



7 PM COMPILATION

3rd and 4th week November, 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
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Crypto as a Money Laundering Tool- Explained Pointwise

Cryptocurrency, once seen as a symbol of financial innovation, has increasingly emerged as a tool for global money laundering. Indian agencies now report large-scale frauds and rapid cross-border fund transfers, posing serious regulatory, financial and national-security challenges. **Between January 2024 and September 2025**, the **Indian Cyber Crime Coordination Centre (I4C)** flagged 27 crypto exchanges involved in laundering **Rs. 623.63 crore** from nearly 2,872 victims.

What is Cryptocurrency and What are Crypto Exchanges?

Cryptocurrencies are digital assets created and exchanged using blockchain — a secure, decentralised public ledger. Unlike regular money, they are not backed by any government or central bank. Their value depends on market demand, supply and speculation. Popular examples include **Bitcoin, Ethereum and stablecoins**.

Key features of cryptocurrencies

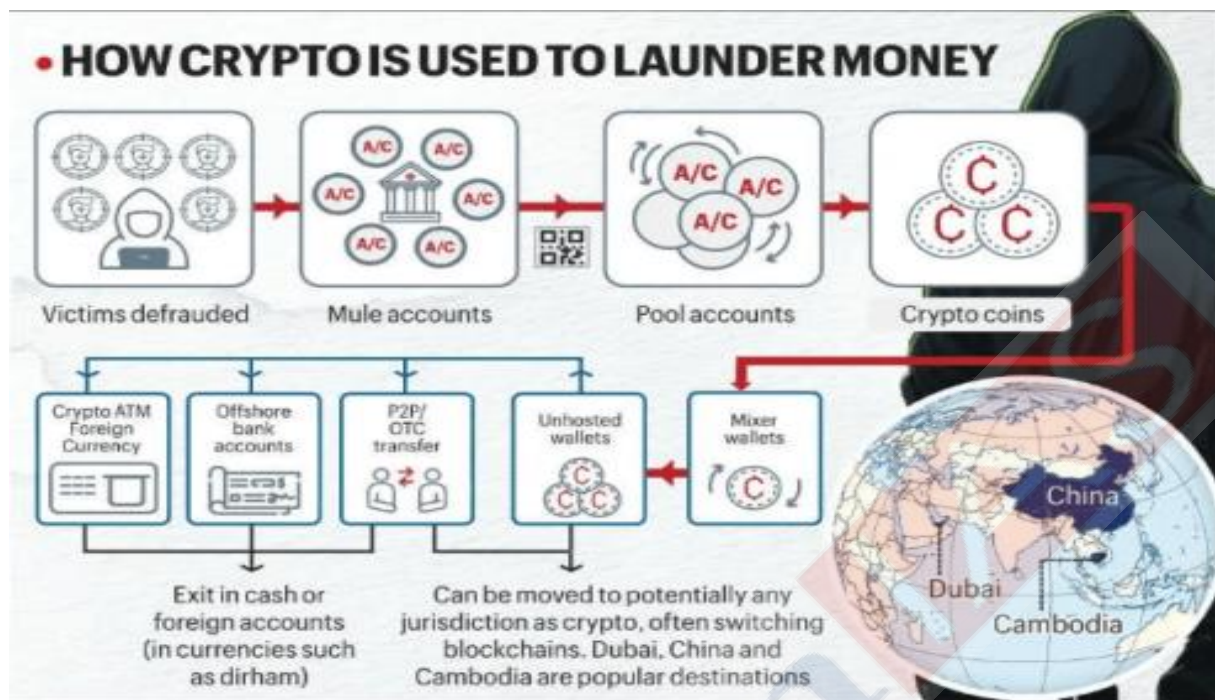
- Decentralisation: No central authority controls cryptocurrency, which gives users freedom but also makes it easier for criminals to hide.
- Pseudo-anonymity: Transactions use wallet addresses instead of real names, making it difficult to identify people behind them.
- Borderless transferability: Crypto can move across countries instantly, avoiding the checks of regular banking systems.
- Irreversibility: Once a blockchain transaction is made, it cannot be undone, making recovery of stolen or laundered money very hard.

Crypto Exchanges– Crypto exchanges are digital marketplaces where users can buy, sell, trade, or convert cryptocurrencies. They **work somewhat like stock exchanges** but operate with significantly fewer regulations, making them faster but also more vulnerable to misuse.

Types of exchanges:

- Centralised Exchanges (CEXs): Platforms such as **Binance, Coinbase** and **WazirX**. They typically require KYC verification, though compliance standards vary widely.
- Decentralised Exchanges (DEXs): Peer-to-peer platforms like Uniswap that operate without any central authority. Users trade directly from their wallets, ensuring privacy but offering limited oversight.
- Hybrid Exchanges: These platforms combine features of both CEXs and DEXs — offering faster transactions and user-friendly interfaces while trying to maintain greater transparency and security

How do Crypto scams happen?



Source- IE

1. Fake Exchanges and Websites– Fraudsters set up websites that look almost **identical to genuine crypto platforms**. Victims deposit money believing they are trading safely, only for the site to disappear along with their funds.
 2. Pump-and-Dump Schemes– Scammers **artificially boost the price of low-value tokens** through coordinated buying and aggressive social-media promotion. When unsuspecting investors join in, the scammers cash out, causing the token price to collapse.
 3. Phishing and Hacking Attacks– Users are tricked into **revealing private keys or seed phrases through fake emails, apps** or customer-support messages. Once accessed, wallets are emptied within minutes.
 4. Rug Pulls– Developers launch a flashy new token or **decentralized Finance (DeFi)** project, attract investor money, and suddenly shut it down—vanishing with the funds and leaving investors with worthless assets.
 5. Romance and Task-Based Scams (Pig Butchering)– Criminal networks build emotional connections or offer “high-income tasks” online, slowly convincing victims to invest in fake crypto platforms that show fabricated profits before ultimately wiping out their savings.
- Across all these methods, **stolen funds are quickly moved through multiple wallets**, mixers and loosely regulated exchanges, making the money trail opaque and helping criminals evade traditional anti-money-laundering systems.

What is the size of India’s crypto market?

India's Crypto Market Size

India today ranks among the world's biggest crypto markets, reflecting both rising digital adoption and growing appetite for alternative assets.

Key Statistics:

- An estimated **119 million Indians** use or hold cryptocurrency — one of the largest user bases globally.
- The domestic crypto market was valued at **USD 2.6 billion in 2024** (IMARC Group).
- By 2035, it is projected to reach **USD 15 billion**, growing at a **17% CAGR** (HDFCTru).

Who is investing?

Younger Indians dominate the crypto ecosystem:

- Gen Z (18–25): 37.6%
- Millennials (26–35): 37.3%
- Adults (36–45): 17.8%

Where is adoption growing?

Metro cities such as **Delhi, Bengaluru and Mumbai** continue to lead. But Tier-2 and Tier-3 cities — **Jaipur, Lucknow and Patna** — are emerging as surprising new hubs of crypto activity.

What are the key challenges posed by Crypto in India?

1. Anonymity and Multi-Layered Laundering– Crypto transactions **use wallet IDs instead of real names**, allowing criminals to move money through hundreds of wallets, DEXs and mixers, making tracing extremely difficult.
2. Cross-Border Movement of Illicit Funds– Cryptocurrencies enable quick transfers to countries like **Dubai, China and Cambodia**, where weak regulations and lack of uniform reporting make international coordination very challenging.
3. Use by Cyber-Criminal and Scam Networks– Cyber-fraud groups increasingly use crypto for ransomware, extortion and global scam operations because it **offers fast, borderless and hard-to-track payments**.
4. Key Role in Online Fraud Schemes– Crypto is now central to job scams, **sextortion, investment frauds and app-loan scams**, with victim money quickly converted into crypto and dispersed worldwide, reducing recovery chances.
5. Regulatory Arbitrage and Exchange Opacity– Many exchanges operate across multiple jurisdictions with different compliance rules, and some Indian platforms have foreign ownership layers, creating opacity and opportunities for regulatory evasion.
6. Enforcement and Forensic Difficulties– Agencies like ED, CBI, and I4C face challenges such as weak KYC standards, complex wallet tracing, lack of protocols for storing seized crypto, jurisdictional limits abroad, and a shortage of trained investigators. These challenges have even led one agency to store seized crypto with a private firm.

7. Macroeconomic and Financial Stability Risks– The RBI fears that widespread crypto use could undermine financial stability, weaken monetary-policy control, and disrupt capital-flow management, while high volatility and terror-financing risks deepen concerns. Additionally, high taxes have pushed users offshore, shrinking domestic activity by 97%.

What is Crypto Governance in India?

1. There is no central legislation, which means crypto has no defined rights, liabilities or consumer protection, and it is not recognised as legal tender.
2. The Supreme Court–RBI conflict has created regulatory ambiguity: the **RBI banned banking services for crypto in 2018**, the **Supreme Court overturned it in 2020**, and the government later introduced taxes without creating a regulatory framework.
3. The government remains hesitant to regulate crypto because doing so may be seen as granting legitimacy, so only a discussion paper is currently being drafted.
4. There is no investor protection, as crypto holdings do not have insurance, RBI ombudsman support or SEBI grievance mechanisms, unlike traditional financial products.
5. Offshore platforms operate outside Indian jurisdiction, serving Indian users without taxation compliance or regulatory oversight.
6. Inter-agency coordination is fragmented, with bodies like the RBI, ED, Income Tax Department, MeitY, state police and FIU-IND following different approaches, creating enforcement gaps.

What should be the way forward?

1. India must enact a comprehensive Crypto Assets and Digital Transactions Act to define asset classifications, licensing rules, consumer protections, Anti-Money Laundering (AML)/KYC standards and penalties for violations, while clearly distinguishing cryptocurrencies, stablecoins, utility tokens and security tokens.
2. Exchanges should be brought under a mandatory licensing regime, similar to the **EU's MiCA framework**, requiring strict KYC norms, AML checks, travel-rule compliance, long-term data storage and mandatory proof-of-reserves audits.
3. A regulated system for custody of seized crypto assets is needed, with national standards for secure storage, recovery procedures and liquidation, supported by a government-approved digital asset custodian.
4. Blockchain forensics capability must be strengthened, with specialised labs, AI-based tracing tools, global analytics partnerships and systematic training for agencies like ED, I4C, FIU-IND and state cyber cells.
5. Cross-border cooperation should be expanded, using Interpol task forces, FATF networks and bilateral agreements with hubs such as Singapore, the UAE and Europe, given the global movement of illicit funds.
6. A balanced taxation framework is necessary, including reducing TDS rates, rationalising capital gains taxes and offering compliance incentives to prevent users from shifting to offshore platforms.
7. A robust consumer protection architecture must be built, with a crypto grievance portal, mandatory insurance for exchange-held assets, transparent risk disclosures and compensation systems for fraud victims.
8. Stablecoins and DeFi need targeted regulation, including licensing for issuers, reserve audits, transaction reporting and KYC-linked safeguards for high-value DeFi transactions.

9. Public awareness and digital literacy should be improved, especially for young investors, through campaigns highlighting common scams, safe wallet practices and the risks of unverified investment schemes.

Conclusion

Cryptocurrencies bring useful innovation but also significant risks. In India, rising usage and unclear regulations have increased threats like cyber fraud, financial crime and monetary instability. India now needs a clear, balanced regulatory framework—aligned with global norms—to protect consumers, maintain financial stability and support the safe growth of digital assets.

Read more- [IE](#)

UPSC Syllabus- GS 3- Issues relating to money laundering, financial frauds, and digital payments

India-Africa Relationship- Explained Pointwise

India's engagement with Africa has grown significantly over the past decade. The **2015 India-Africa Forum Summit**, which brought together all 54 African nations, marked a major diplomatic milestone. Since then, India has opened new missions, expanded **trade beyond \$100 billion**, increased investments, and supported Africa's stronger global role, including its **entry into the G20**. It is now important to review not just the promises made but the solid foundations built for a deeper India-Africa partnership.



Source- ORF

Historical Evolution of India-Africa Relations

Cultural and Trade Links	<ul style="list-style-type: none"> India-Africa relations date back millennia, with trade between the Indus Valley Civilization and African civilizations. During colonial times, Indian indentured laborers (girmitiyas) in Africa strengthened socio-cultural connections.
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Political Ties and Anti-Colonial Solidarity	<ul style="list-style-type: none"> ● India and Africa shared struggles against colonialism, exemplified by Gandhi's civil disobedience work in South Africa. ● After independence, India backed African decolonization at the UN and worked with Africa at the 1955 Bandung Conference, helping form the Non-Aligned Movement to advance Global South interests
Technical and Economic Cooperation	<ul style="list-style-type: none"> ● The Indian Technical and Economic Cooperation (ITEC) program, launched in 1964, provided technical assistance to African nations. ● ITEC strengthened people-to-people ties and laid the foundation for long-term India-Africa partnerships.

