bengal's Operation Barga (1978)** successfully enhanced sharecropper rights, boosting productivity.

3. Facilitating Industrialization & Infrastructure Growth: With India aiming for a **\$30 trillion economy by 2047**, streamlined land acquisition and digitization can unlock land for industrial corridors, logistics hubs, and SEZs. Transparent land policies will reduce disputes, attract FDI, and ease business expansion. **E.g.** **Gujarat's Industrial Development Corporation (GIDC)** efficiently allocated land to industries, driving manufacturing growth.

4. Accelerating Urbanization & Smart Cities Development: By 2047, India's urban population will surpass 50%, necessitating planned urbanization, land pooling, and affordable housing projects. Mixed-use

development, transit-oriented planning, and slum rehabilitation can ensure inclusive cities. **E.g. The Navi Mumbai Airport land pooling model** enabled equitable compensation and stakeholder participation, offering a replicable model for urban expansion.

5. Reducing Land Conflicts & Improving Legal Frameworks: As per World Bank **land disputes cost India \$10 billion annually**, delaying infrastructure projects and investment. Digitizing land records, streamlining land titling, and legal reforms can eliminate disputes, ensuring faster economic growth and efficient governance. **E.g. The PM-SVAMITVA scheme (2020)** is successfully mapping rural land digitally, enhancing property rights and dispute resolution.

6. Ensuring Environmental Sustainability & Climate Resilience: According to State of India's Environment 2023 with **30% of India's land degraded**, reforms should focus on sustainable land use, afforestation, and climate-smart urban planning. Integrating reforestation, soil conservation, and carbon farming can restore degraded land. **E.g. Rajasthan's agroforestry projects** reclaimed over 10 lakh hectares, boosting soil health and livelihoods.

What are the challenges in realizing the full potential?

1. Land Fragmentation & Smallholding Crisis: According to **Agricultural Census 2015-16** with 86% of Indian farmers owning less than 2 hectares, excessive land fragmentation reduces productivity, increases operational costs, and limits mechanization. The **average farm size has declined from 2.3 hectares in 1970 to 1.08 hectares in 2015**, affecting economies of scale.

2. Outdated & Complex Land Laws: Land governance is fragmented across over **300+ state and central laws**, leading to conflicting regulations, legal disputes, and delays in land transactions. Inconsistent land acquisition policies create investor uncertainty, hampering infrastructure projects. **E.g. The failure of the 2015 Land Acquisition Bill** due to compensation and consent issues exemplifies legislative roadblocks.

3. Land Record Digitization & Titling Issues: According to NCAER, 2023 report, despite efforts like DILRMP **only 89% of rural land records are digitized**, with over 60% of land holdings lacking clear titles. Poor land record maintenance fuels litigation, land grabbing, and corruption. **E.g. The PM-SVAMITVA scheme (2020)** has made progress, but full implementation remains slow.

4. Land Acquisition & Rehabilitation Bottlenecks: India faces frequent protests over land acquisition, delaying critical projects like bullet trains, industrial corridors, and highways. Compensation disputes, inadequate resettlement, and opposition from farmers lead to conflicts. **E.g. POSCO's Odisha project** stalled due to resistance over displacement and rehabilitation concerns.

5. Urban Land Shortage & Unaffordable Housing: Rapid urbanization is increasing slum proliferation, land encroachment, and housing unaffordability. India needs ~25 million affordable homes by 2047, but land hoarding, speculation, and unclear land-use policies restrict urban land availability. **E.g. Mumbai's Dharavi Redevelopment Plan** has struggled due to unclear property rights and relocation challenges.

6. Weak Women's Land Rights & Marginalized Communities' Exclusion: According to Agricultural Census 2015-16 despite policy efforts, **women hold only 14% of land in rural India**, and tribal communities face displacement due to mining and industrial projects. **E.g. Weak implementation of the Forest Rights Act (2006)** has led to repeated evictions of Adivasi populations. **Jharkhand's Pathalgadi movement** highlighted local resistance to land dispossession.

What should be the way forward?

1. Digital Land Records & Transparent Governance: Digitizing land records ensures transparency, reduces disputes, and minimizes corruption in land transactions. **E.g. Estonia's blockchain-based land registry** provides a global benchmark for secure and tamper-proof records.

2. Land Consolidation for Productivity: Pooling fragmented agricultural lands enhances mechanization, irrigation efficiency, and overall farm output. **E.g. China's Collective Farming Model**, which transformed small landholdings into high-yield farms.

3. Inclusive Land Rights & Gender Equity: Ensuring land ownership for marginalized groups, especially women, strengthens economic independence and social equity. **E.g. Odisha's 'Vasundhara Scheme'** has provided land rights to over 200,000 landless families, while **Rwanda's Land Tenure Regularization Program (LTRP)** increased women's land ownership to 86%.

4. Fair Land Acquisition & Rehabilitation: A just and participatory land acquisition process ensures fair compensation and safeguards livelihoods while enabling infrastructure expansion. **E.g. Amaravati Land Pooling Scheme (Andhra Pradesh)** attempted a balanced approach, inspired by **Germany's Land Pooling Model**, which ensures equitable returns for landowners.

5. Community-Based Forest Rights & Tribal Empowerment: Recognizing indigenous communities' land rights improves conservation and socio-economic development. **E.g. Maharashtra's Gadchiroli tribal communities** have successfully managed forest land under the **Forest Rights Act (2006)**, similar to **Mexico's Ejidos System**, where collective land ownership ensures sustainable forest management.

6. Promoting Sustainable Land Use: Integrating environmental considerations into land management policies and practices. Protecting natural resources, mitigates climate change, and ensures long-term agricultural productivity. **E.g. Costa Rica's Payment for Ecosystem Services (PES) program**, incentivizing landowners to conserve forests, has contributed to reforestation and biodiversity protection.

Read more- [The Hindu](#)

UPSC Syllabus- GS 3- Land reforms in India

Custodial Violence in India- Explained Pointwise

Recent developments, such as the Sanjay Bhandari extradition case in the UK and Tahawwur Rana's appeal in the US, have highlighted the global implications of India's failure to address custodial violence, undermining its credibility as a defender of human rights.

What is Custodial Violence? What are types of Custodial Violence?

The term custodial violence refers to the inhumane treatment of people by law enforcement while they are in custody. These tactics range from abusing their authority to obtaining information.

Types of Custodial Violence- Custodial violence can take many different forms, and authorities will employ different tactics depending on the situation and their goals.

- 1. Physical-** This technique is based on utilizing physical force to inflict physical injury and tiredness on the subject, resulting in immense anguish.
- 2. Physiological-** It includes mental torture. For instance, depriving a person of food. It also includes threat and humiliation of the victim
- 3. Sexual-** It is employed through rape/sodomy. It is directed towards the social and psychological harassment of the victims.

What are the provisions to prevent custodial violence?

Constitutional Provisions:

1. **Article 21:** Constitution guarantees the right to life and personal liberty, which includes protection from torture and inhuman treatment.
2. **Article 20(3):** Protects individuals from being compelled to be witnesses against themselves, safeguarding them from coercive interrogation.
3. **Article 39A:** Ensures free legal aid to ensure that no citizen is denied justice due to economic or other disabilities.
4. **Article 22:** Provides safeguards against arbitrary arrest and detention, including the right to be informed of the grounds of arrest and the right to consult a lawyer.

Legal Provisions

1. **IPC-** Sections 330 (voluntarily causing hurt to extort confession) and 348 (wrongful confinement to extort confession).
2. **CrPC-** Section 176 mandates a judicial inquiry into custodial deaths.
3. **Protection of Human Rights Act, 1993-** The Act established the NHRC and SHRC's to investigate custodial violence and recommend action.
4. **BNS Provisions-** The BNS maintains provisions related to wrongful restraint and illegal detention, which are often precursors to custodial abuse. E.g. Section 176 (causing hurt by public servant), Section 177 (causing grievous hurt by public servant), Section 178 (wrongful confinement by public servant).

What are the Causes of Custodial Violence?

1. **Lack of answerability and Impunity-** A significant cause of custodial violence is the prevailing lack of accountability, where weak oversight mechanisms and a systemic reluctance to prosecute perpetrators create an environment of impunity. **E.g. Custodial death of P Jayaraj and Bennicks in Tamil Nadu.**
2. **Systemic Law Enforcement Failures:** Systemic issues within law enforcement, including overcrowding, understaffing, insufficient training on human rights, and a hierarchical culture that discourages dissent, contribute directly to the occurrence of custodial violence. **E.g. NHRC consistently highlight overcrowding and understaffing in Indian prisons and police lockups.**
3. **Societal Influences on Violence:** Societal factors, such as social inequality, a tolerance for violence, and negative media portrayals that reinforce harmful stereotypes, play a crucial role in perpetuating custodial violence. **E.g. Caste based discrimination in prisons.**
4. **Procedural Gaps and Vulnerabilities:** Procedural deficiencies, including arbitrary arrests, inadequate documentation of detainees, and a lack of access to legal aid, exacerbate the risk of custodial violence.
5. **Work Pressure:** Psychological factors, such as stress, burnout, sadistic tendencies among custodial personnel, can lead to the infliction of violence. **E.g. According to the 2019 Status of Policing in India Report (SPIR), police officers work an average of 14 hours a day, with nearly 80% of them putting in more than 8 hours.**
6. **No Specific Anti-Torture Law:** India lacks a specific national law criminalizing torture, despite signing the **UN Convention Against Torture (UNCAT)** in 1997, and this absence is a significant issue, allowing custodial torture to continue.

7. Positive Reinforcement of Third-Degree Methods: The use of **third-degree torture** to extract information or coerce confessions is often reinforced when it produces results.

What are the Consequences of Custodial Violence?

1. Severe Human Rights Violations: Custodial violence inflicts physical and psychological trauma (PTSD), violates dignity and privacy (Article 21), and leads to loss of life, as evidenced by cases like D.K. Basu vs State of West Bengal (1997) and NCRB data.

2. Erosion of the Rule of Law: Police impunity, undermining judicial authority, and failure of constitutional safeguards (Articles 21 & 22) perpetuate a culture where accountability is absent. E.g. A report by the Commonwealth Human Rights Initiative (CHRI) noted that fear of police harassment discourages people from seeking justice, especially among marginalized communities.

3. Profound Social and Psychological Impact: Custodial violence destroys public trust, stigmatizes victims, and fuels a cycle of violence, demonstrated by widespread protests like those following the Thoothukudi custodial deaths.

4. Significant Economic Burden: Victims lose livelihoods, families bear financial strain from medical and legal costs, and the state incurs compensation expenses, as mandated by cases like Nilabati Behera vs. State of Orissa.

5. Damaged International Reputation: India's failure to address custodial violence and ratify UNCAT harms its global standing under international treaties like the UDHR (1948) and the ICCPR (1976), impacting extradition requests (Tahawwur Rana case) and highlighting a violation of international commitments. E.g. Sanjay Bhandari extradition case in the UK highlighted India's custodial torture record, leading to the denial of extradition.

6. Legal and Institutional Weaknesses: Custodial violence contributes to judicial backlogs, erodes the credibility of oversight bodies like the NHRC, and reveals the failure of legislative reforms. E.g. The absence of a comprehensive anti-torture law, despite recommendations from the Law Commission and Rajya Sabha Select Committee.

What are the Challenges in Stopping Custodial Violence?

1. Legal and Institutional Deficiencies: The absence of a dedicated anti-torture law, weak enforcement of existing laws (despite recommendations from the **Law Commission (273rd Report, 2017)** and the **Rajya Sabha Select Committee (2010)**), judicial delays, and inadequate independent oversight create a system where custodial violence thrives with impunity.

2. Police Impunity and Lack of Accountability: A culture of impunity within police forces, coupled with a lack of transparency in custodial procedures and resistance to reforms, allows officers to escape consequences for abusive actions.

3. Political and Administrative Obstacles: A lack of political will to enact necessary legislation, political interference in cases of abuse, and bureaucratic inefficiencies hinder efforts to implement reforms and provide justice.

4. Societal and Cultural Factors: Public apathy, stigmatization of victims, and a normalization of violence contribute to a climate where custodial violence is tolerated and perpetuated.

5. Economic and Resource Limitations: Inadequate funding for police reforms, delays in compensation for victims, and resource constraints within police departments impede the implementation of effective measures to prevent custodial violence.