Areas of Cooperation Between India and Africa

1. Political Cooperation

- Regional and Global Engagements: Collaborations through the Asia-Africa Growth Corridor (AAGC), Build Back Better World (B3W), Blue Dot Network, African Development Bank (ADB), and other platforms strengthen South-South cooperation.
- UNSC Reform and Multilateral Advocacy: India has actively supported the Ezulwini Consensus for African representation at the UN Security Council. Both India and African nations frequently align in BRICS, OIC, and New Development Bank (NDB) forums.
- Regional Organizations: Engagement with ECOWAS (Economic Community of West African States) and the African Continental Free Trade Area (AfCFTA) highlights India's commitment to African integration and regional stability.

2. Economic Cooperation

- Trade and Investment: India-Africa bilateral trade reached approximately \$100 billion in 2024-25, with India as Africa's third-largest trading partner. India's investments in Africa, approximately \$75 billion, span energy, mining, telecommunications, and pharmaceuticals.
- Financial Initiatives: EXIM Bank's Focus Africa Programme, India-Africa Partnership projects, and preferential trade agreements with the Southern African Customs Union illustrate India's commitment to African development.
- FDI and Lines of Credit: Around 22.5% of India's outward FDI flows target Africa, complemented by concessional Lines of Credit worth \$12.26 billion, enabling infrastructure projects such as irrigation development in Senegal.

3. Security Cooperation

- India collaborates with African countries on maritime security, anti-piracy operations, and humanitarian and disaster relief (HADR).
- Key platforms include the Indian Ocean Rim Association (IORA) and multinational exercises like MILAN, Cutlass Express, and Africa-India Key Maritime Engagement (AIKEYME).

4. Climate Change and Technology Cooperation

- India and Africa work jointly to tackle climate change through the International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI).
- Technology initiatives such as the Pan-African e-Network and India Stack technologies (UPI, RuPay) support digital infrastructure, capacity-building, and sustainable development in Africa.

5. People-to-People (P2P) Cooperation- India has extended its human resource expertise to Africa through

- Technical training and scholarships via Indian Council for Cultural Relations and ITEC programs.
- Deployment of Indian engineers, healthcare workers, and digital infrastructure specialists.
- Tele-education and telemedicine initiatives like e-VidyaBharti and e-ArogyaBharti.

Strategic Significance of Africa for India

- **Economic and Resource Security:** Africa supplies critical minerals essential for India's industrial and green energy transition: 48.1% of global cobalt and 47.7% of global manganese come from Africa.
- **Trade and Investment Opportunities:** Africa offers vast markets and resources; the African Continental Free Trade Area (AfCFTA) provides the world's largest free trade area, boosting India-Africa trade and investment.
- **Young and Growing Consumer Base:** Africa's rapidly urbanising population presents a large market for Indian IT, banking, financial services, and mobile payment solutions.
- **Geopolitical and Diplomatic Importance:** Africa is a strategic partner in advocating Global South priorities, reforming multilateral institutions (UN, WTO), and promoting international peace. India's support for the African Union's G20 membership highlights this collaboration.
- **Defence and Security Cooperation:** Engagements through the Indian Ocean Rim Association (IORA), Indian Ocean Commission (IOC), and maritime exercises like MILAN, Cutlass Express, and Africa-India Key Maritime Engagement (AIKEYME) strengthen regional security and protect vital sea lanes.
- **Soft Power, Technology, and Climate Initiatives:** India extends ICCR/ITEC scholarships, e-VidyaBharti/e-ArogyaBharti, and India Stack technologies (UPI/RuPay). It also collaborates on renewable energy through the International Solar Alliance (ISA), Global Solar Facility, and Virtual Green Hydrogen Innovation Centre.

Challenges in India-Africa Relations

- **Geopolitical Contestation:** Africa has become a stage for strategic competition among China, the U.S., EU, Russia, Japan, Türkiye, and UAE, which limits India's influence and bargaining power.
- **Chinese Assertiveness:** China's massive investments, diplomatic outreach, and infrastructure projects often overshadow India's contributions. Between 2007–2023, China hosted 251 African leaders, demonstrating its deep influence.
- **Lack of Clear Strategy:** India's development cooperation model in Africa often lacks the scale, speed, and financial depth that China brings, reducing its competitiveness.
- **Focus Diversion:** India's strategic focus on the Indo-Pacific and strengthening ties with Western powers sometimes diverts attention from Africa.
- **Social and Perception Concerns:** Incidents of racial attacks on African nationals in India have negatively impacted India's image and soft power in the continent.

- Operational and Security Challenges: Procedural delays, funding bottlenecks, and logistical issues slow down India-funded projects. Additionally, terrorism, conflicts, and political unrest in regions like the Sahel and Horn of Africa pose risks to Indian personnel and investments.

Way Forward

- Political and Diplomatic Cooperation: Revive regular India-Africa Forum Summits and establish a dedicated Secretary for African Affairs in the Ministry of External Affairs to ensure consistent engagement.
- Defence and Security Collaboration: Increase the number of defence attachés in African capitals, strengthen maritime security partnerships, and expand Lines of Credit for defence exports to enhance strategic ties.
- Economic and Development Initiatives: Create an Africa Growth Fund (AGF) to boost trade and investment, promote project exports, and strengthen cooperation in the shipping sector.
- Socio-Cultural Engagement: Expand academic, cultural, and people-to-people exchanges, rename ITEC and ICCR scholarships after notable African figures, and set up a National Centre for African Studies in India.
- Roadmap Implementation and Strategic Vision: Implement Roadmap 2030 through collaboration between the MEA and the National Security Council Secretariat, and operationalize PM Modi's 10 guiding principles (Kampala Principles) for India-Africa engagement.

Read more– [TH](#)

UPSC Syllabus- GS 2– Bilateral Relations

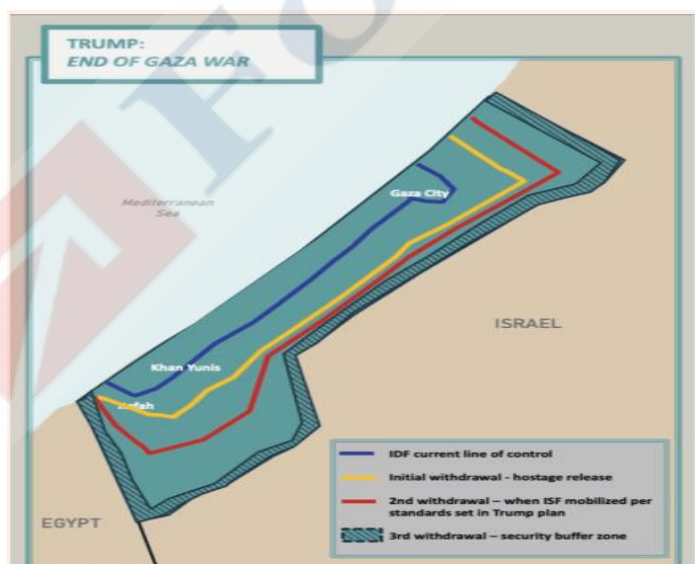
Trump's 20-Point Gaza Peace Plan- Explained Pointwise

The UN Security Council approved US President Donald Trump's 20-point peace plan for Gaza on November 17. The plan aims to stop the ongoing Israel-Hamas conflict that has killed over 66,000 Palestinians since October 7, 2023. It calls for an immediate ceasefire, the release of hostages and prisoners, and a long-term peace agreement under international supervision.

What are the key elements of Trump's 20-Point Plan?

- Immediate Ceasefire: Both parties must agree to halt all hostilities, including bombing, rocket fire, and cross-border attacks.
- Return of Hostages: Hamas would release all living and deceased Israeli hostages held in Gaza upon the ceasefire's implementation.
- Prisoner Exchange: Israel would release Palestinian prisoners, including those from Gaza, in a comprehensive exchange with the hostages released by Hamas.
- Withdrawal from Gaza: Israel to progressively withdraw its military to an agreed line after the ceasefire, monitored by international oversight.
- Demilitarization of Gaza: Gradual disarmament of Hamas and other armed groups, turning Gaza into a "terror-free" zone, as a precondition for broader peace.
- International Stabilization Force (ISF): Deployment of a UN-mandated, multinational security force (involving the US, Qatar, Egypt, Turkey, etc.) to stabilize Gaza, support local police, and monitor compliance.

- **Transitional Governance:** Transfer governance of Gaza to an interim Palestinian technocratic committee, under the supervision of a “Board of Peace” led by Trump and supported by figures like Tony Blair.
- **No Forced Displacement:** Palestinians would not be forcibly expelled or relocated from Gaza. Israel would pledge not to occupy or annex the enclave.
- **Humanitarian Access:** Unrestricted and large-scale humanitarian aid for Gaza, including medical supplies, food, water, and international reconstruction funds.
- **Reconstruction:** Commitment from multiple wealthy countries for the redevelopment of Gaza’s infrastructure, homes, schools, and hospitals.
- **Pathway to Statehood:** Gaza would be governed in a way that could eventually lead to Palestinian self-determination and recognition of statehood, subject to deradicalization and disarmament.
- **Reform of Palestinian Authority (PA):** Simultaneous reforms in the PA to prepare for responsible, nonviolent governance, creating conditions for eventual unity with Gaza.
- **Monitoring and Compliance:** International observers to monitor and verify compliance with ceasefire, withdrawal, and disarmament commitments.
- **Security Guarantees for Israel:** The US and Arab partners to offer guarantees for Israel’s security, deterring future attacks from Gaza.
- **Regional Diplomatic Normalization:** The plan encourages further normalization of ties between Israel and Arab/Muslim countries to cement lasting regional peace.
- **Timeline and Deadlines:** Specific deadlines for each phase, with Trump explicitly warning Hamas to accept or face harsh military consequences (“complete obliteration” if rejected).
- **Accountability for Violations:** Clear consequences for non-compliance, including renewed sanctions, military action, and international condemnation.
- **No Political Control for Hamas:** Hamas must forgo political control—only independent, apolitical technocrats can govern Gaza during the transition.
- **Inclusive Mediation:** Ongoing mediation by the US, Egypt, Qatar, and Turkey, with input from international organizations like the UN and EU.
- **Long-Term “Everlasting Peace”:** The plan envisions a durable, region-wide peace sustained by economic support, political normalization, and a demilitarized Gaza.



Source- Financial Times

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What have been the key responses to the framework?

Israel	<p>Status: Accepted.</p> <p>Prime Minister Benjamin Netanyahu publicly stated that he fully supported the framework, claiming it aligns with Israel's stated war aims, particularly the dismantling and demilitarization of Hamas.</p>
Hamas	<p>Status: Partially Accepted / Core Demands Rejected.</p> <p>Hamas agreed to and carried out the requirements for the hostage and prisoner exchange that defined Phase 1. However, the group has been clear that it refuses the plan's central Phase 2 demands to disarm, decommission its weapons, and relinquish control of Gaza. This rejection of demilitarization is the biggest roadblock to achieving the plan's long-term goals.</p>
Regional Arab States	<p>Status: Widespread Initial Support.</p> <p>The plan garnered significant support from several critical Arab and Muslim-majority nations, including Saudi Arabia, Egypt, Qatar, the UAE, Jordan, and Turkey.</p> <p>Their support was driven by:</p> <ol style="list-style-type: none"> 1. The immediate end to the conflict and the humanitarian crisis. 2. The commitment to reconstruction and economic opportunity in Gaza. 3. The plan's explicit statement that Israel would not annex any territory in the West Bank. 4. Their willingness to potentially contribute to the proposed International Stabilization Force (ISF), provided it receives a mandate from the UN Security Council.
International Community	<p>Status: Broad Support for Framework.</p> <p>Leaders from countries like France, India, and Italy welcomed the framework as a much-needed step toward securing the release of hostages and preventing further bloodshed, praising the ambitious vision for post-conflict governance and reconstruction.</p>
India	<ul style="list-style-type: none"> ● India officially endorsed the Gaza Peace Plan, emphasizing the importance of immediate ceasefire, humanitarian aid, and the release of hostages. ● India welcomed the enhanced humanitarian assistance for the people of Gaza, highlighting the need for aid to reach civilians without interference.

What are the Challenges to the Framework?