6. International and Diplomatic Ramifications: India's failure to ratify UNCAT, the impact on extradition requests, and diplomatic repercussions damage its global reputation and undermine its international commitments to human rights.

What should be the way forward?

1. Enactment of a Standalone Anti-Torture Law: India must criminalize custodial torture through a dedicated **Prevention of Torture Bill**, as recommended by the Law Commission of India (2017). This law should align with the UNCAT, prescribing stringent punishments for erring officials and ensuring mandatory compensation for victims.

2. Strengthening Judicial Oversight: Custodial deaths and torture cases must be investigated by Judicial Magistrates instead of Executive Magistrates, ensuring unbiased scrutiny, as per the 2024 Supreme Court ruling. Courts should also impose harsher penalties for violations of **D.K. Basu guidelines** and mandate compliance with human rights norms.

3. Independent Oversight Mechanisms: Establishing independent oversight bodies at state and national levels, as suggested by the **Justice J.S. Verma Committee** (2013), can ensure impartial investigations into custodial violence cases. The NHRC must be given prosecutorial powers to act against offenders rather than merely recommending action.

4. Police Reforms for Transparency and Accountability: Full implementation of the Prakash Singh case (2006) police reforms, which advocate separating law enforcement from political influence, can professionalize policing and reduce misuse of power. Additionally, Model Police Act, 2006 must be enforced uniformly across states to promote accountability.

5. Mandatory CCTV Surveillance and Audio-Video Interrogation: Expanding the Supreme Court's directive on CCTV installation in police stations (**Common Cause vs Union of India, 2018**) to include real-time monitoring and external audits can prevent custodial torture. Video recordings of interrogations, as recommended by NHRC, must be made mandatory.

6. Fast-Track Courts and Compensation Mechanisms: Special fast-track courts should be established to expedite custodial violence cases, **ensuring strict punishment for perpetrators**. Additionally, NHRC's recommendation for uniform compensation for victims must be institutionalized, with a clear fund allocation mechanism.

7. Ratification of International Conventions and Global Best Practices: India must ratify the UNCAT and adopt best practices from countries like the **UK's Independent Office for Police Conduct (IOPC)** and **Norway's Ombudsman Model**, which allow for independent oversight and strict accountability of law enforcement officials.

Custodial violence remains a grave violation of human rights and a stain on India's justice system. Addressing this issue requires comprehensive reforms, including the enactment of an anti-torture law, police reforms, and ratification of UNCAT. By implementing these measures, India can uphold its constitutional values and international commitments, ensuring justice and dignity for all citizens.

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UPSC Syllabus- GS 2 Governance

Jal Jeevan Mission- Significance & Challenges- Explained Pointwise

Household tap connectivity coverage in rural households under the Jal Jeevan Mission (JJM) will cross 85% by the end of the government's term, Minister for Water Resources Roshy Augustine informed the Kerala's Assembly on Thursday. He was responding to the Opposition UDF charges concerning poor progress of the centrally assisted scheme and Kerala's place in the bottom of the implementation list at the national level.



OPERATIONAL GUIDELINES FOR THE IMPLEMENTATION OF JAL JEEVAN MISSION

Source- Govt. of Maharashtra

What is the Jal Jeevan Mission (JJM) & its key features?

The JJM, launched in August 2019, is a flagship initiative aimed at providing **Functional Household Tap Connections (FHTCs)** to every rural household by 2024, ensuring at least **55 litres per capita per day (lpcd)** of potable water. The mission was initially planned to be completed by 2024, but the **Union Budget 2023-24** extended its **timeline to 2028**.

Key Features of JJM

Coverage	Rural areas, later extended to urban areas through AMRUT 2.0
Service Delivery Approach	Focus on service level benchmarks – quantity, quality, regularity, and sustainability.
Community Participation	Village Water and Sanitation Committees (VWSCs), Gram Panchayats, and User groups are empowered for planning and monitoring.
Bottom-Up Planning	Preparation of Village Action Plans (VAPs) .
Water Quality	Creation of 6,000 water testing laboratories ; emphasis on NABL accreditation.
Convergence	Works in tandem with MGNREGA, SBM, PMKSY, NRDWP, etc. , for source sustainability.
Technology Use	IoT, SCADA, GIS mapping , real-time dashboards

What are the achievements JJM?

1. Expansion of Tap Water Coverage: 16.8% FHTCs in 2019 (3.23 crore households) to 79.74% by February 2025 (15.44 crore households). **E.g. Covering ~13 crore out of ~19.4 crore households (~ 67% coverage).**

2. Budgetary Commitment: The **Union Budget 2024-25** allocated ₹67,000 crore to JJM, reaffirming its centrality in rural development. Cumulatively, the mission has witnessed over ₹3.6 lakh crore in expenditure since inception.

3. State-Wise Success Stories: Eight states and three UT's have achieved 100% FHTC coverage. States like Karnataka (38.3%) and Maharashtra (46.6%) have shown impressive progress in rural tap water coverage. Gujarat and Haryana serve as models with full coverage, demonstrating effective implementation strategies.

4. Transparency and Real-Time Monitoring: The JJM Dashboard ensures data transparency, enabling real-time monitoring of FHTC status. **Over 3 lakh villages** have achieved **100% coverage**. **Village Gram Sabhas** play a key role in verifying connections, reinforcing local accountability.

5. Ensuring Safe Drinking Water: The mission focuses on water quality through infrastructure aligned with **BIS:10500 standards**. **NABL-accredited labs** and **Community Water Purification Plants (CWPPs)** in **arsenic and fluoride-affected areas** ensure supply of safe, potable water.

6. Focus on Source Sustainability: Mandatory provisions for rainwater harvesting, greywater reuse, aquifer recharge, watershed management. **E.g.** Kerala, despite low FHTC coverage, leverages private traditional wells effectively, highlighting the importance of preserving local sources.

7. Employment Generation: According to IIM Bangalore-ILO estimates, the mission created ~60 lakh direct jobs and ~2.2 crore indirect jobs during the capital expenditure phase. In the O&M phase, it is expected to generate 13.3 lakh direct employment opportunities, strengthening rural livelihoods.

8. Alignment with SDG Goals: JJM directly contributes to **SDG 6 – Clean Water and Sanitation**, while indirectly supporting **SDG-3 (Health)** and **SDG-5 (Gender Equality)** through improved health outcomes and reduced water-fetching burden on women and girls.

What are the Impacts of Jal Jeevan Mission (JJM)?

1. Health & Human Development: As per Nobel laureate Prof. Michael Kremer research, safe water access can reduce under-5 child mortality by nearly 30%, potentially saving 1.36 lakh lives annually. It reduces waterborne diseases like diarrhoea and cholera, saves DALYs, and improves nutrition and public health.

2. Gender Empowerment & Ease of Living: By reducing the burden of water collection—traditionally on women and girls—JJM frees up time for education and employment. The 2024 **Jal Shakti Abhiyan**, themed “Nari Shakti se Jal Shakti,” reflects this focus, with initiatives like **Dhantari’s Jal Jagar campaign** involving over 80,000 women.

3. Community-Led Governance: JJM promotes a Jan Andolan approach with 50% Gram Panchayats preparing Village Action Plans and active roles for Village Water & Sanitation Committees, enhancing local ownership, sustainability, and accountability.

4. Ecological & Scientific Water Management: NAQUIM has mapped 25 lakh sq. km of aquifers, while the **Bhu-Neer Portal (2024)** enables real-time groundwater monitoring. The **FloodWatch India App 2.0** provides flood and reservoir data from 592 stations, aiding climate resilience.

5. Localized Innovations: Gujarat’s **Jal Sanchay** created 24,800 rainwater harvesting structures; Meghalaya’s **Mawrah project** rejuvenates springs and mine-spoilt land; Varanasi’s **India-Denmark Smart Lab** combines science and community action for river health.

6. Employment Generation: The mission creates jobs in plumbing, masonry, labs, and monitoring, offering livelihoods during both construction and O&M phases.

7. Behavioral Change: Community awareness on water use, conservation, and greywater reuse has improved water literacy and encouraged sustainable practices.

8. Water as a Right & SDG Enabler: JJM transforms water from a luxury into a public right, contributing directly to **SDG-6** and enabling progress on health, gender, education, and poverty goals.

What challenges still remain unaddressed?

1. Slowing Progress and Delays: While JJM achieved rapid progress initially, the rate of FHTC coverage has slowed in recent months. Indicates logistical, infrastructural, and terrain-related challenges in difficult geographies.

2. Regional Disparities: States like Assam (3.7%) and Kerala (20%) lag far behind the national average, highlighting regional disparities and persistent gaps in infrastructure and implementation, particularly in aspirational and remote blocks.

3. Sustainability and Over-Extraction Concerns: The increasing demand for water is **outpacing natural recharge** in many areas, threatening long-term source sustainability. Over-reliance on **groundwater for**

FHTC's and piped supply without adequate recharge measures raises concerns, especially in **water-stressed regions**.

4. Water Quality Issues: Despite progress, many areas still face contamination challenges from **fluoride, arsenic, and iron**. While **NABL-accredited labs** are being developed, monitoring and quality assurance remain weak in several **rural pockets**.

5. Neglect of Traditional Water Sources: The push for FHTCs may inadvertently marginalize traditional, sustainable sources like dug wells, springs, and rainwater harvesting systems. In Kerala, for instance, despite low FHTC coverage, traditional wells meet water needs effectively and sustainably.

6. Infrastructure and O&M Deficits: Difficult geographies, especially hilly and tribal areas, face logistical and technical hurdles in infrastructure creation. Moreover, weak Operation & Maintenance (O&M) frameworks risk long-term service reliability and system breakdowns.

7. Data Discrepancies and Monitoring Challenges: Varying definitions and metrics across JJM, Census, NFHS, and NSS lead to data mismatches, complicating assessment. Ground studies often report inconsistencies between reported and actual coverage, undermining transparency and targeted intervention.

What Should be the Way Forward?

1. Strengthen Operation & Maintenance (O&M): Ensure long-term sustainability by training local youth and women under community-based models like Kerala's **Kudumbashree**, which empowers women's collectives to manage water supply systems efficiently. **E.g. Swajal Scheme**.

2. Promote Water-Secure Villages: Scale up water budgeting and source sustainability efforts through convergence with MGNREGS and the **Atal Bhujal Yojana**, similar to **Israel's model** of integrated water resource management and reuse, especially in arid zones.

3. Adopt Smart Monitoring Tools: Expand real-time monitoring using IoT and AI for leak detection and quality control, inspired by **Singapore's Smart Water Grid**, which integrates sensors and predictive analytics for efficient urban water supply.

4. Leverage Traditional Water Wisdom: Revive indigenous systems like **Johads in Rajasthan** or **Zabo in Nagaland**, integrating them with modern technology. This approach echoes **Rajasthan's Mukhya Mantri Jal Swavlamban Abhiyan**, which improved groundwater levels through decentralized efforts.

5. Enhance Greywater Management: Implement decentralized greywater reuse for irrigation and recharge, drawing from **Germany's decentralized wastewater treatment (DEWATS)** systems, adapted to rural Indian contexts for water-scarce areas.

6. Institutionalize Behavioural Change: Build on the success of Swachh Bharat by creating village-level water literacy campaigns and school-based water clubs, taking cues from **Australia's Waterwise Schools Program**, which instills conservation values early.

Conclusion

The JJM has made remarkable progress in providing **FHTC's** to rural households, significantly improving access to clean drinking water. However, challenges such as **regional disparities, sustainability concerns, and data discrepancies** need to be addressed to ensure the mission's long-term success. By integrating **water conservation efforts**, improving **data collection mechanisms**, and fostering **community participation**, JJM can achieve its goal of **Har Ghar Jal** while ensuring the sustainable management of India's water resources.

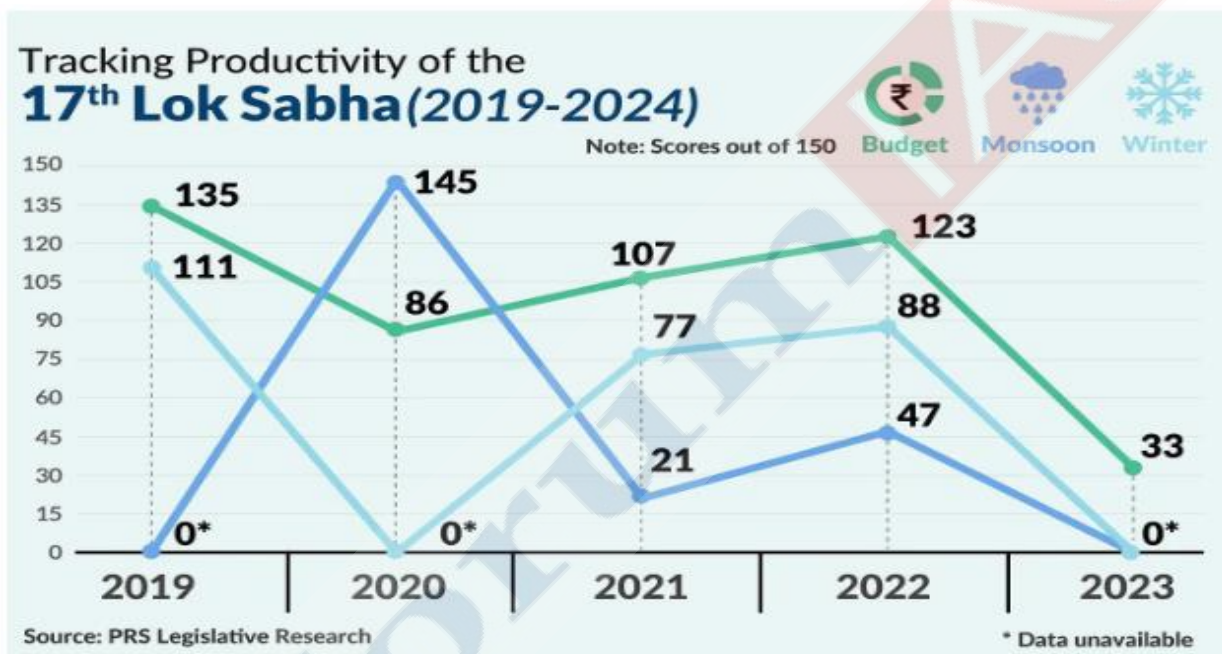
Read more- [The Hindu Business line](#)

UPSC Syllabus- GS 2- Government policies and interventions for development in various sectors

Decline of Indian Parliament- Explained Pointwise

The Indian Parliament, often referred to as the **temple of democracy**. It is the supreme legislative body of the country, embodying the **democratic will of the people**. It plays a crucial role in **law-making (Article 79 to Article 122)**, holding the **executive accountable**, and **reflecting diverse voices**. As the **cornerstone of Indian democracy**, its **health is vital** for effective governance and representation.

What is the Current Status of the Indian Parliament Functioning?



Source- PRS

- 1. Decline in Productivity:** According to PRS Legislative Research, the 17th Lok Sabha (2019-2024) recorded a **productivity rate of 47%**, one of the lowest in recent history. The **2023 monsoon session** saw only **18% productivity** in the Lok Sabha and **28%** in the Rajya Sabha, with significant time lost to disruptions.
- 2. Decline in Debates and Discussions:** As per PRS-2023 the **2023 Budget session** saw only **12 hours of debate** compared to **123 hours** in 1990. Key Bills are often passed with **minimal discussion**. In **17th Lok Sabha**, **42%** of Bills passed with **less than 30 minutes of debate**. E.g. The **Farm Laws (2020)** were passed in **7 minutes** in Rajya Sabha without proper division.
- 3. Reduced Sitting Days:** According to PRS-2023 parliament met an average of **70 days/year over the past decade**, compared to **120-140 days in the 1950s**. In contrast, the **British Parliament** sits for **150-170 days** annually, and the **U.S. Congress** for **260 days**.
- 4. Increased Use of Ordinances:** Over **750 ordinances issued since 1950**; **76 ordinances** from 2014–2023 alone. E.g. **Farm Ordinances (2020)** bypassed pre-legislative scrutiny.

5. Erosion of Budget Scrutiny: In 2023, over 75% of Demand for Grants were passed without discussion. Only **11% of budget expenditure** underwent detailed scrutiny.

6. Marginalization of the Opposition: 146 Opposition MPs suspended in a single session (2023) for demanding discussion on security breaches.

What are the Reasons for the Decline of the Indian Parliament?

1. Frequent Disruptions: Disruptions have become a norm, with the **17th Lok Sabha losing 40% of its time** to protests and adjournments. **2023 monsoon session, Lok Sabha – 55%, Rajya Sabha – 60% time lost.** The **2023 Winter Session** saw repeated disruptions over issues like the **Pegasus spyware scandal** and **farmers' protests**. Strategy used by opposition and ruling parties alike.

2. Lack of Bipartisanship: Rising political polarization has reduced the scope for **consensus-building** and **constructive debates**. The **GST Bill 2016** is a rare example of bipartisan cooperation, but such instances are increasingly rare.

3. Decline of Parliamentary Committees: Committees scrutinize only **~25% of bills** today vs. 60–70% in 1990s. Important bills like **Unlawful Activities (Prevention) Amendment Act (2019)** bypassed committees scrutiny. Parliamentary committees, such as the **PAC** and **DSC**, lack adequate resources and authority. The **PAC's 2022 report** highlighted the **non-implementation of its recommendations** by the government.

4. Parliament Hollowed Out: Contentious laws like the **J&K Reorganization Act** and **Citizenship Amendment Act (CAA)** were pushed through with minimal debate.

5. Executive Overreach: The executive's dominance in legislative affairs has reduced Parliament to a **rubber stamp**. Ordinance route, misuse of Money Bill provision (**in *Rojer Mathew v. South Indian Bank (2019)*, questioned the misuse of the Money Bill provision, e.g., Aadhaar Act, 2016**), and weak enforcement of anti-defection law, curbs dissent and making MPs rubber stamps. Speaker's position increasingly partisan (e.g., delayed decisions in disqualification cases – *Keisham Meghachandra v. Speaker, Manipur, 2020*).

6. Criminalization of Politics: According to the **ADR-report, 46% of the candidates have criminal cases against them, and a striking 93% are crorepatis in 2024 Lok-Sabha**. It Weakens credibility and moral authority of the House.

7. Lack of Research Support: Unlike the **U.S. Congressional Research Service** or the **U.K. Parliamentary Research Service**, Indian MPs lack access to **independent research and analysis**. The absence of a **Parliamentary Budget Office (PBO)** limits MPs' ability to scrutinize fiscal policies effectively.

8. Judicial Activism Filling Legislative Vacuum: The **Supreme Court, in *Kalpna Mehta v. Union of India (2018)***, emphasized the need for **greater parliamentary scrutiny** of Bills. Sometimes it has overshadowed Parliament's role, as seen in the **NJAC case (2015)**.

9. Low Quality of Debates: Personal attacks, walkouts, sloganeering dominate. Reduction in intellectual contributions.

10. Lack of Institutional Reforms: The absence of reforms to modernize Parliament has contributed to its decline. For instance, the **M.N. Venkatachaliah Committee (2002)** recommended measures like limiting the number of ministers, but these remain unimplemented. **The 2nd ARC also** highlighted the need for **strengthening parliamentary oversight**, but its recommendations were ignored.

What are the Impacts of this Decline?

1. Democratic Backsliding: The decline in parliamentary oversight has eroded the **checks and balances** essential for a healthy democracy. The **CAG's 2021 report** on the **PM-CARES Fund** highlighted the lack of parliamentary scrutiny over critical financial decisions.

Less scrutiny → unchecked executive → policy errors (e.g., **demonetization not discussed in Parliament**).

2. Hasty and Poor-Quality Legislation: Hasty legislation leads to ambiguity and poor implementation (e.g., **Farm Laws, GNCTD (Amendment) Act, 2021**). Policy backtracking without legislative review (e.g., repeal of Farm Laws).

3. Loss of Public Trust: Lokniti-CSDS (2021); Only 27% fully trust Parliament (down from 49% in 2005). **ADR (2023);** 68% believe MPs do not represent citizens' interests effectively.

4. Judicial Overreach and Legislative Paralysis: Judiciary increasingly setting policy direction in absence of parliamentary action. E.g. e.g., **Vishaka Guidelines, 1997, Right to Privacy, Passive Euthanasia** cases.

5. Federal Discontent: Centre-State tensions rise when regional voices are ignored (e.g., **Tamil Nadu's opposition to NEET, Hindi imposition debates**). The **Rajya Sabha's diminished role** undermines the federal structure, as states' voices are not adequately represented. The **GST Council**, while innovative, has been criticized for **centralizing fiscal powers**.

6. Impact on Governance: The lack of detailed scrutiny has resulted in **policy failures**, such as the **demonetization of 2016**, which was implemented without parliamentary debate.

How Revitalization of the Indian Parliament Can Be Done?

1. Increase Sitting Days: Parliament should meet for at least **100 days annually**, as recommended by the **NCRWC (2002)**. **Rajya Sabha Committee (2008)** suggested fixed calendar and minimum days.

2. Strengthen Parliamentary Committees: All Bills should be referred to parliamentary committees for detailed scrutiny, as suggested by the **Standing Committee on Personnel, Public Grievances, and Law (2018)**. Committees should be provided with **adequate resources and research support**.

3. Establish a Parliamentary Budget Office (PBO): A PBO, modeled on the **U.S. Congressional Budget Office**, would provide MPs with **independent analysis** of fiscal policies. This would enhance Parliament's ability to scrutinize the Budget and hold the executive accountable.

4. Reform Anti-Defection Law: As per **Law Commission 170th Report**: Limit anti-defection to **confidence and money bills**. Empower Parliament to dissent freely without fear of disqualification.

5. Curb Misuse of Money Bill Provision: Implement SC recommendations in **Rojer Mathew and Puttaswamy** cases.

6. Promote Bipartisanship and Ethical Conduct: Encourage all-party committees. Speaker to facilitate dialogue; enforce code of conduct (**V. Ramaswami Committee, 2001**). Support **Private Members' Bills** like **Shashi Tharoor's (2017)** on deductions for unruly MPs.

7. Enhance Public Participation: Digital platforms should be used to facilitate **public consultations** on key Bills and policies. The **MyGov portal** can be expanded to include parliamentary debates and discussions.

8. Capacity Building: National Legislators' Conference, training programs. Promote **code of conduct for MPs**, as recommended by **V. Ramaswami Committee (2001)**.

9. Judicial Restraint and Legislative Vigilance: While judicial interventions are necessary, the **Supreme Court** should avoid encroaching on Parliament's domain, as highlighted in the **NJAC case**. SC in **Rojer Mathew v. South Indian Bank (2019)** urged Parliament to respect Rajya Sabha's role. **Independent Speaker Tribunal** for fair anti-defection decisions.

Conclusion

The **Parliament of India**, once hailed as the **temple of democracy**, is increasingly seen as a **rubber stamp**. The **foundational ideals of debate, accountability, and representation** are at risk. Reviving it requires **structural reforms, political will, public pressure, and constitutional vigilance**. A strong Parliament is essential for a **vibrant democracy** and the realization of **constitutional values**.

Read more- [India's marginalised Parliament in budgetary affairs](#)

UPSC Syllabus- GS 2- Parliament and State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these

World Tuberculosis (TB) Day 2025- Significance & Challenges- Explained Pointwise

World Tuberculosis (TB) Day is observed every year on **March 24**. The primary objective of this day is to raise awareness about tuberculosis and to encourage efforts to eliminate this disease. This day commemorates Dr. Robert Koch's discovery of the **Mycobacterium tuberculosis bacterium** in 1882, which causes TB.