- Hamas' Reluctance to Fully Disarm and Relinquish Political Control: Hamas remains hesitant to fully disarm or cede political power in Gaza to an interim technocratic government, fearing loss of influence and ideological defeat.
 - Resistance to demilitarization threatens the framework's core premise of a "terror-free" Gaza.
- Trust Deficit Between Parties: Deep mistrust between Israel and Hamas, built over decades of conflict and failed peace efforts, limits willingness for compromise and compliance. Allegations of violations or bad faith could derail ceasefire and prisoner exchange agreements.
- Implementation of International Stabilization Force (ISF): Deploying a multinational force with adequate mandate, resources, and cooperation from all regional powers (Egypt, Qatar, Turkey, US) is politically and logistically complex. Ensuring neutrality, effectiveness, and long-term commitment from troop-contributing countries is a major hurdle.
- Regional and International Political Dynamics: Divergent interests of Arab states, Iran's influence on proxy groups, US political transitions, and Russia-China stances complicate consensus. Normalization efforts by some Arab states with Israel have not allayed tensions, and pockets of opposition persist.
- Humanitarian and Infrastructure Challenges: Rebuilding Gaza's war-torn infrastructure requires massive funding, coordination, and time, with risks of corruption or diversion of resources.
 - Delivering continuous humanitarian aid under volatile security conditions presents logistical and political challenges.
- Security Guarantees and Enforcement: Ensuring lasting security guarantees for Israel while addressing Palestinian rights and aspirations is a delicate task.

Conclusion

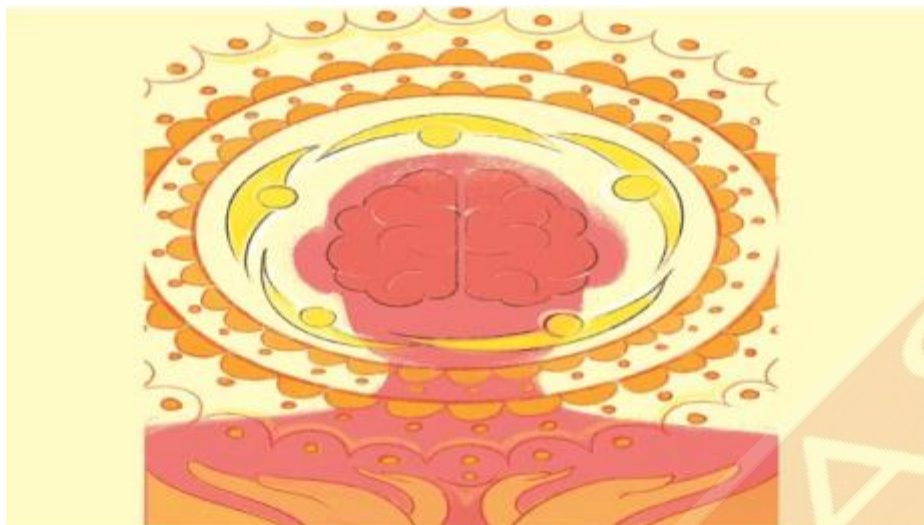
The 20-point framework faces serious challenges including Hamas's resistance to disarmament, entrenched mistrust, difficulties in deploying and maintaining an international stabilization force. Overcoming these requires sustained diplomatic effort, broad-based political will, and robust enforcement mechanisms.

Read more- [IE](#)

UPSC Syllabus- GS 2- Effect of policies and politics of developed and developing countries on India's interests

Mental Health Crisis in India- Explained Pointwise

Rising suicides among students, farmers, and homemakers across India underline a silent yet deepening mental health crisis. Despite progressive legislation and growing awareness, mental healthcare remains underfunded, understaffed, and stigmatized.



Source- IE

What is Mental Health?

Mental health is about how we think, feel, and connect with the world around us. It shapes our emotions, decisions, and relationships — guiding how we handle stress, face challenges, and find meaning in daily life. In essence, good mental health helps us live with balance, purpose, and resilience.

According to the World Health Organization (WHO), mental health is a state of well-being in which individuals can cope with life's stresses, realize their potential, work productively, learn effectively, and contribute meaningfully to their communities.

Current Status of the Mental Health Scenario in India

Prevalence and Burden	<ul style="list-style-type: none"> Nearly 230 million Indians live with mental health disorders. Lifetime prevalence stands at 13.7%, while WHO estimates 16.3 suicide deaths per 1,00,000 people. 15% of adults experience mental health issues, with higher prevalence in urban areas (13.5%) compared to rural areas (6.9%). India's mental health burden equals 2,443 Disability-Adjusted Life Years (DALYs) per 10,000 population.
Suicide Statistics (NCRB 2023)	<ul style="list-style-type: none"> 1,71,418 suicides were recorded, with men comprising 72.8% of victims. Family problems (31.9%), illness (19%), and marital issues (10%) were leading causes. Farmer suicides stood at 10,786, or 6.3% of total suicides. Andaman & Nicobar Islands, Sikkim, and Kerala reported the highest suicide rates

Treatment Gap and Workforce Shortage	<ul style="list-style-type: none"> 70–92% treatment gap, with 85% gap in common disorders like depression. Only 0.75 psychiatrists and 0.12 psychologists per 1 lakh population, far below the WHO norm of 3. Rehabilitation services meet less than 15% of national needs
Economic and Social Costs	<ul style="list-style-type: none"> Untreated mental illnesses may cost India over USD 1 trillion by 2030. Employers lose ₹1.1 lakh crore annually due to absenteeism and burnout. Suicide remains the leading cause of death among youth (15–29 years).

Key Drivers of India's Mental Health Crisis

- Socio-Economic and Financial Stress:** High unemployment (7.3% in 2024), rising debt, and job insecurity have triggered widespread anxiety. As per NCRB (2023), 31.9% of suicides stemmed from family and financial distress, with farmers and informal workers most affected.
- Educational and Professional Pressure:** Exam stress and fear of failure have made students vulnerable — over 25 suicides in Kota (2023) alone. Long working hours and workplace burnout add to adult psychological strain.
- Urbanisation and Social Isolation:** Migration, nuclear families, and digital lifestyles have eroded traditional support systems, making urban residents twice as likely to report loneliness as rural populations.
- Gendered and Domestic Challenges:** Nearly 29% of women (NFHS-5) have faced domestic violence, leading to high rates of depression and anxiety linked to emotional neglect and unpaid care work.
- Digital Overload:** Excessive screen time and social media exposure heighten anxiety, low self-esteem, and body-image issues. National Institute of Mental Health and Neurosciences (NIMHANS), 2022 found adolescents online for 4+ hours daily more prone to such disorders.
- Stigma and Cultural Misconceptions:** Over half of Indians still view mental illness as weakness, causing delayed diagnosis and low treatment-seeking, especially in rural areas.
- Systemic Deficiencies:** With just 1.05% of the health budget for mental health and 0.75 psychiatrists per lakh people, India faces a 70–92% treatment gap, reflecting weak infrastructure and policy execution.

Key Government Initiatives Related to Mental Health in India

Mental Healthcare Act, 2017	<ul style="list-style-type: none"> Recognises mental health as a legal right under Article 21. Decriminalises suicide, mandates insurance coverage, and guarantees affordable, dignified care. Empowers individuals to make advance directives for treatment.
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National Mental Health Programme (1982) and District Mental Health Programme (DMHP) (1996)	<ul style="list-style-type: none"> • Aims to integrate mental healthcare into primary health systems. • Now expanded to 767 districts, though many face staff and funding shortages
Tele MANAS (2022)	<ul style="list-style-type: none"> • A 24×7 tele-counselling helpline for psychological support. • Has conducted over 20 lakh tele-counselling sessions, improving access in underserved areas
National Suicide Prevention Strategy (2022)	<ul style="list-style-type: none"> • Aims to reduce suicide rates by 10% by 2030 through early detection, awareness campaigns, and responsible media reporting.
Manodarpan Initiative	<ul style="list-style-type: none"> • Provides psychosocial support to students, teachers, and families under the Atmanirbhar Bharat Abhiyan. • Reached over 11 crore students through school-based awareness programmes
Judicial Backing	<ul style="list-style-type: none"> • In Sukdeb Saha vs State of Andhra Pradesh, the Supreme Court affirmed mental health as part of the Right to Life (Article 21), binding the state to ensure accessible and quality care

Way Forward to improve mental healthcare in India

- **Increase Budgetary Allocation:** Raise spending to at least 5% of total health expenditure to improve infrastructure, medicine supply, and service delivery in mental healthcare.
- **Expand and Train Workforce:** Build a stronger pool of mental health professionals by training mid-level providers, counsellors, and community nurses, with incentives for rural postings.
- **Integrate Mental Health into Primary Care:** Embed mental health services within Ayushman Bharat Health and Wellness Centres (HWCs) and ensure basic counselling at every Primary Health Centre (PHC).
- **Promote Community-Based Interventions:** Strengthen peer support networks and village-level counselling through trained ASHA and Anganwadi workers to enhance accessibility at the grassroots level.
- **Address Stigma and Raise Awareness:** Launch nationwide campaigns, introduce mental health education in schools, and encourage open discussions to normalise help-seeking behaviour.

- Ensure Digital and Regulatory Safeguards: Regulate mental health apps and AI tools to ensure privacy, ethical standards, and professional oversight, preventing misinformation and misuse.
- Enhance Governance and Coordination: Establish a National Mental Health Observatory for monitoring outcomes and align inter-ministerial efforts across Health, Education, Women & Child Development, Labour, and Agriculture for an integrated approach.

Conclusion

Mental health is vital for individual well-being and national progress. India's crisis is not just medical but also moral—each suicide or silent struggle reflects a gap in empathy and policy. With better access, funding, and awareness, mental health can become a key pillar of inclusive and humane development.

Read more– [IE](#)

UPSC Syllabus- GS 2- Issues related to health

Presidential Reference: SC Clarifies Governor's Powers on State Bills

In a major decision clarifying how Governors and state legislatures must interact, the **Supreme Court's five-judge Constitution Bench** issued its opinion on a presidential reference related to the Governor's assent to state Bills.

The Court held that Governors cannot indefinitely delay Bills passed by state legislatures and must work cooperatively with elected governments, upholding the principle of cooperative federalism. At the same time, it stated that **courts cannot mandate a fixed timeframe for the Governor or the President to grant assent**, nor can they create a concept like "deemed assent" in cases where no action is taken.



Source- IE

Why the Presidential Reference was submitted to the Supreme Court?

- President Droupadi Murmu approached the Supreme Court under Article 143(1) to seek its advisory opinion after disputes arose over delays by Governors and the President in granting assent to state Bills.
- The immediate trigger was an April 8 judgment from Tamil Nadu, where a two-judge Bench had set strict timelines for Governors and the President to act on Bills.

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- In a highly unusual step, the court invoked Article 142 and declared 10 Tamil Nadu Bills as having received “deemed assent” because the Governor had not taken action for extended periods. This unprecedented move raised questions about constitutional boundaries.
- To clear the confusion, the President submitted a five-page reference containing 14 specific questions, seeking guidance on:
 - Whether courts can set deadlines for constitutional authorities.
 - The validity of the concept of “deemed assent.”
 - The scope and limits of gubernatorial and presidential powers under Articles 200 and 201.

Read more:

1. [Presidential Reference](#)
2. [Role of Governor](#)

What is the Supreme Court’s position on the 14 key questions regarding the powers of Governors and the President?

1. What are the constitutional options before a Governor under Article 200? Article 200 outlines the process for a Governor to give assent to a Bill passed by the state legislature. The Court held that the Governor has three options:

- Grant assent
- Reserve the Bill for the President’s consideration
- Withhold assent and return the Bill to the legislature with comments for reconsideration

Crucially, the Court ruled that there is no option to “withhold assent simpliciter.” The Governor cannot simply refuse to sign a Bill and keep it pending; if they withhold assent, they must return it to the House.

2. Is the Governor bound by the aid and advice of the Council of Ministers under Article 200? No. Article 163 states that the Governor must act on the aid and advice of the Council of Ministers, except where the Constitution requires discretion. The Court ruled that when granting assent to Bills, the Governor enjoys discretion and is not bound by the Cabinet’s advice. The Bench reasoned that if Governors were bound by the Cabinet, they could never return a Bill for reconsideration, as no government would advise against its own legislation.

3. Is the Governor’s exercise of discretion under Article 200 justiciable?

The merits of the Governor’s decision are not justiciable. However, “prolonged, unexplained, and indefinite inaction” is subject to judicial review. If a Governor sits on a Bill without acting, the Court can direct them to do so.

4. Is Article 361 an absolute bar to judicial review of the Governor’s actions under Article 200?

No. Article 361 grants the President and Governors personal immunity, stating they are not “answerable to any court” for their duties. The Court held that while this protects the individual, it does not protect the office of the Governor from judicial scrutiny in cases of constitutional inaction. Immunity cannot shield indefinite delays.

5. Can timelines be imposed on the Governor under Article 200?

No. The Court overruled its April judgment that set one- to three-month timelines. Article 200 uses the phrase “as soon as possible,” so rigid deadlines are inappropriate.

6. Is the President's discretion under Article 201 justiciable?

No. Article 201 deals with Bills reserved by the Governor for the President. Like the Governor, the President's decision to assent or withhold assent cannot be reviewed on merits.

7. Can timelines be imposed on the President under Article 201?

No. Judicial timelines cannot bind the President regarding reserved Bills.

8. Must the President consult the Supreme Court under Article 143 when a Bill is reserved?

No. Article 143 allows consultation but does not make it mandatory. The President's subjective satisfaction is sufficient.

9. Are decisions of the Governor/President justiciable before a Bill becomes law?

No. Judicial review applies only to enacted laws, not proposed Bills. Courts cannot adjudicate on a Bill before it receives assent.

10. Can Article 142 be used to create "deemed assent"?

No. Article 142 allows the Supreme Court to do "complete justice" but cannot create a legal fiction to substitute the Governor's role.

11. Can a Bill become law without the Governor's assent?

No. A Bill cannot become law without the Governor's assent, or the President's if reserved.

12. Is it mandatory for a Bench to first decide if a matter requires a five-judge Bench under Article 145(3)?

The Court declined to answer, stating it was irrelevant to the reference on legislative assent.

13. Can Article 142 override substantive or procedural provisions of the Constitution?

The Court clarified that Article 142 cannot override substantive provisions such as the requirement of assent.

14. Does the Constitution bar the Supreme Court from exercising jurisdiction beyond Article 131 in Union-State disputes?

The Court declined to answer, deeming it irrelevant to the Governor's powers.

Significance of the Supreme Court Opinion on Governor's Powers

1. Clarification of Governor's Role: The SC reaffirmed that the Governor's function under Article 200 is discretionary and generally not justiciable, except in cases of prolonged, unexplained, or indefinite inaction.

2. Strengthening Separation of Powers: By rolling back strict timelines, the Court preserves executive autonomy while retaining judicial oversight as a corrective mechanism.

3. Facilitating Dialogue: The Governor's assent is seen as the "initiation of a dialogic process" between the state and Centre, highlighting its advisory, consultative, and mediative character.

4. Preventing Judicial Overreach: The SC explicitly rejected the idea of "deemed assent" or substituting executive functions, emphasizing adherence to constitutional boundaries.

5. Preserving Federal Balance: The ruling ensures that both the Centre and state governments respect the constitutional discretion of Governors while maintaining checks and balances.

Challenges Highlighted

1. Prolonged Inaction by Governors: Despite constitutional safeguards, delays in granting assent can stall legislative processes, affecting governance and citizens' interests.

2. Ambiguity in Judicial Intervention: The Court can intervene only in “glaring circumstances,” which leaves a grey area about when exactly judicial review is warranted.
3. Political Pressures: Governors may face political pressure from the Centre or opposition parties, potentially compromising neutrality in legislative assent.
4. Coordination Between Centre and States: Lack of structured dialogue mechanisms can exacerbate disputes and lead to litigation, straining federal relations.
5. Limited Accountability Mechanisms: While the SC can nudge action, there is no fixed timeline, which may reduce the deterrence against deliberate delays.

Way Forward

1. Promote Timely Assent: Governors should ensure prompt consideration of Bills, and state governments should maintain open channels for dialogue.
2. Judicial Oversight as Last Resort: Courts should intervene only in exceptional cases, issuing limited mandamus without reviewing merits of the decision.
3. Institutionalize Dialogue: Establish structured consultations between Governors, state governments, and Centre to resolve legislative impasses.
4. Training and Awareness: Enhance understanding of constitutional roles under Articles 200 and 201 among Governors and state officials.
5. Safeguard Federalism: Both Centre and states must respect the discretionary role of Governors to maintain federal balance.
6. Monitor Deliberate Inaction: States can move courts when Governors delay action excessively, ensuring accountability without compromising discretion.

Read more– [IE](#)

UPSC Syllabus- GS 2– Separation of powers and checks and balances

New Labour Codes- Explained Pointwise

In a landmark move, the Government of India has decided to bring all four Labour Codes— **the Code on Wages (2019), Industrial Relations Code (2020), Code on Social Security (2020), and Occupational Safety, Health and Working Conditions Code (2020)**— into force from 21 November 2025, **replacing and consolidating 29 existing labour laws.**

This reform aims to modernise labour governance, improve worker welfare, and align labour practices with emerging workplace trends, paving the way for a future-ready workforce and more resilient industries under the vision of Aatmanirbhar Bharat.

Labour and Constitutional Rights in India

The Constitution of India provides several safeguards and rights concerning labour and workers:

1. Article 19(1)(c): Grants all citizens the right to form associations or unions, enabling collective bargaining and organisation of workers.
2. Article 23: Prohibits forced labour, making it unconstitutional to compel any person to work against their will.
3. Article 24: Prohibits child labour, specifically banning the employment of children below 14 years in hazardous occupations or processes.
4. Article 38(1) & 38(2):
 - (1) Directs the state to promote the welfare of the people.
 - (2) Seeks to reduce economic inequalities, including income disparities.
5. Article 43(A): Provides for workers' participation in the management of industrial and other undertakings, fostering cooperative industrial relations.

Overview of Labour Codes

Labour Codes	Major Acts Subsumed	Key Provisions
Code on Wages, 2019	<ul style="list-style-type: none"> – Payment of Wages Act, 1936 – Minimum Wages Act, 1948 – Payment of Bonus Act, 1965 – Equal Remuneration Act, 1976 	<ul style="list-style-type: none"> ● Establishes a uniform definition of 'wages' for all workers. ● Mandates timely payment of wages to every employee. ● Introduces a national minimum wage, adjustable by states above the central floor. ● Ensures equal remuneration for men and women performing the same or similar work.

Industrial Relations Code, 2020	<ul style="list-style-type: none"> -Trade Unions Act, 1926 - Industrial Employment (Standing Orders) Act, 1946 - Industrial Disputes Act, 1947 	<ul style="list-style-type: none"> • Simplifies trade union registration and recognition. • Introduces negotiation unions or councils for dispute resolution. • Sets conditions for strikes, including a 60-day notice period for strikes in public utility services. • Establishes grievance redressal mechanisms. • Raises threshold for prior government permission for closure, lay-off, or retrenchment from 100 to 300 workers. • Introduces fixed-term employment, providing flexibility for employers while ensuring protection for workers.
Code on Social Security, 2020	<ul style="list-style-type: none"> - Employees' Provident Funds and Miscellaneous Provisions Act, 1952; - Employees' State Insurance Act, 1948; - Maternity Benefit Act, 1961; - Payment of Gratuity Act, 1972; - Unorganised Workers Social Security Act, 2008 	<ul style="list-style-type: none"> • Expands employee definition to include gig and platform workers. • Introduces social security schemes for gig, platform, and unorganised workers. • Mandates creation of a social security fund for unorganised workers. • Provides maternity benefits and gratuity to women workers, including those in the unorganised sector.
Occupational Safety, Health and Working Conditions (OSHC) Code, 2020	<ul style="list-style-type: none"> -Factories Act, 1948 -Mines Act, 1952 -Contract Labour (Regulation and Abolition) Act, 1970 -Inter-State Migrant Workmen (Regulation of Employment and 	<ul style="list-style-type: none"> • Ensures health, safety, and welfare for all workers. • Mandates annual health check-ups for employees. • Regulates working hours and conditions for different sectors. • Introduces a single licensing mechanism for contractors and employers. • Increases thresholds for contract labour applicability and prohibits

	Conditions of Service) Act, 1979	<p>contract labour in core activities, with certain exceptions.</p> <ul style="list-style-type: none"> Shifts primary responsibility for welfare facilities from contractors to principal employers.
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Comparison of the Labour Ecosystem Before and After Labour Codes

Parameter	Pre-Labour Reforms	Post-Labour Reforms
Formalisation of Employment	No mandatory appointment letters.	Written appointment letters mandatory for all workers, ensuring transparency, job security, and formal employment.
Social Security Coverage	Limited coverage; many workers, especially in the informal sector, remained outside the social security net.	Under the Code on Social Security, 2020, all workers—including gig and platform workers—are eligible for PF, ESIC, insurance, and other social security benefits.
Minimum Wages	Minimum wages applied only to scheduled industries/employments, leaving large segments uncovered	Under the Code on Wages, 2019, every worker has a statutory right to minimum wages. Timely payment and wage protection enhance financial security.
Preventive Healthcare	No legal mandate for employers to provide annual health check-ups	Employers are required to provide free annual health check-ups to workers aged 40+, promoting preventive healthcare and timely diagnosis.
Timely Wages	No strict compliance requirement for timely wage payments.	Employers must ensure timely payment of wages, improving financial stability and worker morale while reducing exploitation.
Women Workforce Participation	Women faced restrictions on night shifts and certain occupations	Women are permitted to work in all occupations, including night shifts, with

		consent and adequate safety measures, enhancing access to high-paying opportunities
ESIC Coverage	Limited to notified areas; establishments with fewer than 10 workers were largely excluded; hazardous units had non-uniform coverage.	ESIC benefits extended PAN-India: voluntary for establishments with fewer than 10 workers, and mandatory for even one worker in hazardous processes, ensuring wider social protection.
Compliance Burden	Multiple registrations, licences, and returns under separate laws	Single registration, PAN-India licence, and unified return reduce compliance burden and simplify processes for businesses.

Benefits of Labour Reforms Across Key Sectors

1. Fixed-Term Employees (FTE)

- FTEs will receive all benefits equal to permanent workers, such as leave, medical benefits and social security.
- Gratuity eligibility reduced from five years to one year of continuous service.
- Equal wages with permanent employees ensure higher income and better protection.
- Encourages direct hiring, reducing excessive contractual dependence.

2. Gig & Platform Workers

- For the first time, 'Gig work', 'Platform work' and 'Aggregators' are legally defined.
- Aggregators must contribute 1–2% of annual turnover (capped at 5% of payments made/payable to workers) for worker welfare.
- Aadhaar-linked Universal Account Number (UAN) enables fully portable social security benefits across states and migration.

3. Contract Workers

- Fixed-term employment increases employability, ensuring legal and social security benefits equal to permanent employees.
- FTEs become eligible for gratuity after one year of continuous service.
- Principal employers must provide social security and health benefits to contract workers.
- Workers are entitled to a free annual health check-up.

4. Women Workers

- Gender discrimination is legally prohibited; equal pay for equal work is ensured.

- Women can work night shifts and in all types of work, including underground mining and heavy machinery, with consent and safety measures.
- Mandatory representation of women on grievance redressal committees.
- Family definition expanded to include parents-in-law for women employees, increasing dependent coverage.

5. Youth Workers

- Minimum wage guaranteed for all workers.
- Mandatory appointment letters ensure formal employment and employment history records.
- Employers must pay wages even during leave, preventing exploitation.
- Workers to receive wages as per Central Government floor wage, enabling a decent standard of living.

6. MSME Workers

- All MSME workers covered under the Social Security Code, 2020, based on employee count.
- Minimum wages ensured for all workers.
- Workers get access to canteens, drinking water, restrooms, and other welfare facilities.
- Provides standard working hours, paid leave and double overtime.
- Timely wage payment is mandatory.

7. Beedi & Cigar Workers

- Minimum wages guaranteed.
- Working hours fixed at 8–12 hours a day; 48 hours per week cap.
- Overtime is voluntary and paid at double the normal wage rate.
- Timely wage payment ensured.
- Workers become eligible for bonus after 30 days of work in a year.

8. Plantation Workers

- Covered under the OSHWC Code and Social Security Code.
- Codes apply to plantations with more than 10 workers or on 5+ hectares of land.
- Mandatory safety training for handling and storing chemicals.
- Protective gear compulsory to prevent accidents and chemical exposure.
- Workers and families receive full ESI medical facilities, and education benefits for children.

9. Audio-Visual & Digital Media Workers

- Workers such as journalists, dubbing artists and stunt persons get full social security benefits.
- Mandatory appointment letters, defining wages and entitlements.
- Timely wage payment enforced.
- Overtime requires consent and is paid at double the normal wage rate.

10. Mine Workers

- The Social Security Code treats certain commuting accidents as employment-related, under specific conditions.
- Central Government will notify uniform occupational safety standards.
- Workers get free annual health check-ups.
- Working hours limited to 8–12 hours per day, 48 hours per week, ensuring work-life balance.

11. Hazardous Industry Workers

- Free annual health check-ups for all workers.
- National safety standards framed by the Central Government.
- Women can work in hazardous sectors, including underground mining and heavy machinery, with equal opportunities and safety safeguards.
- Mandatory safety committee at every hazardous site for workplace monitoring and chemical handling safety.

12. Textile Workers

- All migrant textile workers (direct, contract-based, self-migrated) get equal wages, welfare benefits and PDS portability.
- Workers can claim dues up to three years back, easing dispute settlements.
- Overtime wages must be double the normal rate.

13. IT & ITES Workers

- Salary must be released by the 7th of every month.
- Equal pay for equal work, with strengthened participation of women.
- Women allowed night shifts with opportunities to earn higher wages.
- Mechanisms established for timely resolution of harassment, discrimination and wage disputes.
- Social security ensured through fixed-term employment and mandatory appointment letters.