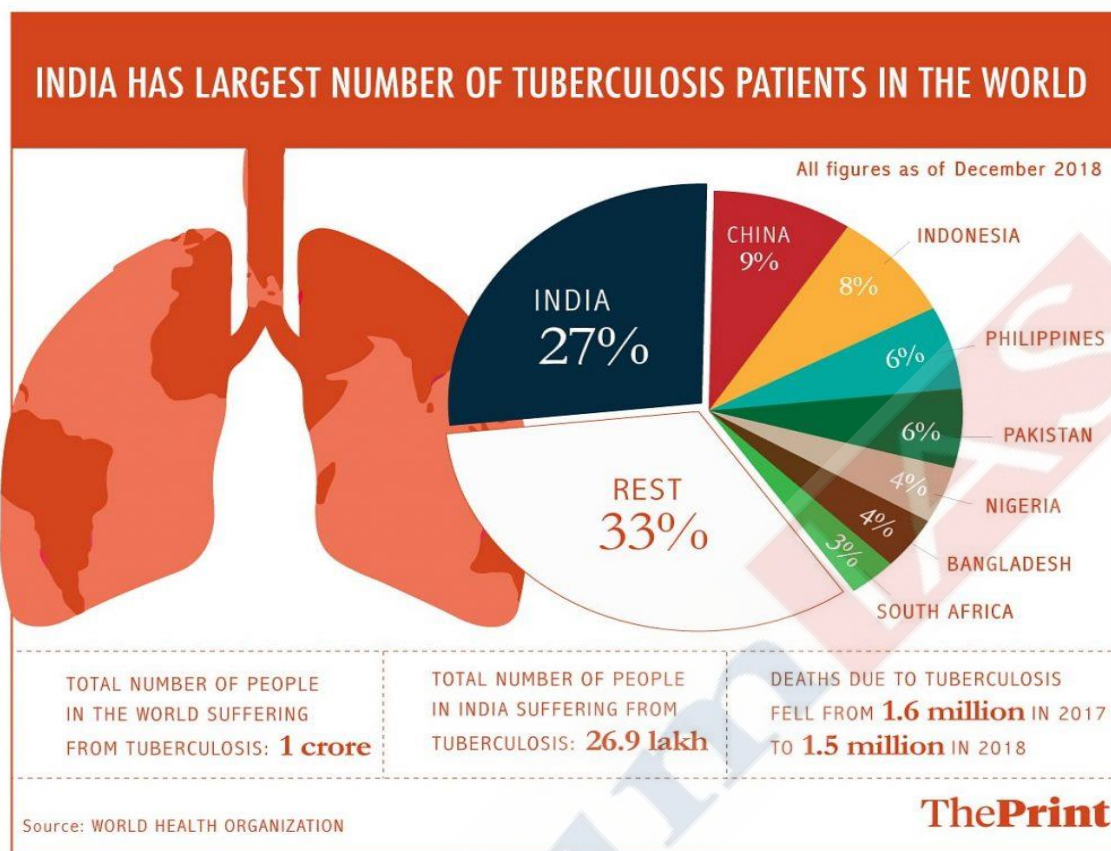
India started the "**TB Free India Campaign**" in 2018 with the goal of eradicating tuberculosis by 2025. On March 24, almost seven years after taking the pledge, it is important to evaluate India's progress in this battle as well as the obstacles that the country continues to face.

What is Tuberculosis? What is the Current Status of Tuberculosis Burden In India?

Tuberculosis- Tuberculosis (TB) is an **infectious airborne bacterial disease** caused by **Mycobacterium tuberculosis**. It most commonly affects the lungs but can also damage other parts of the body.

Current Status of TB Burden In India

- India has notified a record **25.5 lakh TB patients in 2023**. (More than 8.4 lakh patients were notified by the private healthcare sector). This is a 21-fold increase from 2013 notified level.
- According to WHO's Global TB report 2021, with **25.9 lakh TB cases**, **India is home to 25% of the global tuberculosis cases**.



Source- The Print

What is the need for Eliminating TB earlier in India?

Eliminating TB earlier in India is crucial for a number of reasons which are mentioned below-

- Health-** TB is a **major cause of illness and death in India**, and eliminating the disease would significantly improve the health and well-being of the population.
- Economic impact-** TB has a significant economic impact, as it leads to **loss of income and productivity** for individuals and families. Eliminating tuberculosis would reduce this impact and help to boost the economy.
- Poverty reduction-** TB **disproportionately affects people living in poverty**, and eliminating the disease would help to reduce poverty and promote economic development.
- Global health-** TB is a **global health concern**, and eliminating the disease in India would contribute to the global effort to control and eventually eliminate TB.
- Achievement of Sustainable Development Goals-** Elimination of Tuberculosis is an **important target under the United Nations' Sustainable Development Goals (SDGs)** and its **elimination in India** would contribute to overall progress towards the SDGs.
- Social justice-** Eliminating TB would help to **promote social justice by reducing the burden of the disease on vulnerable and marginalized populations**, such as those living in poverty or with limited access to healthcare.

What are the challenges in Eliminating TB in India?

- 1. High burden of TB cases-** According to the Global TB Report 2022, **India accounts for 28% of all TB cases in the world.** This makes it difficult to identify and treat all cases in a timely manner.
- 2. Drug-resistant TB-** India has a **high burden of drug-resistant TB**, which is more difficult and costly to treat than regular TB. **Inadequate use of antibiotics** and **poor adherence to treatment regimens** have contributed to the emergence of drug-resistant strains.
- 3. Limited access to healthcare-** Many people, particularly in rural areas, **lack the access to quality healthcare facilities or cannot afford to seek medical care.** This **result in delays in diagnosis and treatment**, and may also lead to the spread of TB.
- 4. Stigma and discrimination-** The stigmatisation of Tuberculosis has led to reluctance among the population to **disclose their illness or seek treatment** due to fear of discrimination or social isolation.
- 5. Poor living conditions-** **Overcrowded living conditions, poor sanitation, and lack of access to clean water** can increase the risk of TB transmission.
- 6. Limited awareness-** Many people in India are **not aware of the signs and symptoms of TB** or the importance of completing the full course of treatment. This **leads to delays in diagnosis and treatment** and contribute to the spread of TB.
- 7. Insufficient funding-** Despite being a major health problem in India, TB **receives insufficient funding and attention** from policymakers and healthcare providers.

Read More- [TB in India: A fight to the end](#)

What are the government's steps for Eliminating TB in India?

National TB Elimination Programme (NTEP)	<ol style="list-style-type: none"> 1. It aims to make India TB-free by 2025, ahead of the global 2030 Sustainable Development Goals. As part of the programme, all TB patients are monitored through the Ni-kshay portal throughout their treatment. 2. Launched in 2022, the PM TB Mukh Bharat Abhiyaan, a key initiative under NTEP, promotes community participation, advanced diagnostics, improved treatments, and innovation to accelerate TB elimination.
Introduction of CB-NAAT and TureNat for TB detection	The government has increased access to more accurate molecular diagnostic tests like CB-NAAT and TureNat . The government has implemented a universal drug susceptibility test , which use the antibiotic susceptibility of the mycobacterium is determined for all newly diagnosed cases.
Improvements in treatment protocols	Injectable kanamycin for TB elimination, which caused kidney failure and deafness, has been replaced by Bedaquiline and Delamanid . These new pharmaceuticals have also been included in the new National List of Essential Medicines , giving the government the authority to control their market pricing.

Community engagement programme	The government launched the community engagement programme where Nikshay mitras can adopt TB patients and provide them monthly nutritional support.
Engaging with private healthcare providers	The government has engaged with private healthcare providers to improve the quality of TB care and ensure that TB patients receive appropriate treatment.

What is the private sector involvement in Tuberculosis treatment?

Public Private Interface Agency (PPIA)- The **Public Private Interface Agency (PPIA)** is the most effective form of intervention for elimination of TB. The **agency functions as an intermediary** between the national TB programme and private healthcare providers.

Patient Provider Support Agency (PPSA)- This has created a **network of private health sector providers, including medical practitioners, retail chemists, laboratories, and corporate hospitals** to ensure that diagnostic and treatment practices adhere to the '**Standards of TB Care**' in India.

What Should be the way forward?

- 1. Engaging better with private chemists**- Retail chemists who are the **first point of contact for patients in India** who must be trained for regular monitoring of the H1 schedule and prohibiting over-the-counter sale of antibiotics.
- 2. Leveraging the contact of medical practitioners**- The network of rural medical practitioners and village doctors have a **high trust compact with the community**, must be leveraged for TB detection and elimination.
- 3. Implementation of a comprehensive TB control program**- The Indian government should develop and implement a comprehensive TB control program that includes **early diagnosis, effective treatment, and follow-up care**.
- 4. Investment in research and development**- Investment in research and development can help to **identify new diagnostic tools** and more effective treatments for TB. For ex- The recent **development of artificial intelligence software for detecting hot spots in the lungs from digital chest X-rays** is a promising tool for mass active case finding of TB in the community.
- 5. Increase in govt funding**- TB prevention and treatment **should be a priority for the government and policymakers**, and funding should be increased to support research, prevention programs, and treatment efforts.

Read More- [Business Standard](#)

UPSC Syllabus- GS 2: Social Justice – Issues relating to development and management of Social Sector/Services relating to Health

Heatwaves in India- Explained Pointwise

The India Meteorological Department (IMD) has warned of another year of extreme heat and above-normal heatwaves. This comes as **Delhi recorded its hottest February in 74 years** and **Mumbai faced two heatwaves even before mid-March**.

Heatwaves in India are becoming more severe and frequent, posing serious health risks. IMD predicts a rise in maximum temperatures and more heatwaves in eastern and southern India in the coming days. India must stay prepared to handle these recurring heatwaves.

What are heatwaves? How are they defined in India?

Heatwaves- Heat waves are **prolonged periods of excessively hot weather** that can cause **adverse impacts** on **human health, the environment, and the economy**.

Definition of Heatwave- In India IMD defines heatwave based on the following criteria.

Physiography of regions

Plain- The maximum temperature recorded at a station is **40 degrees Celsius or more**.

Coast- The maximum temperature recorded at a station is **37 degrees Celsius or more**.

Hills- The maximum temperature recorded at a station is **30 degrees Celsius or more**.

Based on Departure from Normal Temperature

Heat Wave- Departure from normal is **4.5°C to 6.4°C**

Severe Heat Wave- Departure from normal is **>6.4°C**

Based on Actual Maximum Temperature

Heat Wave- When actual maximum temperature **≥ 45°C**

Severe Heat Wave- When actual maximum temperature **≥ 47°C**

*Heat Wave is declared if above criteria are met in at least 2 stations in a Meteorological subdivision for at least two consecutive days.

What is the status of Heatwaves in India?

India has been affected by the Heatwaves since a long time. However, during the last few decades, due to increased instances of climate change, the impact of heat waves has also enhanced quite significantly.

a. States like **Rajasthan, Gujarat, Uttar Pradesh, Delhi, Haryana, Punjab, Madhya Pradesh** have been affected the most by the Heatwaves.

b. According to IMD, **between 1981 and 1990** there were **413 heatwave days** in India. However, the heatwave days have increased to **600 days** between **2011 and 2020**.

c. The number of deaths from heat-related causes increased from **5,457** between **1981 and 1990** to **11,555** between **2011 and 2020**.

What are the factors behind the increase in Heatwaves in India?

Heatwaves can be caused by a combination of natural and human-induced factors. The main causes are mentioned below-

Natural causes

1. High Atmospheric Pressure Systems- Heatwaves occur when high-pressure systems stall over a region. These systems trap warm air near the Earth's surface and prevent the normal movement of air masses, leading to prolonged periods of hot weather.

2. Climate Variability- Natural climate variations, such as El Nino and La Nina events, influence weather patterns and increase the likelihood of heatwaves. For ex- During El Nino events, warmer ocean waters in the tropical Pacific lead to changes in atmospheric circulation and weather patterns.

3. Drought and Dry Conditions- Prolonged periods of drought and lack of precipitation reduces the overall moisture of the soil, causing the land to heat up more quickly during heat waves.

4. Changes in Wind Patterns- Shifts in wind pattern transports hot air from one region to another which intensifies heat waves in areas that are not typically prone to such extreme temperatures.

5. Geography and Topography- Geographic features and topographical conditions also contribute to the development of heat waves. For ex- Landlocked valleys and regions surrounded by mountains trap hot air and lead to temperature spikes.

Human-Induced Factors

1. Global Warming- The long-term increase in Earth's average temperature, primarily driven by human activities such as burning fossil fuels, deforestation, and industrial processes, contributes to the frequency and intensity of heat waves.

2. Urban Heat Island Effect- Urban areas with high population density, extensive concrete and asphalt surfaces, and limited vegetation tend to absorb and retain more heat, has created localized zones of higher temperatures. This phenomenon, known as the urban heat island effect, has intensified heat waves in cities.

What are the impacts of Heatwaves?

1. Impact on Human Health- Rapid rises in heat compromises the body's ability to regulate temperature resulting in a cascade of illnesses, including heat cramps, heat exhaustion, heatstroke, and hyperthermia.

2. Impact on Energy- Heatwaves increase the electricity demand for cooling purposes, leading to strain on power grids and potential blackouts.

3. Impact on the economy- Heatwaves disrupt economic activities, affecting productivity of workers and labourers, lacking the access to reliable electricity for cooling during heatwaves. According to an ILO study at 34°C, workers can lose up to 50% of their work capacity.

4. Impact on Water Resources- Heatwaves exacerbate water scarcity issues in India due to drying up of water bodies and decrease in the groundwater table. This exacerbates the inter-state conflict over water. For ex- Cauvery water Dispute.

5. Impact on the food security- The rise in heat waves increase the probability of droughts, enhance demand of irrigation water, which impacts agricultural production and increases food insecurity.

Read More- [Protecting the most Vulnerable due to Increasing heatwaves in India](#)

What steps have been taken by the government to address the issue of heatwaves?

Heat Action Plans	The Indian government has updated Heat Action Plans across 23 states , aiming to strategically combat and manage heatwaves.
Public Health Preparedness	The Union Health Ministry reviews the preparedness for managing Heat-Related Illnesses (HRIs) periodically indicating a proactive approach to address the health impacts of heatwaves.
Focus on Vulnerable Groups	The government initiatives prioritize protecting high-risk groups like children, pregnant women, the elderly, and people with chronic diseases .
Awareness Campaigns	About 100 districts have initiated campaigns to raise awareness about heatwave risks and precautions.

What should be the way Forward?

- 1. Effective implementation of Heat Wave Action Plan-** Effective implementation of the Heat wave action plan with the **State playing a leading role and sharing responsibility with other stakeholders** is now the need of the hour.
- 2. Sustainable Cooling-** Passive cooling technology like **construction of ventilated buildings** and the **use of porotherm bricks**, can be a vital alternative to address the urban heat island for residential and commercial buildings.
- 3. Heatwave Mitigation Plans-** Heatwave mitigation plans which includes **access to drinking water, oral rehydration solutions (ORS), shade at public places, flexible working hours in workplaces** must be effectively designed and implemented.
- 4. Creation of more Green Spaces-** According to the UN, investment of US\$ 100 million in street trees globally can bring 1°C temperature reduction. India must scale up its reforestation and tree plantation efforts. **For ex- Haritha Haram project of Telangana Govt** to increase the green cover in Telangana from the current 24% to 33%.
- 5. Adoption of energy efficient solution-** The masses should be encouraged to adopt more energy efficient solutions like **using desert coolers in place of air conditioners in dry areas**.

Read More– [The Indian Express](#)

UPSC Syllabus- GS Paper 3-environment-climate change and GS Paper 1- geography-Important Geophysical phenomena such as Heatwaves.

Regulatory Reforms in India- Explained Pointwise

Finance Minister Nirmala Sitharaman recently announced that a high-level committee for regulatory reforms will be set up for a **review of all non-financial sector regulations, certifications, licenses, and permissions**. The objective of the high-level committee will be to strengthen trust-based economic governance and take transformational measures to **enhance ease of doing business, especially in matters of inspections and compliances**. The committee will be expected to make recommendations within a year.



Source- PIB

What is the significance of regulatory sector reforms in India?

Economic boost	<ol style="list-style-type: none"> 1. Record Foreign Direct Investment (FDI) inflows of \$84.8 billion in 2021-22. 2. The ₹2.5 lakh crore Production-Linked Incentive (PLI) scheme across 14 sectors. 3. Unified Payments Interface (UPI) transactions surpassing 100 billion in 2023.
Financial fortification	<p>The Indian banking sector has significantly strengthened through:</p> <ol style="list-style-type: none"> 1. Reduction of Non-Performing Assets (NPAs) from 11.2% in 2018 to 5.0% in 2023. 2. Insolvency and Bankruptcy Code (IBC) recovering ₹2.5 lakh crore in stressed assets. 3. UPI processing over 8 billion transactions monthly.

Ease of Business Boost	<p>India's business environment has vastly improved, leading to:</p> <ol style="list-style-type: none"> 1. Ease of Doing Business ranking improvement from 142 to 63. 2. Reduction in company registration time from over 30 days to under 3 days. 3. Unification of 17 taxes under the Goods and Services Tax (GST).
Infrastructure Impact	<p>Infrastructure development has been accelerated through:</p> <ol style="list-style-type: none"> 1. The \$1.5 trillion National Infrastructure Pipeline. 2. Real Estate (Regulation and Development) Act (RERA) improving transparency in real estate. 3. A 40% reduction in project delays as per NITI Aayog.
Manufacturing Momentum	<p>The manufacturing sector has gained momentum through:</p> <ol style="list-style-type: none"> 1. Simplification of 29 labor laws into 4 labor codes. 2. Consistent 7%+ sectoral growth. 3. Greater integration into global value chains.
Digital Dominance	<p>Digital transformation in India has seen rapid growth with:</p> <ol style="list-style-type: none"> 1. 1.2 billion beneficiaries under the Digital India initiative. 2. Over 100,000 registered startups by 2023. 3. Improved ranking in the Global Innovation Index.
Social Sector Transformation	<p>The social sector has witnessed inclusive growth through:</p> <ol style="list-style-type: none"> 1. ₹2.25 lakh crore savings via Direct Benefit Transfers (DBT). 2. Ayushman Bharat benefiting 500 million citizens. 3. National Education Policy (NEP) 2020 reshaping the education sector.
Sustainable Development	<p>India has advanced in sustainability with:</p> <ol style="list-style-type: none"> 1. Renewable energy capacity surpassing 175 GW. 2. Over \$10 billion raised via green bonds. 3. A 15% reduction in emission intensity.

What are the key reforms undertaken?

- 1. Simplification of Regulation:** The **Jan Vishwas Act 2023** decriminalized **3400+ legal provisions** and reduced 39,000 compliances. The **SPICe+ portal** simplified business incorporation by integrating PAN, TAN, DIN, and other identifiers into a single form. **For ex-** The **Economic Survey 2024-25** emphasized the need to “**peel off layers of needless rules**” and adopt a “**minimum government, maximum governance**” approach.
- 2. Ease of Doing Business (EoDB) and Penal Provisions:** The **Jan Vishwas Act 2023** removed jail provisions for minor procedural defaults, such as delayed filings or incorrect calculations. **For ex-** The **Economic Survey 2024-25** called for decriminalizing regulations that do not involve physical harm, fraud, or large externalities.
- 3. Sunset Clauses for Outdated Regulations:** The Economic Survey 2024-25 recommended sunset clauses to automatically repeal regulations after a fixed period unless explicitly renewed. **For ex-** The **Insolvency and Bankruptcy Code (IBC)** introduced time-bound resolutions, setting a precedent for regulatory efficiency.
- 4. Consolidation of Laws and Codes:** The Labour Codes consolidated 29 central labor laws into 4 codes, simplifying compliance for employers. The **GST regime unified 8 central and 9 state taxes into a single tax**, reducing compliance costs.
- 5. Structured Notification Schedules:** The Economic Survey 2024-25 proposed structured notification schedules to ensure predictable and phased implementation of regulations. The **GST Council** meets quarterly to announce changes, providing businesses with a clear timeline for compliance.
- 6. Risk-Based Regulatory Inspections:** The **Shram Suvidha Portal** introduced risk-based inspections, reducing unnecessary scrutiny for compliant businesses. The **GST e-way bill system** uses data analytics to identify high-risk transactions for inspection.

What are the challenges in implementing regulatory reforms?

- 1. Red Tape Overload:** India's regulatory framework is often criticized for being overly complex, with **over 85,000 compliances and 5,000+ jail provisions** for businesses. This creates a high compliance burden, especially for small and medium enterprises (SMEs).
- 2. Ease of Doing Business Mirage:** Despite India's rise in the **World Bank EoDB** ranking from **142nd (2014) to 63rd (2020)**, SMEs still face challenges due to **excessive penal provisions** and **interpretation subjectivity**.
- 3. Legacy Laws:** Many regulations, such as the **Factories Act (1948)** and **Shops and Establishments Act**, are outdated and do not align with modern business practices. **India has over 1,000 central laws and 15,000 state laws**, many of which overlap or conflict, creating confusion for businesses. **For ex-** The **TeamLease report** highlights how fragmented labour laws have slowed employment growth, making consolidation a critical reform.
- 4. Regulatory Volatility:** Frequent and unpredictable regulatory changes create uncertainty for businesses, especially startups and SMEs.
- 5. Inspection Harassment:** Traditional inspection systems are often manual, subjective, and prone to corruption, leading to harassment of businesses.

What are the key recommendations for the High-Level Committee?

- 1. Modernizing Regulations for Growth:** Introduce **sunset clauses for outdated regulations** to ensure periodic review and repeal. Also, adopt a **risk-based approach** to compliance, focusing on high-risk sectors while

reducing scrutiny for low-risk businesses. **For ex-** The GST regime consolidated 17 indirect taxes into one, reducing compliance costs by 20-30% for businesses.

2. Smart Sanctions for Business: Restrict jail provisions to only those involving intentional fraud or physical harm. Introduce a **National Employer Compliance Grid (NECG)** to streamline compliance filings and reduce subjectivity. **For ex-** The Shram Suvidha Portal reduced labor inspection timelines by making reports public within 48 hours, enhancing transparency.

3. Five year check-up for Regulations: Implement sunset clauses for all regulations, with a mandatory review every 5 years. **For ex-** The **Telecom Regulatory Authority of India (TRAI)** periodically reviews its policies to align with technological advancements.

4. One-Stop Law Shop: Consolidate sector-specific laws into umbrella codes, such as the Environmental Code or Energy Code. **For ex-** The **Companies Act, 2013 replaced the 1956 Act**, simplifying corporate governance and compliance.

5. Regulatory Calendar: Introduce a structured regulatory calendar for all ministries, with pre-announced dates for notifications and amendments. **For ex-** The **RBI's monetary policy calendar** provides clarity on interest rate decisions, reducing market uncertainty.

6. AI and Analytics for Proactive Compliance: Expand risk-based inspections to all sectors, using AI and data analytics to identify high-risk entities. **For ex-** The **Food Safety and Standards Authority of India (FSSAI)** uses a risk-based approach to prioritize inspections for high-risk food businesses.

7. Global Best Practices: Adopt successful international regulatory models, such as the **US Regulatory Flexibility Act**, which mandates regular reviews of business regulations, and **Singapore's Pro-Enterprise Panel**, which reduces inspections for compliant businesses to enhance ease of doing business.

What should be the way forward?

1. "Peel the Onion" Approach: The **Economic Survey 2024-25** likens deregulation to peeling an onion—each layer removed reveals the next, making the process easier over time.

2. Digital Public Infrastructure (DPI) for Employers: The proposed **PAN 2.0** and **Entity Digilocker** can revolutionize compliance by creating a paperless, presence-less, and cashless ecosystem.

3. Butterfly Effect: Small deregulatory actions can trigger a ripple effect, leading to significant gains in business competitiveness and growth.

4. Regulatory Cholesterol: Reducing excessive regulatory burdens is essential for unlocking India's entrepreneurial potential and fostering high-wage job creation.

5. Viksit Bharat by 2047: Sustaining 8% GDP growth over the next decade requires a concerted focus on deregulation, innovation, and simplifying the regulatory framework.

Conclusion:

India's regulatory reforms have made significant strides, but the journey is far from over. By focusing on **simplification, decriminalization, and digitization**, India can create a business-friendly environment that fosters innovation, entrepreneurship, and economic growth. The Economic Survey 2024-25 and Union Budget 2024-25 provide a clear roadmap, but timely implementation and political will are crucial to realizing the vision of a Viksit Bharat.

Read more– [Business Standard](#)

UPSC Syllabus- GS 2/ GS 3– Government policies and interventions for development in various sectors/ Indian Economy and issues relating to planning, mobilization, of resources

National Judicial Appointments Commission (NJAC)- Explained Pointwise

India's judiciary, often described as the **guardian of the Constitution**, plays a crucial role in upholding the rule of law, ensuring justice, and acting as a check on the executive and legislature. There are ~**12,000 courts – 1 Supreme Court, 21 High Courts, 3,150 District Level Courts, 4,816 Munsif / Magistrate Courts, and 1,964 Magistrate II Courts**. Judicial appointments in them are governed by **Articles 124 to 147 for the Supreme Court and 214 to 231 for the High Courts**, reflecting the centrality of an independent judiciary in the constitutional scheme.

What are the constitutional provisions regarding Judicial appointments in India? What has been the history of evolution of the present system of appointment in India?