14. Dock Workers

- All dock workers receive formal legal recognition and protection.
- Appointment letters mandatory, guaranteeing social security benefits.
- Provident fund, pension and insurance benefits apply to contract and temporary workers as well.
- Annual employer-funded health check-ups and medical facilities, sanitation and washing areas made mandatory.

15. Export Sector Workers

- Fixed-term export workers to receive gratuity, PF and full social security benefits.
- Annual leave available after 180 days of work in a year.
- Right to timely wage payment, no unauthorized deductions and no wage ceiling restrictions.
- Women allowed night shifts with consent, including guaranteed safety protocols—transport, double overtime wages, CCTV, security arrangements.

Challenges with the New Labour Codes

1. Uneven implementation across States
 - Labour is in the Concurrent List, so states frame their own rules.
 - By mid-2025, 30+ states/UTs had published draft rules, but some (e.g., West Bengal, Meghalaya) were still lagging (Ministry of Labour).
 - This has created a patchwork of protections → workers in Karnataka may enjoy better safeguards than those in Assam.
2. Excessive delegation of Powers
 - Key provisions like the definition of “wages” or thresholds for retrenchment are left to government notifications.
 - This reduces parliamentary oversight and opens scope for arbitrary decisions.
 - The Standing Committee on Labour (2023) flagged this as a major concern.
3. Inadequate Protection for Gig & Informal Workers
 - Despite 30+ crore unorganised workers registered on e-Shram, benefits are still unclear.
 - Positive state efforts: Karnataka’s 2025 law mandating platform firms to contribute to a welfare fund; Maharashtra mapping 10 lakh gig workers; Telangana study found gig workers earn ~₹20,000/month but face long hours & high commissions.
 - Union Budget 2025–26 extended PM-JAY health coverage to gig workers, but a comprehensive national framework is missing.
4. Weakening of collective bargaining
 - The Industrial Relations Code requires 75% approval for strikes, nearly impossible in large firms.
 - In 2024, trade unions held nationwide protests in Delhi, Lucknow, and Kolkata, calling this provision “anti-labour.”
5. Reduced Job Security
 - Retrenchment/closure threshold raised from 100 to 300 workers.
 - Critics say this tilts towards “Ease of Doing Business” over worker security.
 - Example: Gurugram auto-component firms (2024) downsized without government approval due to the new threshold.
6. Precarious Fixed-Term Contracts
 - Employers use fixed-term contracts to avoid permanency.
 - The Supreme Court (2024) criticised exploitative contract renewals.
 - Telangana HC (2025) ordered regularisation of ad hoc staff, calling repeated contracts “unfair labour practice.”
7. Broad exemptions diluting protections
 - Governments can exempt industries in “public interest,” a vague term prone to misuse.
 - This could let factories bypass rules on wages, safety, and working hours.
8. Low awareness & compliance (MSMEs and Informal Sector)
 - Many MSMEs struggle with digital compliance.
 - CII’s 2024 survey: only 46% of small firms were fully aware of labour code requirements.
 - Informal workers remain under-informed about e-Shram benefits.

Way Forward

- Uniform Implementation Across States- Establish a national benchmark framework for minimum wages, occupational safety, and social security. For Example- A GST Council-like institutional mechanism for labour could promote inter-state harmonisation while preserving federal flexibility.
- Strengthening Legislative Oversight- Ensure greater legislative clarity by embedding critical definitions (e.g., “wages,” retrenchment thresholds) within the Codes themselves.
- Comprehensive Social Security for Gig & Informal Workers- Draft a National Gig and Platform Workers Policy mandating aggregator contributions to welfare funds. The e-Shram portal should be integrated with DBT-enabled schemes covering health (PM-JAY), pensions (PM-SYM), and accident insurance for effective last-mile delivery.
- Reviving Collective Bargaining Rights- Rationalise the strike approval threshold (from 75% to around 51%) to make it practical while ensuring industrial peace. Promote tripartite consultations (Government-Employers-Workers) for dispute resolution.
- Balancing Flexibility with Worker Security- Couple greater flexibility for firms with mandatory unemployment insurance and reskilling programmes for retrenched workers. This would align with global best practices in labour transition support.
- Regulating Fixed-Term Contracts- Introduce a cap on contract renewals (e.g., 2–3 cycles). Beyond this, workers should either be granted permanency or strengthened social security entitlements to avoid “permanent temporariness.”
- Restricting Exemptions- Narrow down the scope of “public interest” exemptions. Make them time-bound, criteria-based, and subject to judicial or legislative review to prevent misuse.
- Improving Awareness and Compliance- Launch multilingual awareness campaigns, labour helplines, and simplified digital compliance portals. Special digital support cells for MSMEs should be set up to ease compliance without imposing excessive costs.

Read more- [PIB](#)

UPSC Syllabus- GS 2 & GS 3- Social Sector Initiatives & Labour Reforms

COP30 Outcomes-Explained Pointwise

The 30th Conference of the Parties (COP30) to the United Nations Framework Convention on Climate Change (UNFCCC) **concluded in Belém, Brazil**, on 22 November 2025. With growing concerns that global climate pledges are not being fulfilled, COP30 became an important test of whether international cooperation can still deliver real results or remain only symbolic.

For India and other Global South countries, this COP was especially significant because they need concrete progress on adaptation finance, just transition, and nature-based solutions to ensure climate justice.



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What Is COP30?

- **COP and Its Purpose:** The COPs are the annual meetings of the UNFCCC where nearly 200 countries (Parties) negotiate climate policy, review progress, and chart future actions. The goal is to operationalize the **Paris Agreement**, improve **Nationally Determined Contributions (NDCs)**, and mobilize climate finance, among other things.
- **COP30 (Belém, 2025):** Hosted in the heart of the Amazon, the choice of Belém was symbolic — highlighting forests' role in the global climate system. **COP30 focused on turning long-standing promises into concrete actions**, especially on adaptation, nature preservation, just transition, and climate finance.
- **Core Themes:** The presidency under Brazil emphasized three priorities: (i) strengthen multilateralism, (ii) center climate action on people, and (iii) accelerate implementation of the Paris Agreement.
- **Next COP– Türkiye will host COP31** through a consensus-based process, as **COP venues are chosen by regional rotation** across five UN-designated regions, and when multiple countries volunteer, the region selects one by agreement rather than voting.

Key Outcomes of COP30 (Belém, Brazil, 2025)

Belém Package	<ul style="list-style-type: none"> ● 195 Parties agreed on a 29-point package focused on just transition, adaptation finance, technology, trade, and gender. ● More than 122 countries updated their Nationally Determined Contributions (NDCs), renewing global commitment to the 1.5°C target. ● A COP30 Action Agenda was launched to involve cities, private sector players, local communities, Indigenous Peoples, and subnational governments in delivering climate solutions on the ground
Adaptation Finance and Clear Measurement Rules	<ul style="list-style-type: none"> ● Countries agreed to triple funding for climate adaptation by 2035, especially expecting developed nations to do more. ● The Baku–Belém Roadmap (2026–2028) will guide countries in planning adaptation actions before the next Global Stocktake review. ● A set of 59 voluntary indicators was adopted to measure adaptation progress in areas like water, food security, public health, infrastructure, and livelihoods.
Belém Health Action Plan	<ul style="list-style-type: none"> ● A major health-centered achievement of COP30, launched on Health Day (13 November 2025). ● It aims to strengthen healthcare systems to cope with climate threats like heatwaves, disasters, and disease outbreaks.

	<ul style="list-style-type: none"> • Built on two principles: <ul style="list-style-type: none"> • Climate justice and health equity • Participatory and accountable climate-health governance • Key components include: <ul style="list-style-type: none"> ○ Climate-based health surveillance ○ Evidence-backed policies and training ○ Digital health tools and climate-resilient medical infrastructure • Received around USD 300 million in philanthropic support to kickstart implementation.
Tropical Forests Forever Facility (TFFF)	<ul style="list-style-type: none"> • A new system where countries that protect forests get paid based on satellite-verified performance. • Aims to mobilize USD 125 billion using public and private investments. • 20% of funds will go directly to Indigenous Peoples and local communities, recognizing their vital role in conservation. • Brazil demonstrated leadership by making the first contribution of USD 1 billion.
Just Transition Mechanism	<ul style="list-style-type: none"> • Approved to ensure a fair shift away from fossil fuels, without harming workers and communities. • Focuses on reskilling, secure employment, and social protections. • However, funding and operational specifics are yet to be fully defined
Fossil Fuels & Forest Roadmaps	<ul style="list-style-type: none"> • The final Belém Political Package did not mandate a fossil fuel phase-out, reflecting divisions among countries. • Brazil committed to two voluntary roadmaps: one for a fair transition away from fossil fuels and another to halt and reverse deforestation. • The package addressed key concerns of developing countries, including implementation of Article 9.1 of the Paris Agreement on climate finance and issues like the EU's Carbon Border Adjustment Mechanism (CBAM), though not fully as demanded. • A two-year work programme was proposed to discuss all climate finance issues, including Article 9.1.

Santa Marta Conference on Fossil Fuel Phase-Out	<ul style="list-style-type: none"> • Announced by Colombia and the Netherlands for April 2026. • Will discuss how to phase out fossil fuels in a way that protects economies, jobs, national security, and fair global trade.
Global Ethical Stocktake (GES)	<ul style="list-style-type: none"> • Introduced to measure climate progress not only through numbers but also through principles like justice, rights, fairness, and intergenerational equity. • Its Asia edition was held earlier in New Delhi.
Open Planetary Intelligence Network (OPIN)	<ul style="list-style-type: none"> • A global initiative to standardize climate data systems. • Integrates satellites, digital technology, and artificial intelligence for transparent and faster climate decision-making.
Belem Declaration on Hunger, Poverty & People-Centric Climate Action	<ul style="list-style-type: none"> • Signed by 43 countries plus the European Union (EU). • Places vulnerable communities at the center of climate policy. • Calls for measures like social protection, crop insurance, community-based adaptation, and livelihood security.
Global Mutirão Platform	<ul style="list-style-type: none"> • A digital platform encouraging community-powered climate action, inspired by Brazil's collaborative tradition called "Mutirão". • Focuses on closing the gap between promises and actual delivery, especially in energy transition, finance, and trade.
Belém 4X Pledge (Sustainable Fuels)	<ul style="list-style-type: none"> • A global political commitment to quadruple sustainable fuels (biofuels, biogas, hydrogen, etc.) by 2035, from 2024 levels • The initiative supports a people-centric and low-carbon energy transition, broadening mitigation pathways beyond emissions reductions alone.
Climate-Trade Dialogue	A new process was initiated to align climate policies with fair trade, involving bodies like WTO and UNCTAD

Significance of COP30

1. From Promises to Action- COP30 shifted focus from making new pledges to implementing existing ones. The Belém Package now uses measurable tools like 59 adaptation indicators so that climate commitments can be tracked and delivered on the ground.
2. Breakthrough in Forest Finance- The **Tropical Forests Forever Facility (TFFF)** created a long-term, performance-based fund that rewards countries for protecting forests. With 20% of funds reserved for Indigenous Peoples and local communities, conservation now supports both nature and livelihoods.
3. Making Health a Climate Priority- The Belém Health Action Plan brought public health into climate policy for the first time. It highlighted climate change as a public health emergency and focused on climate justice, equity, and community participation to build climate-resilient health systems.
4. A Fair and Just Transition- COP30 formally recognized a mechanism to support workers and vulnerable groups during the shift away from fossil fuels. Although financing is yet to be finalized, it ensures future climate action includes jobs, reskilling, worker rights, and social protection.
5. Strengthening Equity in Global Climate Governance- All 195 countries approved the Belém Package, strengthening global cooperation. The Global Ethical Stocktake added ethics, justice, and intergenerational rights to climate assessments, showing that fairness is now central to climate policy.
6. Bringing Climate and Trade Together- COP30 launched a **climate-trade dialogue** to address policies such as carbon border taxes that affect global trade. Its goal is to align trade with climate goals and prevent unfair barriers, ensuring trade supports a just and sustainable transition.

Key challenges that COP30 failed to address

1. Weak Fossil Fuel Action- COP30 did not include clear language on phasing out fossil fuels. Brazil's **roadmaps are voluntary and outside the binding UNFCCC text**, causing disappointment among vulnerable and pro-mitigation countries at a time when stronger fossil fuel cuts are urgent.
2. Uncertain Adaptation Finance- Although countries agreed to triple adaptation finance by 2035, the deal **does not specify a baseline, legal commitments, or interim targets**. Without transparency and accountability, richer nations may delay or dilute financial support.
3. Inadequate Loss and Damage Support- Operational structures were created, but **funding remains insufficient**. Without a reliable and scaled-up Loss and Damage fund, climate-affected countries may not receive timely help for disaster-related losses.
4. Voluntary Implementation Risks- Many major proposals — including just transition mechanisms, financial mobilization, and roadmaps — rely on voluntary efforts. There is a risk that these may remain plans on paper without long-term funding and political will, especially in initiatives like the Tropical Forests Forever Facility (TFFF).
5. Trust Deficit between North and South- The absence of binding fossil fuel commitments could worsen distrust among developing nations. The Amazon dominated the discussions, yet the agreement did not legally restrict fossil fuel expansion, raising concerns about justice and ecological tipping points.
6. Geopolitical Tensions Threaten Progress- Resistance from some Global North countries to stronger commitments, combined with broader geopolitical disputes, may weaken multilateral cooperation. Without rebuilding trust, COP30's achievements could remain symbolic rather than transformative.

Way Forward

1. Deliver Adaptation Finance- Rich countries must turn their promise of tripling adaptation funds into clear yearly targets, with checkpoints for 2028 and 2030. This progress should be tracked openly using UNFCCC's 59 indicators. Funds should come mainly as **grants, not loans**, so vulnerable nations don't end up in debt while fighting climate disasters.
2. Scale the Tropical Forests Forever Facility (TFFF)- The TFFF needs fast funding to reach USD 125 billion, with both governments and private investors contributing. Indigenous Peoples and local communities who protect forests must have a say in decisions and share the benefits.
3. Advance Just Transition- As the world moves away from fossil fuels, workers and communities must not be left behind. A new fund should support skill training, social security, and local resilience. Countries should include just transition in their development plans and NDCs, using ethical stocktake standards to protect labour rights in climate finance and trade.
4. Create a Fossil Fuel Phase-Out Roadmap- Brazil's fossil fuel phase-out plans need technical support, clear targets, and peer review. These roadmaps should be part of UNFCCC negotiations and the Global Stocktake. Civil society, youth, and Indigenous communities must monitor progress to keep the process fair and accountable.
5. Reform Climate Finance Architecture- The new Global Climate Finance Accountability Framework must be expanded to clearly track how much money is promised and delivered. Multilateral Development Banks should offer more concessional finance, blended finance, and debt-for-climate swaps. Platforms like **FINI (Forest-Positive Investment Initiative)** should help bring in large private investments.
6. Institutionalize the Ethical Stocktake- Ethics should be a permanent part of global climate assessments. Reviews must focus on justice, rights, and equity, especially for Indigenous Peoples and future generations. Communities, youth, and civil society should have real decision-making power, and ethical findings must shape future NDCs and climate finance.

Read more- [TH](#)

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

G20 Summit 2025: Key Takeaways-Explained Pointwise

The 2025 G20 Leaders' Summit held on 22–23 November in Johannesburg, South Africa, became the **first G20 meet hosted on the African continent**. Amid global tensions and development challenges, leaders issued a **122-point declaration** focused on multilateral cooperation, climate action, debt relief, and Global South priorities. The summit also drew attention due to the **absence of the United States**.



Source- CNN

What is G20 (Group of Twenty)?

- It is an **informal intergovernmental forum** comprising **19 countries** (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom, and the United States) and the **European Union** and **African Union**.
- It **represents about 85% of global GDP**, over **75% of international trade**, and **nearly two-thirds of the world's population**.
- It was **established in 1999**, in response to the Asian Financial Crisis, to enhance international economic cooperation and financial stability.
- The G20 provides a platform for both advanced and emerging economies to discuss global issues such as macroeconomic policy, global governance, sustainable development, and financial stability.
- The grouping has **no permanent secretariat**; its **presidency rotates annually**, and coordination is supported by a "Troika" (previous, current, and upcoming Presidencies). During South Africa's Presidency, the members of the G20 troika are Brazil, South Africa and the United States.

Highlights of the G20 Summit 2025 (Johannesburg)

- **Ubuntu Philosophy & Multilateralism:-** The summit adopted the Ubuntu theme ("I am because we are"), stressing the interdependence of nations and the need for collective global action on inequality, conflict, climate change, and economic instability.
- **First G20 Summit in Africa:-** Johannesburg hosted the first-ever G20 Leaders' Summit on African soil, strengthening Africa's role in global governance and prioritizing the concerns of the Global South.
- **122-Point Leaders' Declaration:-** A 122-point declaration was adopted on Day 1, showing early consensus on development equity, debt relief, institutional reforms, and a just energy transition for developing countries.

Key Outcomes of the Johannesburg Declaration (G20 2025)

- **Historic African Summit:** The 2025 G20 Leaders' Summit was hosted for the first time in Africa, guided by the Ubuntu philosophy of collective cooperation.
- **Greater African Voice in Global Finance:** The summit endorsed a new 25th IMF Executive Board seat for Sub-Saharan Africa and supported channeling **over \$100 billion Special Drawing Rights (SDRs)** to the region.
- **Debt Sustainability Framework:** The G20 strengthened its Common Framework to make debt restructuring more transparent, predictable, and supportive for vulnerable countries.
- **Climate Action and Disaster Resilience:** Leaders recognized that developing nations need **US\$ 5.8–5.9 trillion before 2030** and called for scaling up climate finance and support for climate resilience.
- **Just Energy Transitions & Mission 300:** The declaration supported tripling global renewable energy capacity and launched Mission 300 to **provide electricity to 300 million Africans by 2030**.
- **Critical Minerals Framework:** A new framework was adopted for sustainable mining, local value addition, and secure supply chains, benefiting mineral-rich developing countries.
- **Global Food Security:** Leaders reaffirmed the Right to Food, supported African farmers, and encouraged market integration through the **African Continental Free Trade Area (AfCFTA)**.
- **AI and Digital Inclusion:** The AI for Africa Initiative was launched to ensure safe, inclusive, and human-centric digital governance and expand access to digital technologies.
- **Youth and Gender Targets:** The declaration set clear goals to reduce NEET (Not in Education, Employment, or Training) youth by 5% and achieve 25% gender parity in workforce participation by 2030.
- **UN Security Council Reform:** G20 leaders pledged to make UNSC representation more inclusive and reflective of 21st-century realities, especially for underrepresented regions.

India's Priorities and Contributions

India's Strategic Priorities

- India stressed the need to rethink development models that keep large sections of humanity deprived and exploit natural resources unsustainably.
- It promoted the concept of holistic human development, drawing on the idea that economic progress should integrate material welfare with social and ecological well-being.
- India sought stronger representation of developing nations, especially African countries, in forums like the UN Security Council (UNSC) and IMF, ensuring that development and equity remain central to global decision-making.

Major Initiatives Proposed by India at G20 2025

- **G20 Initiative on Countering the Drug–Terror Nexus-** Targets narcotics trafficking and its linkages with terror financing, including synthetic drugs.
- **G20–Africa Skills Multiplier Initiative-** Plans to train one million certified trainers in Africa over the next decade to build local talent and jobs.
- **Global Traditional Knowledge Repository-** Aims to collect and share traditional knowledge for sustainable lifestyles, health and well-being, drawing on global indigenous wisdom.

- Global Healthcare Response Team- Proposes a network of trained professionals from G20 nations for rapid medical and humanitarian assistance during crises.
- Open Satellite Data Partnership- Promotes accessible and interoperable satellite data to help agriculture, fisheries, disaster management and climate adaptation in developing nations.
- Critical Minerals Circularity Initiative- Focuses on recycling, urban mining, second-life batteries and expanding value-addition to ensure sustainable and equitable mineral supply chains.

Note– India deepened its diplomatic ties through the launch of the **ACITI Partnership (Australia–Canada–India)**, aimed at advancing cooperation in technology and innovation, with a focus on AI, clean energy, and resilient supply chains.

Challenges Ahead

- Limited attention to global conflicts: Major flashpoints like Ukraine and Gaza were mentioned only indirectly, showing weak consensus on security issues.
- Implementation gap in climate finance: Meeting targets in trillions requires accountability mechanisms and financing capacity, especially for developing states.
- Debt distress remains unresolved: Many low-income nations still face high borrowing costs, opaque debt structures and slow restructuring processes.
- Geopolitical divides: Absence of key leaders raises questions about cohesion and collective action within the G20.
- Resource and coordination barriers: India's proposals require funding, governance structures and measurable outcomes to avoid remaining aspirational.
- Equity concerns in critical minerals: Extracting nations need safeguards to ensure social and environmental protection and fair value addition.
- Digital and AI risks: Benefits must be balanced against risks like digital divide, privacy issues, misuse, algorithmic bias and sovereignty concerns.

Way Forward

- Make Global Governance More Inclusive- Implement reforms in the UN Security Council and IMF to give stronger representation to Africa and other underrepresented regions.
- Deliver Climate & Finance Commitments- Turn pledges into action by operationalising climate finance (including the Loss and Damage Fund) and ensuring transparent, timely funding flows.
- Reform Debt Relief Mechanisms- Simplify and expand the G20 Common Framework, promote debt-for-climate and debt-for-development swaps, and reduce unfair borrowing costs for developing nations.
- Ensure a Just Energy Transition- Mobilise investment for renewable energy, accelerate Mission 300, support clean technology access, and develop local green industries in the Global South.
- Strengthen Responsible Tech & AI Governance- Advance a global framework for safe, transparent, and inclusive AI that protects human rights and reduces the digital divide.
- Promote Food Security & Human Capital Development- Support climate-resilient agriculture, integrate food markets, invest in youth skills and women's workforce participation to build long-term inclusive growth.

Read more– [IE](#)

UPSC Syllabus– GS 2- Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

India's Dairy Sector: Significance and Challenges (Explained Pointwise)

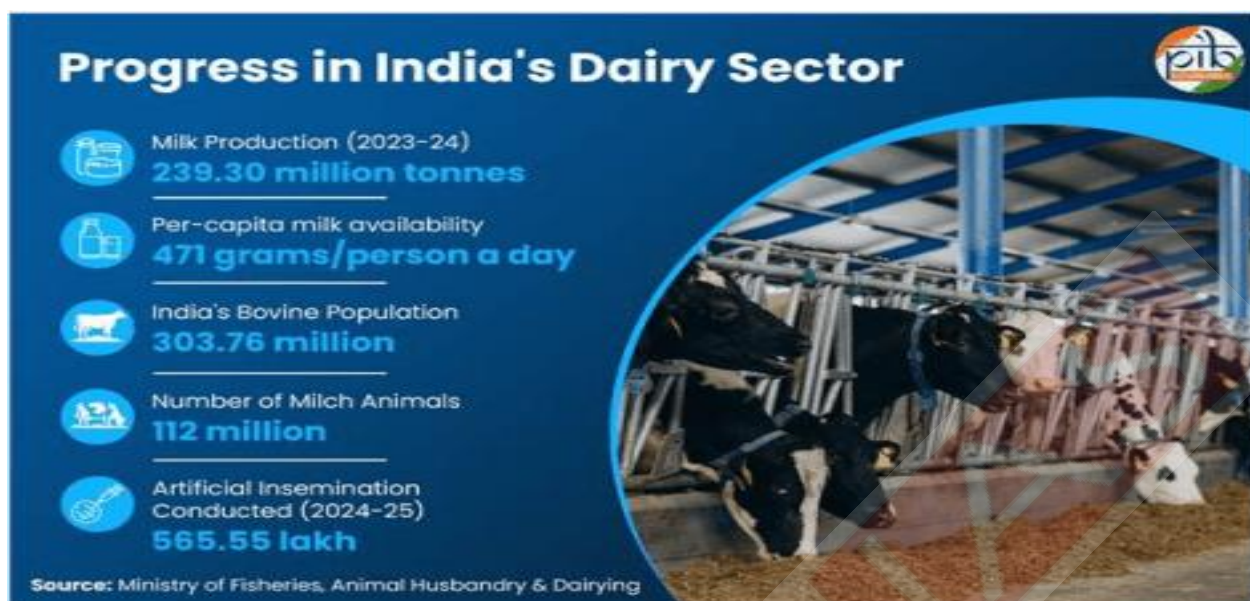
National Milk Day, observed on 26 November, commemorates the birth anniversary of Dr. **Verghese Kurien**, widely known as the **"Father of the White Revolution."**

India is the world's largest milk producer, accounting for nearly **one-fourth of global output**. The dairy sector significantly boosts the rural economy, **contributing around 5% to the national GDP** and **providing livelihoods to over 8 crore farmers**, with women playing a crucial role in production, processing, and milk collection.



Source- PIB

What is the current status of dairy sector in India?