Constitutional Provisions of Judicial Appointment	
Article 124 (2)	Every Judge of the Supreme Court shall be appointed by the President by warrant under his hand and seal after consultation with such of the Judges of the Supreme Court and of the High Courts in the States as the President may deem necessary for that purpose. In the case of appointment of a Judge other than the Chief Justice, the Chief Justice of India shall always be consulted.
Article 217	Every Judge of a High Court shall be appointed by the President by a warrant under his hand and seal after consultation with the Chief Justice of India, the Governor of the State, and, the Chief Justice of the High Court except in case of his/her own appointment.

Historical Battle between Executive and Judiciary over appointments

Colonial Rule	During the Colonial rule, the Judicial appointments were dominated by the executive branch.
Constitutional Debates	The framers of the Indian Constitution, were concerned about the potential for executive overreach in the appointments. They sought to create a balanced system of Judicial appointment to ensure judicial independence. Art 124(2) and Art 217 were aimed at balancing the powers of executive and judiciary in safeguarding judicial appointments.
Judicial Interventions	A series of rulings by the Supreme Court of India in the First, Second, and Third Judges case, led to the establishment of collegium system in India. The Judiciary

	gained a significant role in appointing judges, thereby reducing the executive's influence.
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First, Second and Third Judges Case

First Judges Case (1981)	SC in the First Judges case ruled that consultation under Art 124 does not mean concurrence . The president is not bound by the CJI's advice.
Second Judges Case (1993)	SC overruled its previous decision in the First Judges case and asserted that 'consultation' meant 'concurrence' . The CJI is required to formulate its advice based on a collegium of judges consisting of CJI and two senior most SC-judges.
Third Judges Case (1998)	SC expanded the collegium to a five member body to include the CJI and the four senior most judges of the court after the CJI. This further entrenched judicial control over appointments .

NJAC Act and the Judicial Response

99th Constitutional Amendment Act 2014 and the National Judicial Appointments Commission (NJAC) Act, 2014	<p>The NJAC was proposed to be an independent Commission to replace the Collegium System to appoint Judges to the higher Judiciary.</p> <p>Membership- It was to be a six member body consisting of</p> <ul style="list-style-type: none"> (a) The Chief Justice of India as the ex-officio Chairperson (b) Two senior-most Supreme Court Judges as ex-officio members (c) The Union Minister of Law and Justice as ex-officio member (d) Two eminent persons from civil society. (The eminent persons were to be nominated by a committee consisting of the Chief Justice of India, Prime Minister of India and the Leader of Opposition in the Lok Sabha. One of the eminent persons was to be nominated from SC/ST/OBC/minorities or women) <p>Veto Power- The Act empowered any 2 members of the NJAC to veto a recommendation if they did not agree with it.</p>
Fourth Judges Case (2015)	The Supreme Court declared the 99th Amendment Act and the NJAC Act as unconstitutional. Supreme Court struck down the National Judicial Appointments Commission (NJAC) and reaffirmed the collegium system. SC held that NJAC impinged on the independence of the Judiciary and undermined the basic structure of the Constitution.

Why the NJAC Needs Reconsideration?

1. Judicial Primacy Retained: The NJAC preserved judiciary's primacy (3/6 judicial members), while **introducing checks and diverse inputs**. Could have been "read down" to retain constitutionality instead of outright striking it down **(as suggested by Fali Nariman)**.

2. Democratic Mandate: **543 members of Parliament** voted for it (barring one dissent). Passed by **16 state assemblies** indicating **federal consensus** and **public mandate** for reform.

3. Global Comparisons: **UK, South Africa, and others** employ mixed models involving judiciary, executive, and civil society not unilateral control.

What are the Significance and Challenges of having an NJAC?

Significance	Challenges
Transparency & Accountability – Multi-stakeholder model reduces opacity. Justice Verma & ARC supported participatory appointments.	Threat to Judicial Independence – Violation of Doctrine of Stare Decisis i.e. respect for precedent. Inclusion of the executive violates separation of powers. In SC AoR Assn. v. Union of India (2015) struck down NJAC.
Checks nepotism- Ends judges-only coterie. Law Commission 230th Report flagged favoritism in collegium	Eminent Person Ambiguity – No clear criteria for selection. Vidhi Legal raised concern over vagueness
Public Trust & Legitimacy – Wider representation increases public confidence. CPR and Second ARC advocated inclusive models	Politicisation Risk – Eminent persons may be politically affiliated. PRS Legislative Research flagged possible executive packing
International Best Practices – Aligns with systems in UK, South Africa.	No SOP or Safeguards – NJAC lacked operational clarity. No tie-break or dispute-resolution rules defined in the Act.
Balanced Power Structure – Judiciary, Executive, Civil Society involved. Supported by Justice Venkatachaliah Commission (2002) .	Basic Structure Violation – NJAC viewed as undermining judicial primacy

What are the Significance and Challenges of the Collegium System?

Significance	Challenges
Judicial Independence – No executive role ensures autonomy. Kesavananda Bharati Case (1973) , Second Judges Case (1993) .	Opaque Process – No criteria or transparency. Law Commission 214th Report & Justice Chelameswar criticized lack of records or reasons

Institutional Continuity – Judges best assess competence. Justice Lodha: “Judges know the court better.”	Uncle Judge Syndrome- Nepotism & favouritism in selections seen as biased. Law Commission 230th Report highlighted the “sons and nephews” pattern.
Stability – No political turnovers affect appointments. Third Judges Case (1998) institutionalized collegium to prevent arbitrary decisions	No Accountability – No review of decisions. Justice Kurian Joseph and others demanded internal reform and feedback mechanisms
Constitutional Backing – Upheld by Supreme Court. NJAC Verdict (2015): Collegium protected under Basic Structure	Vacancies & Delays – Leads to huge backlogs. 30% HC posts vacant in 2024; many files pending with Centre
Guards Against Politicisation – Purely judicial selection. No “political loyalty test” like in some Western democracies	Inconsistent Standards – Merit often overlooked, reversals without explanation. Justice Ruma Pal called it “mysterious and arbitrary.”

What are the core Challenges facing the Indian Judiciary?

- 1. Judges Appointing Judges Dilemma:** The **Collegium System** lacks transparency, criteria, and accountability. No formal procedure/reasons for selection/rejection are made public, which affects **public trust** and raises concerns of **elitism and nepotism**.
- 2. Justice Delayed is Justice Denied:** Over **70,000 cases** are pending before the Supreme Court, **60 lakh in High Courts**, and more than **4 crore in subordinate courts (NJDG, 2024)**. Causes include inadequate judge strength, procedural delays, frequent adjournments, and lack of judicial infrastructure. **India has only 21 judges per million population (against the Law Commission’s recommendation of 50)**.
- 3. Lack of Transparency and Accountability:** Judiciary is exempt from **RTI disclosure**, though **CJI is a public authority under RTI**. There is no clear **code of conduct or performance appraisal** for judges, unlike bureaucrats or legislators.
- 4. Judicial Corruption and Ethical Deficit:** Allegations against sitting judges (e.g., Justice P.D. Dinakaran, Justice Soumitra Sen, Justice Verma) reveal disciplinary gaps. **Impeachment proceedings** are rare and cumbersome.
- 5. Executive-Judiciary Tussles and Judicial Overreach:** The judiciary has often been accused of **encroaching into the executive’s domain**, leading to friction. Cases like **Arun Gopal v. Union of India (2022)** raised concerns over excessive interference in policy matters (e.g., **environmental regulations, administrative orders**).
- 6. Underrepresentation and Lack of Diversity:** Only **12% representation of women** (as of 2024). There is poor representation from **SCs/STs/OBCs and minorities**, violating the constitutional spirit of **social justice (Article 15, 16)**.
- 7. Insufficient Judicial Infrastructure:** According to the **India Justice Report 2023**, many courtrooms are still without proper Wi-Fi, digitization, or sitting facilities for judges and litigants. Delayed computerization has undermined the potential of **e-Courts Phase II and III**.

What Should be the Way Forward?

- 1. Revisiting the NJAC judgment:** Reconsideration by a **larger Constitutional Bench**, as was done in Second Judges case. Justice Kurian's regret and other observations indicate scope for change.
- 2. Judicial Appointments Bill 2.0:** vise NJAC to preserve independence while ensuring transparency. Include clear criteria, fixed timelines, and institutional records.
- 3. Public and Parliamentary Oversight:** Set up a **Judicial Appointments Oversight Committee** to ensure due process. Strengthen Parliamentary debate on appointments.
- 4. Transparency via Digitization:** While live-streaming may not be feasible, recorded minutes and reasoned decisions must be published.
- 5. All India Judicial Services (AIJS)–** Several experts have argued for establishment of AIJS to improve the quality of judges in the lower Judiciary. This should be consulted and implemented post consensus among all stakeholders.
- 6. Judicial Appointments Secretariat:** As proposed by the **Justice Venkatachaliah Commission** – provide logistical and data support to Collegium.
- 7. Time-bound Clearance Mechanism:** Mandate decisions within **3 months** from both Collegium and executive, to reduce pendency and avoid institutional standoffs.

Read more– [The Indian Express](#)

UPSC Syllabus- GS 2– Issues Related to Judiciary

India's Deep Ocean Mission (DOM)- Explained Pointwise

India, with a coastline of over **7,517 km** and an Exclusive Economic Zone (EEZ) of **2.2 million sq. km**, holds immense potential beneath its oceanic expanse. Recognizing the untapped potential, the Government of India launched the **Deep Ocean Mission (DOM)** in **June 2021**, under the Ministry of Earth Sciences (MoES), with a total outlay of **₹4,077 crore over 5 years**.

As per **NITI Aayog** and **India's Blue Economy Vision 2030**, ocean-based resources could contribute up to **4% of India's GDP**. The **United Nations Decade of Ocean Science (2021–2030)** also provides a **global framework**, aligning with India's efforts.

Why is there a need to focus on deep oceans?

- 1. 70% of Earth's surface** is covered by oceans, yet **less than 20% is explored (UN Ocean Decade Report)**.
- 2. NITI Aayog's Strategy for New India @75** emphasizes **marine resource utilization** for sustainable growth.
- 3. Global Precedents:** China's **Jiaolong Submersible** and USA's **NOAA expeditions** showcase deep-sea dominance.

India's DOM aims to **explore mineral wealth, biodiversity, and energy reserves** while ensuring **ecological balance**.

What is the Deep Ocean Mission (DOM)?

The Government of India's Deep Ocean Mission (DOM) is a multi-institutional initiative led by the **Ministry of Earth Sciences (MoES)** to explore deep-sea resources and develop deep-sea technologies for their sustainable use. It **aims to contribute over Rs. 100 billion to India's Blue Economy** through explorations in the **Central Indian Ocean Basin**. The mission involves collaboration with **ISRO, NIOT, VSSC**, and the **International Seabed Authority (ISA)**.

Source- Copyright infringement not intended

Samudrayan

- **Samudrayan** is **India's first manned ocean mission**. It is launched in 2021 as a **part of the Deep Ocean Mission**. With this, India joined the club of the **USA, Russia, Japan, France** and **China**, which have underwater vehicles for subsea activities.
- Samudrayan will carry out **deep ocean exploration** of the non-living resources, such as **polymetallic manganese nodules, gas hydrates, hydro-thermal sulphides** and **cobalt crusts**, located at a depth between **1000-5500 m**.
- Under this mission, the **manned submersible MATSYA 6000 is indigenously built** with the help of ISRO, the Indian Institute of Tropical Meteorology (IITM) and the DRDO.

Difference between Submarine and Submersible

1. **Submarine:** Submarines are self-sufficient underwater vessels capable of independent travel to and from ports due to their substantial onboard power reserves and has a long operational range.
2. **Submersible:** Submersibles are smaller, limited-power vehicles that rely on a support ship for launch and retrieval has a limited operational range.

What is Deep Sea Mining and the Types of Deep-Sea-Minerals?

Source- Copyright infringement not intended

1. Deep sea mining is the process of retrieving mineral deposits from the deep seabed **below 200m depth (covers about 2/3rd of the total seafloor)**.
2. There is growing interest in the mineral deposits of the deep seabed because of:
 - **Depleting terrestrial metals deposits** like copper, nickel, aluminium, manganese, lithium, cobalt etc.
 - **Increasing production of technologies** like smartphones, wind turbines, solar panels, and batteries.

Types of Deep-Minerals

- **Polymetallic Nodules:** They are rounded **potato-sized lumps** of minerals found usually on the seabed **across the abyssal plains**. They are composed of **manganese, iron, nickel, copper**, and **cobalt**.
- **Seafloor Massive Sulfides (SMS):** They are found around **hydrothermal vents** (where hot, mineral-rich fluids are released from the seafloor). They are composed of **copper, gold, silver, zinc**, etc.
- **Cobalt-rich Crusts:** They are found on seafloor **seamounts and other volcanic features**. They comprise **cobalt, nickel, iron, manganese**, and **other metals**.