Source- PIB

Milk Production Data	India is the world's leading milk producer . The milk production surged from 146.30 million tonnes in 2014-15 to 239.30 million tonnes in 2023-24 . The per-capita availability of milk in India has risen to 471 grams per day in 2023-24 compared to a global average of about 329 g/day.
Milk Sector contribution to Agri GDP	The milk sector (milk consumed or sold in liquid form, ghee, butter, and lassi produced by producer households) contributed almost 40% (Rs 11.16 lakh crore) to agriculture and related sectors.
Top Five Milk producing states in India	The top five milk-producing states- Uttar Pradesh, Rajasthan, Madhya Pradesh, Gujarat, and Andhra Pradesh - contribute over 53% of the country's total milk production.
National Average Yield and production data	The national average yield is 8.55 kg per animal per day for crossbred animals and 3.44 kg for indigenous ones . Indigenous buffaloes account for 31.94% of production , followed by crossbred cattle at 29.81% .
Handling of milk	The organized sector, led by cooperatives, manages about one-third of the marketable milk. The unorganized sector handles the remaining two-thirds.

Cooperative Dairy Network in India & Government Roadmap for White Revolution 2.0

Cooperative dairy network includes 22 milk federations, 241 district unions, 28 marketing dairies, and 25 MPOs, connecting 1.72 crore farmers in 2.35 lakh villages, supported by 31,908 cooperatives, 61,677 milk testing labs.

White Revolution 2.0, launched in 2024–25, represents a renewed commitment to strengthen India's dairy cooperatives, expand milk procurement, and enhance women's participation in the sector. Over the five-year period until 2028–29, the initiative aims to:

- **Establish 75,000 new dairy cooperative societies** in underserved areas.
- **Strengthen 46,422 existing dairy cooperatives** to improve service delivery and farmer incomes.
- Expand multi-state cooperative societies for cattle feed, mineral mixtures, biofertilizer, biogas, and sustainable management of animal by-products.
- Increase milk procurement by cooperatives to over 1,007 lakh kilograms per day.

Infrastructure development is a core component, with new plants such as the **Sabar Dairy in Rohtak, Haryana**, catering to Delhi-NCR's demand and enhancing production of curd, buttermilk, and yoghurt. Large-scale investments in milk processing and chilling capacity aim to **raise India's milk processing to 100 million litres per day by 2028–29**.

What is the Significance of the Dairy Industry in India?

1. **Backbone of Rural Economy:-** Dairy contributes about **5% of India's GDP** and **40% of agriculture and allied sector output (₹11.16 lakh crore)**, supporting the livelihoods of over 8 crore farmers, especially small and marginal landholders.
2. **Ensures Nutritional Security:-** With per capita milk availability at 471 grams/day, milk provides high-quality protein, calcium, magnesium, and Vitamin B12, helping combat malnutrition, anemia, and stunting, particularly among children and women.
3. **Promotes Women Empowerment:-** Women make up **70% of the dairy workforce** and lead **48,000+ cooperatives and 16 all-women Milk Producer Organisations (MPOs)**, giving them income, independence, and decision-making power in rural areas.
4. **Supports Integrated & Climate-Friendly Farming:-** India's livestock—**303.76 million bovines**, 148.88 million goats, and 74.26 million sheep—provides manure for crops and biogas for energy. Programs like Gobar-Dhan and bio-CNG turn cattle waste into organic fertilisers and renewable energy, adding income for farmers.
5. **Encourages Sustainability & Circular Economy:-** Dairy reduces reliance on chemical fertilizers, promotes waste-to-wealth practices, lowers emissions, and supports rural entrepreneurship, contributing to both environmental and economic resilience.
6. **Future Growth under White Revolution 2.0:-** Milk procurement by cooperatives is set to increase from **660 lakh litres/day to 1,007 lakh litres/day by 2028–29**, focusing on higher production, women's participation, nutritional security, and better market access for farmers.

What are the challenges in the Dairy Industry?

1. **Low Scientific Breeding Coverage:** **Only 33% of breedable bovines undergo artificial insemination (AI)**, while 70% are bred with scrub bulls of unknown genetic merit. Limited AI use, low-quality germplasm, and shortage of technical staff hinder high-quality cattle development.

2. **Disease Threats:** Contagious diseases like Foot-and-Mouth Disease (FMD), Brucellosis, Lumpy Skin Disease (LSD), and Black Quarter infections continue to reduce livestock productivity. Mass vaccination and eradication programs under the National Animal Disease Control Programme aim to control these diseases by 2030.

3. **Infrastructure Gaps:** Many rural areas still lack access to organized milk markets, chilling centers, and quality-testing laboratories. Cooperative coverage is uneven—well-established in Gujarat and Kerala but **below 10% in West Bengal, Assam, and Jharkhand**—limiting uniform sector growth.

4. **Feed and Fodder Shortages:** Seasonal fodder scarcity affects milk yield. India faces a **deficit of 12% green fodder, 23% dry fodder**, and 30% grains-based concentrate feed.

5. **Low Cattle Productivity and State Variability:** Average cattle productivity is 1,777 kg per animal per year, below the global average of 2,699 kg. Punjab achieves 13.49 kg per animal per day, while West Bengal only 6.30 kg.

6. **Market Volatility:** Fluctuating milk prices, rising input costs, and competition from the unorganized sector reduce farmers' incomes. Limited marketing support, absence of price stabilization, and a small share of livestock in agricultural credit (around 4%) further constrain economic security.

7. **Declining Growth Rate:** Annual milk production growth has slowed from 6.47% in 2018–19 to 3.83% in 2022–23, which may affect the objectives of White Revolution 2.0.

8. **Policy and Technology Gaps:** Agricultural subsidies mainly favor crops; in 2023–24, only Rs 4,328 crore was allocated to the Department of Animal Husbandry and Dairying compared to over Rs 4 trillion for other agricultural subsidies. Insufficient institutional finance and low adoption of modern breeding technologies limit sector growth.

What are the other government schemes & initiatives for the development of dairy sector?

Rashtriya Gokul Mission (RGM)	It is being implemented for development and conservation of indigenous bovine breeds since December 2014. Its aim is to enhance milk production and to make it more remunerative to the farmers.
National Programme for Dairy Development (NPDD)	Focuses on infrastructure development, milk testing, chilling facilities, and cooperative strengthening. Over 31,000 dairy cooperatives have been revived, benefiting more than 17 lakh milk producers
National Livestock Mission (NLM)	National Livestock Mission (NLM) scheme has been restructured for 2021-22 to 2025-26 . The scheme focuses on entrepreneurship development and breeds improvement in poultry, sheep, goat and piggery , including feed and fodder development.

National Artificial Insemination Programme	To suggest novel methods of bringing about impregnation in female breeds and prevent the spread of certain diseases which are genital in nature.
National Cattle and Buffalo Breeding Project	To genetically upgrade important indigenous breeds on a priority basis with a focus on development and conservation.
National Animal Disease Control Programme	Implemented to control FMD and Brucellosis by completely vaccinating cattle, buffalo, sheep, goat and pig populations against Foot & Mouth Disease (FMD) and bovine female calves of 4-8 months of age against Brucellosis.
Animal Husbandry Startup Grand Challenge	To appreciate innovations coming from the villages to expand the dairy sector in India.
GST Reforms	The 56th GST Council reduced GST rates on key dairy products, effective from 22 September 2025 . UHT milk and packaged paneer are now tax-free, while ghee, butter, cheese, milk products, ice cream, and milk cans saw GST reduced to 5% .
National Gopal Ratna Awards	The National Gopal Ratna Awards recognize outstanding dairy farmers, cooperatives, and AI technicians for their contribution to livestock and dairy development. The 2025 awards, to be presented on 26 November, include cash prizes of ₹5 lakh, ₹3 lakh, and ₹2 lakh for the top three winners

What Should be the Way Forward?

- 1. Expansion of Cooperatives:** Achieving White Revolution 2.0 targets by establishing 75,000 new societies will bring underserved areas into the organized sector, reducing reliance on informal middlemen.
- 2. Enhancing Scientific Breeding:** Increasing AI coverage, promoting progeny-tested bulls, and adoption of advanced technologies such as IVF and sexed semen will strengthen productivity.
- 3. Infrastructure Modernization:** Scaling up milk processing plants, chilling centers, and quality-testing laboratories will improve efficiency, reduce wastage, and support uniform growth across states.
- 4. Climate-Smart Practices:** Adoption of sustainable feed production, organic manure, biogas generation, and circular economy models will mitigate environmental risks and reduce the sector's carbon footprint.
- 5. Feed and Fodder Security:** Ensuring adequate availability of green and dry fodder, grains, and drinking water is essential, particularly in regions with seasonal scarcity, to enhance milk yields and livestock health.

6. Insurance and Credit Support: Expanding livestock insurance coverage and providing easy access to short-, medium-, and long-term credit will buffer farmers against market volatility and climatic uncertainties.

7. Capacity Building and Training: Continuous skill development for AI technicians, cooperative staff, and farmers will facilitate adoption of modern practices and ensure knowledge transfer.

8. Value Addition and Marketing: Supporting milk producers to enter value-added segments such as ice cream, yogurt, cheese, and whey will significantly improve profit margins compared to raw milk sales.

9. Promoting Indigenous Breeds: Conserving and genetically enhancing native breeds, like the Badri cow, can improve productivity while maintaining resilience to local climatic conditions.

Read More–[PIB](#)

UPSC Syllabus- GS 3– Economics of animal rearing

Regulation of AI- Explained Pointwise

India unveiled its AI Governance Guidelines as the country takes a measured approach to regulating artificial intelligence by emphasizing trust, equity and innovation. The guidelines, released by the Ministry of Electronics and Information Technology (MeitY) after a consultation that drew more than 2,500 submissions from government bodies, academia, think tanks, and the private sector, reflect the vision of “AI for All” laid out by Prime Minister Narendra Modi.

Calls for regulation of Artificial Intelligence has emerged stronger than ever with the recent rise in the cases of misuse of AI like proliferation of deepfakes. With the rapid advancement of AI and its potential impact on society, there is a growing consensus among experts that regulation is necessary to ensure responsible and ethical use of AI technology.



Regulation of AI

- » The global artificial intelligence market size was valued at **USD 136.55 billion in 2022** and is projected to expand at a compound annual growth rate (CAGR) of **37.3% from 2023 to 2030**.
- » Calls for regulation of Artificial Intelligence has emerged stronger than ever with the recent rise in the cases of misuse of AI like proliferation of deepfakes. With the rapid advancement of AI and its potential impact on society, there is a growing consensus among experts for regulation of AI.



Need

- » Bias and discrimination- **Facial recognition algorithms** have been shown to have higher error rates for women and people with darker skin tones.
- » Concerns about privacy and data protection. For ex- **Lawsuits against Silicon Valley giants** for data and privacy breach.
- » Vulnerable to cybersecurity threats and attacks. For ex- Adversarial attacks can manipulate AI models posing risks to autonomous vehicles or healthcare.
- » **Artificial General Intelligence** can go beyond human intelligence, which raises concerns of predictability and security.
- » Challenges associated with Deepfakes like **women safety** (pornographic material), **liar's dividend** (an undesirable truth is dismissed as fake news) etc.



Way Forward

- » Universal adoption of the Bletchley Declaration
- » Establish comprehensive and flexible regulatory framework
- » Foster international cooperation
- » Invest in AI research and education
- » Encourage industry self-regulation



Challenges

- » **Rapid technological advancement** makes it challenging for regulators to keep up with the latest developments
- » **Increase in compliance costs** may push small business and startups out of the market.
- » **Determination of responsibility and liability** when AI systems cause harm or make erroneous decisions
- » **Developing consensus** among different countries with varying interests and priorities is a complex task.

For detailed Reading- 7 PM Link



Created by ForumIAS

What is the need for regulation of AI?

1. **Bias and discrimination:** AI systems can inherit biases from the data they are trained on, leading to discriminatory outcomes. For ex- Facial recognition algorithms have been shown to have higher error rates for women and people with darker skin tones.
2. **Lack of transparency-** Many AI algorithms operate as black boxes, making it difficult to understand how they reach their decisions. For ex- Medical AI system recommending a specific medical treatment but cannot explain its reasoning.
3. **Privacy and data protection-** AI systems rely on vast amounts of personal data, raising concerns about privacy and data protection. For ex- Lawsuits against Silicon Valley giants for data and privacy breach in their AI systems.

4. **Security risks-** AI systems can be vulnerable to cybersecurity threats and attacks. For ex- Adversarial attacks can manipulate AI models posing risks in critical domains such as autonomous vehicles or healthcare.

5. **Ethical considerations-** AI raises ethical questions related to the impact on jobs, social inequality, and concentration of power. For ex- automated decision-making in hiring processes have shown to perpetuate existing biases and result in unfair outcomes.

6. **Artificial General Intelligence**– AGI can self-learn and go beyond human intelligence, raising concerns of predictability and security.

7. **Autonomous Weapons Development-** These machines have the potential to make life-and-death decisions without direct human intervention, leading to ethical dilemma regarding the value of human life.

8. **Mass State Surveillance:** AI, equipped to conduct facial recognition and analyze extensive data, will empower governments to maintain round-the-clock profiles of citizens. This will make dissenting against governments difficult.