What is the significance of Deep Ocean Mission?

1. **Strategic Minerals & Resource Security:** The CIOB holds **~380 million tonnes of polymetallic nodules** containing **nickel, cobalt, copper**, and **manganese**. India has a contract with the **ISA** to explore 75,000 sq. km.

These minerals are crucial for **Atmanirbharta** in EVs, batteries, electronics, and India's **energy transition goals**. E.g. **Gas Hydrates of Krishna-Godavari Basin** reserves estimated at **1,894 trillion cubic feet**—enough to replace **imports for 100+ years (ONGC)**.

2. Technological Sovereignty: Development of the **Samudrayaan Mission**, India's first manned deep-ocean submersible, aims to reach **6,000 meters depth**, enabling exploration and extraction. It ensures reduced dependence on foreign tech, akin to **ISRO's indigenisation model**.

3. Blue Economy Expansion and Diversification: According to **CII & NITI Aayog**, the **Blue Economy** can add **\$1 trillion** to India's GDP by 2047. Deep sea mining, marine biotechnology, and tourism are future industries for **economic resilience and sustainable development**.

4. Strategic & Geopolitical Leverage: As China accelerates ocean missions, India's presence in the IOR via DOM ensures **maritime domain awareness and open sea-lane-of-communications** and enhances **regional influence** and supports doctrines like **SAGAR (Security and Growth for All in the Region)**. It complements missions like **Project Mausam** and India's role in **IORA**.

5. Scientific Advancement: Research on **hydrothermal vents, microbial ecosystems, and carbon sequestration** will bolster understanding of **climate change impacts on marine biodiversity**. DOM supports **SDG-14 (Life Below Water)** and aligns with **UN Ocean Decade** targets.

6. Biotechnology & Pharmaceuticals: Marine genetic resources may yield **anti-cancer, anti-microbial, and anti-inflammatory** compounds for drug discovery. It facilitates **bio-prospecting and biotechnological innovation**. E.g. **Andaman Trench's undiscovered species** may hold **cures for cancer & antibiotics (CSIR-NIO)**.

7. Data Sovereignty & Ocean Mapping: Establishment of a **Marine Spatial Data Infrastructure (MSDI)** will help in **resource planning, disaster management, and navigation**. DOM contributes to a **"Digital Ocean" platform (INCOIS)**, improving **data-driven policy**, ocean data infrastructure and digital mapping of the Indian ocean.

What are the challenges and effects of Deep Ocean Mission?

1. Environmental Degradation: **Ecological footprint** of deep-sea mining disturbs fragile habitats, with potential irreversible loss of species. **WWF** warns of **sediment plumes, noise pollution, and disruption to carbon sinks**. Deep-sea mining could wipe out **undiscovered species (IUCN)**. E.g. **Solwara-1 (PNG) halted after protests over coral damage**.

2. Regulatory Gaps: India lacks a comprehensive **National Deep-Sea Mining Policy**. Legal ambiguities can hinder exploitation **rights and environmental accountability** such as compliances with **UNCLOS and ISA** frameworks.

3. Technological Limitations: Extreme conditions (6,000m depth, high pressure, low temp) demand precision engineering. India's **ISRO-style innovation** needs scaled funding **mining robotics R&D** for success. India's **Deep Submergence Vehicle (DSV)** is still in prototype stages. E.g. **OceanGate Titan implosion (2023)** shows risks of inadequate engineering.

4. High Financial Cost & Cost-Benefit Concerns: Deep-sea missions are capital-intensive with **long gestation periods**. Returns from mining remain **uncertain vs. ecological and financial risks**.

5. Skilled Manpower Shortage: India has limited trained personnel in **deep-sea robotics, submersible operations, and ocean mining**. Institutes like **NIOT and NIO** are running at a much lower benchmark capability.

6. Security Risks & Strategic Vulnerability: Sub-Sea operations may be prone to **surveillance, espionage, or sabotage**, especially amid rising **China-India ocean competition**. E.g. **China's cable-cutting submersible** threatens India's **digital economy (\$1 trillion by 2025)**.

7. Geopolitical Competition: Ocean rivalry, strategic turf can be seen as India **faces competition from China**, which controls **5 deep-sea exploration blocks**, backed by massive investments and a powerful navy. **CSIS Report (2023)**, warned of a new '**Ocean Race**' similar to the 20th-century space race.

8. Unknown Consequences & Knowledge Gaps: Only **5% of the deep oceans** are explored; unforeseen effects may arise from mining or ecological interference. Premature intervention could cause **non-recoverable damage**.

What Should be the Way Forward?

1. Robust Legal Framework: Enact a **National Deep Sea Mining Act**, aligned with **ISA and UNCLOS**, ensuring ecological safeguards and **local community rights**.

2. Blue Economy Integration & Synergized Planning: Integrate **DOM** with **Sagarmala, MATSYA 6000, Coastal Regulation Zone (CRZ) rules**, and **Marine Fisheries Policy** to create a **unified marine vision**. E.g. **NITI Aayog: Recommends integrating the blue economy into 3-year plans**.

3. Invest in R&D: Building an **ocean innovation ecosystem**, encouraging **PPP models** in deep-sea robotics, AI in ocean mapping, and underwater drones. Learn from **Japan's JAMSTEC** and **Norway's marine research cluster**.

4. Sustainable Mining Protocols & Precautionary Principle: Establish **marine EIAs, biodiversity offsets**, and **adaptive management** practices before deep-sea operations. E.g. **MoES: Should develop India's own Ocean Impact Index**.

5. Capacity Building & Human Capital: Promote **marine studies** in **IITs, IISc, and NIOT**. Launch **Ocean Science fellowships**, targeting youth and tribal coastal communities. E.g. **Norway's "Ocean Space Centre" as a global model**.

6. Geostrategic Alliances: Collaborate with **ISA, IORA, Indo-Pacific Quad**, and countries like **France, Japan** on marine technology, mapping, and conservation. E.g. **Collaborate with Japan and Australia under the Indo-Pacific Oceans Initiative (IPOI)**.

7. Digital Ocean Infrastructure: Build a national **"Digital Ocean India" portal** with real-time, AI-driven insights for **disaster preparedness, resource allocation, and coastal resilience**.

Read more– [The Indian Express](#)

UPSC Syllabus- GS 2/GS 3– Government policies and interventions for development in various sectors/Achievements of Indians in science & technology

APAAR ID- Explained Pointwise

In a rapidly digitizing India, educational reforms must not only enhance access but also ensure seamless academic mobility, transparency, and accountability. The **Automated Permanent Academic Account Registry (APAAR ID)** — part of the **"One Nation, One Student ID"** initiative — aims to revolutionize the way student data is stored, accessed, and utilized across the learner's lifetime. However, this seemingly

transformative move raises serious concerns over data privacy, legal mandates, and digital rights, especially for minors.

As India charts its way towards achieving the **National Education Policy (NEP) 2020** goals of holistic and lifelong learning, APAAR ID emerges as a crucial step. But as one expert noted, “**we must ensure that we don’t stumble too much as the baby learns to walk.**”

What is an APAAR ID and its key features?

Definition and Core Features

- **APAAR (Automated Permanent Academic Account Registry)** is a **12-digit unique digital identity** for every Indian student, comparable to **PAN for taxpayers**.
- Part of the **One Nation, One Student ID initiative**, it is rooted in the **NEP 2020 vision** of “**seamless mobility, multidisciplinary learning, and lifelong education.**”

Key Functionalities:

- Stores a **student’s complete academic journey** – curricular, co-curricular, and extra-curricular achievements.
- Links **Academic Bank of Credits (ABC)** with **DigiLocker**, enabling verified storage and retrieval of educational records.
- Aims to cover **admissions, scholarships, internships, skill certifications, job applications, and credit transfers**.
- All records are accessible via **DigiLocker**, enabled through **Aadhaar authentication**.

Integration of Infrastructure:

Component	Function
DigiLocker	Secure digital document locker (e.g., mark sheets, driving license)
ABC (Academic Bank)	Learner’s passbook of academic credits stored institution-wise
ABC (Academic Bank)	Institution-reported educational credentials repository
APAAR ID	The digital “bridge” linking all the above under one verifiable ID

What is the significance and importance of APAAR ID?

1. Holistic Student Portfolio: “What PAN is to an Indian taxpayer, APAAR is to an Indian learner.” Currently, academic records are fragmented — **marksheets, extra-curricular certificates, and training credentials** are stored separately. APAAR centralizes this, creating a “**lifelong academic identity**” — useful for education, employment, **portability, transparency and skill progression**.

2. Facilitating NEP 2020 Vision: NEP emphasizes **credit-based, multidisciplinary, and modular education**. APAAR, through **ABC**, allows learners to earn credits from multiple institutions and aggregate them, easing

mobility across institutions. E.g. NEP 2020's PARAKH (Performance Assessment) can leverage APAAR for competency tracking.

3. Ease of Verification: Employers and institutions can **instantly verify credentials**, curbing the menace of **fake certificates**. According to a **2023 Aspiring Minds Report**, over **25% of resumes in India carry discrepancies**, leading to loss of trust and inefficiencies in hiring.

4. Data-Driven Governance: APAAR allows the Ministry of Education (MoE) to analyze **real-time data** on: educational attainment by geography, gender, caste, dropout rates, transition patterns, and skills gap. **Helps achieve UN SDG 4 (Quality Education)** through informed policy decisions. E.g. **Integration of APAAR with UDISE+**, which tracks infrastructure and enrollment, could enable **360° monitoring** of both input and output parameters of schooling.

5. Economic Rationale: Reduces administrative costs related to issuance, verification, and storage of records. Encourages **portability of skills**, critical in the **Gig Economy** and **Skill India Mission**. Can synergize with **e-Shram, National Career Service, and Udyam Portal** for streamlined workforce planning.

6. Direct Benefit Transfer & Equity: APAAR can streamline **scholarship distribution, reducing leakages**. **PM-SHRI Schools** plan to use APAAR for **targeted welfare** may create a virtuous cycle of benefit sharing.

7. Global Recognition: APAAR aligns with **UNESCO's Global Education Monitoring**, facilitating cross-border academic recognition.

What are the associated challenges and concerns with it?

1. Data Privacy of Minors: APAAR is **hard-linked with Aadhaar**, which the **Supreme Court in Justice K.S. Puttaswamy v. Union of India (2018)** ruled **cannot be mandatory** for school enrolment. **DPDP Act 2023, Section 9(1)** mandates **verifiable parental consent** for processing children's data — this raises questions on the validity of bulk registration drives in schools.

2. Lack of Legal Framework: Unlike Aadhaar which eventually got a **statutory backing** (Aadhaar Act, 2016), **APAAR ID lacks a dedicated legislative framework**. Echoes concerns raised by identity expert **Kaliya Young**, who noted that Aadhaar was rolled out **"without first putting necessary legal or regulatory frameworks"**.

3. Cybersecurity and Data Management: As APAAR integrates data from **DigiLocker, ABC, and NAD**, it becomes a **high-value target** for cyberattacks. **According to Internet Freedom Foundation, there is no public clarity yet** on the ownership of the data, data protection, can students delete their records, accessibility of data like who has access — can EdTechs or third parties use it for **"personalized learning"** as claimed by ABC.

4. Consent and Transparency Deficits: Current process of obtaining consent is ambiguous — often conducted **without informing parents fully or in English-only forms**. Withdrawal of consent is unclear; **retained Aadhaar data** is not purged post withdrawal.

5. Implementation Gaps: Lack of capacity building among school administrators and teachers. **Digital divide** may leave out rural, poor, or tribal students — ironically exacerbating the very inequities APAAR seeks to resolve. **China's Social Credit System** mirrors **APAAR's potential misuse**.

6. Institutional Resistance: **Teacher burden, tech readiness** also posing challenge to the idea as, according to **NIEPA Survey 60% govt. schools lack training for APAAR uploads (NIEPA)**. **Data entry errors in UDISE+** plagued initial implementation.

7. Parental Apprehensions: EdTech surveillance & profiling fears concerns have sparked debates (Internet Freedom Foundation, 2023).

What should be the Way Forward?

1. Enact a Dedicated APAAR Act: Like the Aadhaar Act, APAAR needs **Parliamentary backing** ensuring voluntary participation, consent architecture, data usage boundaries and right to opt-out and delete. **E.g. EU's GDPR mandates strict minor data protections.**

2. Ensure Privacy by Design: Follow **Justice B.N. Srikrishna Committee's recommendation** of "Privacy by Design". Adopt **data minimization** and **purpose limitation** principles. Implement **end-to-end encryption**, **auditable access logs**, and **cyber hygiene training** in schools. **E.g. A blockchain-backed APAAR ID** can eliminate fake degrees, as seen in the **UGC's DigiLocker integration** (AICTE Report, 2022).

3. Parental and Student Control: Parents must have **real-time dashboards** to view, withdraw or restrict access to data. Students should have ability to **curate what to share**, much like **LinkedIn profile visibility settings**.

4. Digital Inclusion: Provide APAAR kits in schools with **vernacular instructions** and **community sensitization**. Train **data protection officers** in every district. Consider **offline alternatives** for low-tech zones. **E.g. MIT's Blockcerts for tamper-proof diplomas.**

5. Independent Oversight: Constitute an **Independent Data Protection Board** to audit APAAR operations. Ensure APAAR-related actions are subjected to **RTI and Parliamentary oversight**.

Global Best Practices:

Country	System	Key Feature
European Union	ECTS (Credit System)	Allows seamless mobility and credit transfer in EU
United States	Student ID + SSN (optional)	Education and privacy policies ensure children's rights
Estonia	National Digital Identity	Entire education journey online, privacy by design model
India (Future?)	APAAR + DigiLocker + ABC	Needs a transparent, inclusive, and secure implementation

Conclusion

APAAR ID represents a promising leap towards **digital public infrastructure for education**, aligning with India's broader digital transformation under **Digital India, Bharat Stack, and NEP 2020**. However, as seen in the experience with Aadhaar, **technological infrastructure must not outpace legal safeguards**. India has a rare opportunity to build a **learner-centric, privacy-respecting, and globally interoperable academic identity system**. But without robust safeguards, consent architecture, and public debate, **we risk turning a digital revolution into a digital surveillance state**.

Let us not forget the golden lesson of governance: “Efficiency cannot come at the cost of liberty.”

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UPSC Syllabus- GS 2– Government policies and interventions for development in various sectors

‘3Cs’ Crisis in Indian Education- Explained Pointwise

Education is not merely a service—it is a **public good**, a **constitutional right (Article 21A)**, and the bedrock of **India’s demographic dividend**. However, the Indian education system is today haunted by **three intertwined threats ‘3Cs’** —**Centralization, Commercialization, and Communalization**—collectively undermining the idea of “**Education for All**”.

The **National Education Policy (NEP) 2020** has been hailed as a transformative reform, yet these alarming trends are eroding its potential impact.

What are the ‘3Cs’ Crisis in Indian Education?

Centralization: Erosion of Federalism in Education

- 1. Marginalization of States:** According to **ASER 2024**, **only 6%** of schools are under the Central government, yet key decisions (syllabus, exams, funding) are increasingly centralized.
- 2. Ignoring the Concurrent List:** NEP 2020 was implemented without consulting states, despite education being a **Concurrent List subject**. The introduction of **PARAKH central boards** risks sidelining State Boards.
- 3. Financial Coercion:** As per the **Parliamentary Standing Committee’s 363rd Report**, the **PM-SHRI schools** scheme forces states to comply by withholding **Samagra Shiksha Abhiyan (SSA) funds** (₹38,000 crore pending).
- 4. Takeover of State Universities:** **UGC 2025 draft guidelines** empower governors (acting as Chancellors) to control Vice-Chancellor appointments, sidelining state governments (**e.g., Kerala vs. Governor feud**).
- 5. Concentration of Regulatory Power:** The **Draft Higher Education Commission of India (HECI) Bill** further consolidates authority at the Centre, undermining institutional diversity.
- 6. Curriculum Control:** The **National Curriculum Framework (2023)** shifts curriculum control to the Centre, ignoring local needs and innovations (**e.g., Kerala’s localized curriculum for tribal students**).
- 7. Violation of Federal Principles:** This contradicts recommendations by the **Sarkaria Commission** and **National Knowledge Commission**, which emphasized cooperative federalism in education.

Commercialization: Privatization and Fee Hikes

- 1. Exclusion Due to Costs:** **UDISE+ 2022** reports a **25% dropout rate** in secondary education due to unaffordability. **NSSO 2022 data** highlights that only 12% of poor rural children can access private schools.
- 2. Decline of Public Schools:** **ASER 2023** notes that **89,441 government schools** shut down (2014-24), forcing students into expensive private institutions.
- 3. RTE Dilution:** NEP’s ‘**school complexes**’ replace neighborhood schools, pushing economically weaker students into private institutions.

4. Loan-Based Education: HEFA (Higher Education Financing Agency) replaces UGC grants with market-rate loans, leading to fee hikes (**78-100% HEFA loans repaid via student fees—Parliamentary Committee's 364th Report**).

5. Corruption in Accreditation: The **NAAC bribery scandal** and **NEET-UG 2024 paper leaks** expose the vulnerability of the system to fraud and profiteering.

6. Rising Private Expenditure: Households spend **₹8,331 per child annually** in private schools vs. **₹2,231 in government schools (NSSO 2017-18)**. **Economic Survey 2022-23** shows private education expenditure (**₹2.5 lakh crore**) exceeds public spending.

- **Falling RTE Admissions:** RTE admissions in private schools declined by **32% (ASER 2022)**.
- **Fee Surge:** IITs and IIMs have increased fees by **300% since**.

7. Coaching and EdTech Boom: The **₹38,000 crore EdTech industry** promotes exam-centric learning, with Kota coaching hubs charging up to **₹5 lakh/year (CRISIL Report 2023)**. Despite **T.M.A. Pai Foundation v. Karnataka (2002)** ruling education is not a business, rampant profiteering continues.

Communalization: Rewriting History and Ideological Takeover

1. Erasing Pluralism: Textbook revisions (e.g., erasure of Mughal history, rationalizing riots) promote majoritarian narratives and **undermine secularism (Article 28)**.

2. Hate Indoctrination: States like **Uttarakhand and Gujarat** have been accused of using curricula to **demonize minorities**, polarizing young minds.

3. Whitewashing History: No mention of **Dalit movements**.

4. Court Ruling: In **Aruna Roy v. Union of India (2002)**, the Supreme Court ruled that **education must be secular and free from religious propaganda**. It also undermines the **National Curriculum Framework (2005)** that upheld **inclusivity, rationality, and constitutional values**.

What is the Significance of Decentralized, Secularized Education as a Public Good?

1. Promotes Equity and Inclusion: Decentralization empowers **local authorities** to design culturally sensitive and linguistically relevant curricula. **RTE Act, 2009** mandates local authorities to ensure **neighborhood schooling**, promoting equity. E.g. **Kerala's Panchayat-led school reforms** have enhanced **tribal and coastal community education access**.

2. Protects Constitutional Values: A secularized curriculum fosters **constitutional morality, tolerance, and scientific temper** as per **Article 51A** of the Constitution. The **Supreme Court in Aruna Roy v. Union of India (2002)** held that **value education must be secular** and not religiously proselytizing. In **Bandhua Mukti Morcha vs. UoI (1984)**, SC linked education to **right to life (Article 21)**.

Constitutional & Legal Mandates: **Article 21A** provides right to education for 6-14 years, **RTE Act, 2009**, mandates **25% reservation** for EWS in private schools and **NEP 2020**, aims for **100% GER (Gross Enrollment Ratio)** by 2030. E.g. **Bandhua Mukti Morcha vs. UoI (1984)**, SC linked education to **right to life (Article 21)**.

3. Improves Governance and Responsiveness: Decentralization facilitates **contextual problem-solving, real-time grievance redressal, and accountability**. E.g. **Rajasthan's Shiksha Mitra Scheme** empowered local school management committees to address dropouts and infrastructure gaps.

4. Enables Data-driven Local Planning: Local bodies can use **DISE (District Information System for Education)** data to tailor educational interventions. Think tank **PRATHAM's ASER reports** reveal **district-level disparities**, highlighting the need for localized strategies.

5. Encourages Pluralism and Social Harmony: A secular education helps prevent **sectarianism, communalism**, and fosters **unity in diversity**. E.g. **Old NCERT textbooks** emphasize secular values, composite culture, and shared history to promote **national integration**.

6. Strengthens Educational Outcomes: Involving **Gram Sabhas, PTAs, and School Management Committees (SMCs)** enhances school performance. Study by **Accountability Initiative (Centre for Policy Research)** shows **community-led monitoring improved learning outcomes** in Madhya Pradesh.

7. Democratizes Knowledge and Curriculum: Decentralized curriculum design allows inclusion of **local histories, indigenous knowledge, and regional heroes**, helping overcome **centralized biases**. E.g. **North-East India textbooks** now include local folklore and tribal movements, increasing student engagement and cultural pride.

8. Economic Growth: A skilled and educated workforce is essential for driving economic growth and innovation. According to the **World Bank**, a **1% rise** in education spending boosts **GDP by 0.5%**. E.g. **Kerala Model: 94% literacy rate (Census 2011) linked to high HDI (0.784)**. **Case Study:** Tamil Nadu's **Mid-Day Meal Scheme** reduced dropout rates by 11% (**NITI Aayog, 2021**).

9. Social Equity: Education is a powerful tool for social mobility and empowerment. The **RTE Act** aims to ensure **equitable access to quality education** for all children **aged 6-14**. The **Sachar Committee Report** highlighted the educational backwardness of Muslim communities, underscoring the need for inclusive policies.

What are the Major Challenges and Systemic Issues?

Challenge	Data/Fact/Example
Learning Poverty	Over 53% of Indian children in Class V cannot read a Class II level text – ASER 2023
Teacher Vacancies	Over 1 million teacher vacancies in government schools (MoE, 2023 Annual Report)
Skewed Budget Priorities	India spends only 2.9% of GDP on education, below Kothari Commission's 6% target .
Digital Divide	Only 29% rural households have internet access – NSO 2023
Unregulated EdTech	Lack of data privacy and exploitative pricing (UDISE+ 2024)
Ineffective Regulation	Fake degree rackets and substandard private colleges mushroom unchecked

What should be the Way Forward?

1. Strengthen Federalism in Education: Implement **School Complex Clusters** (NEP 2020) with true autonomy. Empower **State Education Regulatory Authorities (SERA)** to oversee curriculum, funding, and teacher training. E.g. **Germany's Federal Education Council**.

2. Stop Privatization: Cap private school fees (Like **Kerala's Fee Regulation Act**). **Double education budget** (Current: **2.9% of GDP**, vs. **6% NEP target**).

3. Secular, Diverse Curriculum Reforms: Revise textbooks through **multi-stakeholder bodies** involving historians, educators, and constitutional experts. Use **NCERT's Textbook Review Panel** to restore plural, fact-based content. E.g. **Finland's National Board of Education**.

4. Revive Public Education with Accountability: Social audits in school governance. Public-private partnerships only with **strong regulation**, not laissez-faire privatization. E.g. **CBI-led probe into NTA, NAAC scams**.

5. Transparent EdTech & Coaching Regulation: Implement **National EdTech Policy** with focus on **affordability, safety, and learning outcomes**. Regulate coaching fee structures, working hours (especially for minors), and psychological safety.

6. Massive Investment in Teacher Training & Infrastructure: Implement **NCTE's National Professional Standards for Teachers (NPST)**. Budget for education should rise to **6% of GDP**, per **Kothari Commission** and **NEP 2020**.

7. Democratize Educational Governance: Strengthen **Panchayati Raj Institutions** in education delivery. **Community-led school monitoring** (e.g., **Lok Jumbish** in Rajasthan) as a model for participatory accountability.

8. Global Best Practices

- **Canada's Public-School Model:** No privatization, high equity.
- **South Korea's R&D Focus:** 5% GDP on education + research.

Conclusion:

India's vision of **"Viksit Bharat by 2047"** will collapse if its education system is captured by the **3Cs—Centralization, Commercialization, and Communalization**. Education must be the **"engine of equality, enlightenment, and empowerment"**, not a tool of control, profit, or propaganda.

As **Tagore warned**, "The highest education is that which does not merely give us information but makes our life in harmony with all existence."

Read more – [The Hindu](#)

UPSC Syllabus- GS 2– Issues related to Education