9. **Challenges associated with Deepfakes generated using AI-** There are concerns about women safety (morphed pornographic material), liar's dividend (an undesirable truth is dismissed as fake news) and fuelling radicalisation and violence (Fake videos showing armed forces committing 'crimes in conflict areas').

Read More- [Deepfakes- Explained Pointwise](#)

What are the challenges in regulation of AI?

1. **Rapid technological advancement-** AI is evolving at a rapid pace, making it challenging for regulators to keep up with the latest developments and effectively regulate a technology that is constantly evolving.

2. **Complexity and development-** Creating effective regulations that address the intricacies of AI systems and keep pace with technological advancements is a considerable challenge.

3. **Increased costs and competition-** Compliance with regulations may impose additional costs on businesses. This disproportionately affects smaller companies and startups, limiting their ability to compete in the AI market.

4. **Accountability and liability-** Determination of responsibility and liability when AI systems cause harm or make erroneous decisions is also a considerable challenge.

5. **International cooperation-** Developing consensus among different countries with varying interests and priorities is a complex task.

What is the status of regulation of AI in India and across the globe?

India

a. **AI Governance Guidelines-** The India AI Governance Guidelines is the country's first formal, comprehensive blueprint for how AI should be developed and used. Rather than proposing a brand-new overarching AI law immediately, the Guidelines adopt a lighter-touch, flexible regulatory strategy.

They rely on existing laws (like the Information Technology Act, 2000 and Digital Personal Data Protection Act, 2023) and propose targeted amendments where necessary.

b. Digital India Framework- India is developing a comprehensive Digital India Framework that will include provisions for regulating AI. The framework aims to protect digital citizens and ensure the safe and trusted use of AI.

c. National AI programme- India has established a National AI Programme to promote the efficient and responsible use of AI.

d. National Data Governance Framework Policy- India has implemented a National Data Governance Framework Policy to govern the collection, storage, and usage of data, including data used in AI systems. This policy will help ensure the ethical and responsible handling of data in the AI ecosystem.

e. Draft Digital India Act- The Ministry of Information Technology and Electronics (MeitY) is working on framing the draft Digital India Act, which will replace the existing IT Act. The new act will have a specific chapter dedicated to emerging technologies, particularly AI, and how to regulate them to protect users from harm.

Rest of the World

1. European Union- The European Union is working on the draft Artificial Intelligence Act (AI Act) to regulate AI from the top down.

2. United States- The White House Office of Science and Technology Policy has published a non-binding Blueprint for the Development, Use, and Deployment of Automated Systems (Blueprint for an AI Bill of Rights), listing principles to minimize potential harm from AI.

3. Japan- Japan's approach to regulating AI is guided by the Society 5.0 project, aiming to address social problems with innovation.

4. China- China has established the "Next Generation Artificial Intelligence Development Plan" and published ethical guidelines for AI. It has also introduced specific laws related to AI applications, such as the management of algorithmic recommendations.

What should be the way forward?

1. Universal adoption of the Bletchley Declaration- The push must be made towards universal adoption of the Bletchley Declaration by all the countries.

Read More- [Bletchley Declaration](#)

2. Establish comprehensive and flexible regulatory framework-: The governments should develop clear guidelines and laws that address various aspects of AI, including data privacy, algorithmic transparency, accountability, and potential biases.

3. Foster international cooperation- Given the global nature of AI and its potential impact, collaboration among countries is essential. International standards and agreements should be developed to promote ethical practices and ensure consistency in regulation across borders. In this respect, the [G7 Hiroshima AI Process](#) (HAP) could facilitate discussions.

4. Encourage industry self-regulation- Companies involved in AI development should take responsibility for ensuring the ethical and responsible use of their technologies.

5. Invest in AI research and education- Governments, academic institutions, and industry stakeholders should allocate resources to R&D, and education in the field of AI. This will help create a well-informed workforce capable of addressing regulatory challenges and ensuring the safe and responsible deployment of AI technologies.

Read More- [India AI Governance Guidelines](#)

India's Persistent Air Pollution Puzzle- Explained Pointwise

Each winter, **Delhi plunges into its familiar grey haze**, and India relies on quick fixes—cloud seeding, smog towers, water sprinkling, odd-even rules, and festival crackdowns. These visible measures promise action but rarely improve air quality.

Recently, public frustration was evident when 50–60 peaceful protesters gathered near India Gate against the smog; five were detained despite the protest being nonviolent, highlighting growing anger at recurring pollution and weak institutional responses.



Source- TH







What is air Pollution and how is it measured in India?

Air Pollution: Air pollution is the introduction of chemicals, particulates or biological materials into the atmosphere that cause discomfort, disease, or death to humans.

Measurement of Air Pollution In India:

- In India, air pollution is measured according to the National Air Quality Index developed by Central Pollution Control Board (CPCB) in 2014.
- The measurement of air quality in the NAQI framework is based on **eight pollutants**, namely- Particulate Matter (**PM10**), Particulate Matter (**PM2.5**), Nitrogen Dioxide (**NO2**), Sulphur Dioxide (**SO2**), Carbon Monoxide (**CO**), Ozone (**O3**), Ammonia (**NH3**) and Lead (**Pb**).

Categorization of Air Quality under AQI:

AQI	Remark	Colour Code	Possible Health Impacts
0-50	Good		Minimal Impact
51-100	Satisfactory		Minor breathing discomfort in sensitive people
101-200	Moderate		Breathing discomfort to people with asthma and heart disease.
201-300	Poor		Breathing discomfort to most people on prolonged exposure.
301-400	Very Poor		Respiratory illness on prolonged exposure
401-500	Severe		Affects healthy people and seriously impacts those with existing diseases.

Source- CPCB

Recent data shows **Delhi's air quality at its worst in three years**, prompting GRAP activation and emergency measures like cloud seeding by IIT Kanpur and the Delhi government, though their effectiveness remains limited by low cloud moisture and high cloud bases.

What are the key drivers of Air Pollution in Delhi?

1. **Stubble Burning:** Crop residue burning in Punjab, Haryana, and Rajasthan **contributes up to 35% of Delhi's PM2.5 levels** during October–November. Emissions include methane, carbon monoxide, VOCs, and carcinogenic hydrocarbons.
2. **Vehicular Pollution:** Delhi hosts one of the highest numbers of registered private vehicles in India. Vehicles **contribute approximately 40% of particulate load in the city**.
3. **Construction and Open Waste Burning:** Dust from construction debris and landfill burning aggravates air quality. Construction alone **accounts for roughly 10% of particulate pollution**.

4. **Meteorological Factors:** Low winter wind speeds, northwesterly winds carrying dust from Pakistan and Afghanistan, and temperature inversions trap pollutants in the lower atmosphere.

5. **Urban Development and Grey Infrastructure:** Rapid urbanization, shrinking green cover, and real estate expansion reduce the city's ecological buffers. Promotion of car ownership and poorly planned road widening exacerbate vehicular emissions.

6. **Firecrackers:** Seasonal burning during festivals like Diwali adds to acute pollution spikes.

What are the harmful effects of air pollution?

The harmful effects of air pollution have been tabulated below:

Economic effects	<p>(1) Leads to loss of labour productivity, GDP and per capita income levels. (The Confederation of Indian Industry estimates that air pollution costs Indian businesses \$95 billion, or 3 per cent of India's GDP every year). (Poor air amounts to about Rs 7 lakh crore of annual economic loss, which is more than a third of our annual GST collection)</p> <p>(2) Air pollution reduces agricultural crop yields and commercial forest yields.</p>
Human Health Effects	<p>(1) Air pollution leads to multiple health conditions including respiratory infections, heart disease and lung cancer.</p> <p>(2) As per the Global Burden of Disease comparative risk assessment for 2015, air pollution exposure contributes to approximately 1.8 million premature deaths and loss of 49 million disability adjusted life-years (DALYs) in India.</p>
Environment	<p>(1) Acid Rain: Damages crops, natural vegetation, soil chemistry and leads to damage to ancient monuments (Taj Mahal Yellowing).</p> <p>(2) Eutrophication of water bodies: Increases nitrogen intake of freshwater bodies leading to Eutrophication.</p>

Government Initiatives to Combat Pollution

1. **Cloud Seeding (Artificial Rain):** Temporary reduction of particulate matter, constrained by insufficient cloud moisture.

2. **Crop Residue Management (CRM) Scheme:** Subsidies for turbo happy seeders, rotavators, and other machinery to reduce stubble burning.

3. **Commission for Air Quality Management (CAQM):** Statutory body established in 2021 to tackle air pollution and coordinate efforts across NCR and adjoining regions.

4. **Vehicular Pollution Control:** Transition from BS-IV to BS-VI fuels, promotion of electric vehicles, and odd-even traffic rules.

5. **Graded Response Action Plan (GRAP):** Measures include shutdowns of thermal plants, bans on construction, and deployment of anti-smog guns and water sprinklers at hotspots.

Structural and Institutional Challenges

1. **Institutional Fragmentation:** No single body has full authority or accountability, creating gaps in coordination across NCR states.

2. **Incentive Misalignment:** Quick fixes are politically attractive—they are inexpensive, easy to deploy, and visibly responsive, even if they fail to reduce public exposure effectively.

3. **Intellectual Trap:** Solutions conceived in elite institutions or think tanks often underestimate real-world implementation constraints.

4. **Western Trap:** Importing foreign “best practices” without adapting them to India’s urban density, informal economy, and administrative limitations reduces effectiveness.

To overcome these traps, India requires coordinating institutions, professional science managers, long-term budgets, and multi-year plans that can adapt global solutions to local realities.

Way Ahead

1. **Expand AQI Monitoring:** Install adequate air quality monitoring stations and deploy hyperlocal sensors to track real-time pollution levels.

2. **Empower Authorities:** Give agencies the power to act on hyperlocal data for pre-emptive measures, such as penalizing construction or industrial violations immediately.

3. **National Nodal Authority:** Establish a constitutionally empowered nodal body to coordinate air pollution management across states and sectors with clear timelines.

4. **Independent Regional Commissions:** Set up city-level commissions like CAQM in other metro regions (e.g., Mumbai, Chennai) to enforce regulations across geographical and jurisdictional boundaries.

5. **Stricter Industrial Guidelines:** Enforce uniform pollutant reporting, emission reduction targets, and accountability frameworks for industries throughout the production-consumption-recycling chain.

6. **Promote Clean-Air Investments:** Encourage investment in green mobility, clean energy, and sustainable cooking solutions to reduce pollution while creating economic opportunities.

7. **Funds and Capacity Building:** Allocate finance and train manpower in urban local bodies and State Pollution Control Boards for effective monitoring, enforcement, and long-term air quality management.

8. **Public Awareness and Incentives:** Educate and incentivize civil society and stakeholders, e.g., farmers, to adopt sustainable practices like circular economy solutions for crop residue.

9. **Sustainable Transport:** Enhance public transport, discourage private vehicle use through parking management and taxes, and meet city transport targets for cleaner mobility.

10. **Agriculture, Construction, and Waste Management:** Limit stubble burning through crop and irrigation practices, manage construction dust, and improve waste handling to reduce airborne pollutants; incorporate lessons from global cities like London, Singapore, and Beijing.

Read More- [The Hindu](#)

UPSC Syllabus- GS 3- Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

India-Central Asia Relations- Explained Pointwise

India’s ties with Central Asia are becoming more important as global politics change. The spotlight on **Tajikistan’s Ayni airbase**, India’s former overseas military base, shows the region’s strategic value. Central Asian countries are balancing relationships with Russia, China, and the US, while India uses its

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historical, cultural, and security connections to stay influential and pursue economic and strategic goals

Central Asia Region



- **Location:** Situated in the central part of the Eurasian continent, bordered by Russia to the north, China to the east, Iran and Afghanistan to the south, and the Caspian Sea to the west.
- **Member States:** Consists of five landlocked countries – Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

Evolution of India-Central Asia Relations

Ancient & Medieval Periods	Trade along the Silk Route and the spread of Buddhism created strong cultural and intellectual links. Many medieval Indian rulers, including the Mughals, came from Central Asia, deepening these historical ties.
Post-1991 (Post-USSR)	Five Central Asian nations became independent; India quickly established diplomatic relations (1991-92). Engagement was limited in the 1990s but increased from the 2000s
Key Milestones	<ul style="list-style-type: none"> • 2015: Indian PM visited all five Central Asian Republics (CARs) in one trip, signaling strategic intent.

- 2017: India became a permanent member of the Shanghai Cooperation Organisation (SCO), strengthening multilateral engagement.
- 2020: India-Central Asia Business Council established to promote trade and investment.
- 2022: **First India-Central Asia Summit** and ministerial dialogues held, consolidating diplomatic relations.

Recent Developments

- External Affairs Minister S. Jaishankar hosted the 4th India–Central Asia Foreign Ministers’ Dialogue, convened after a gap of over three and a half years.
- The dialogue, an annual platform bringing together the Foreign Ministers of India and the five Central Asian Republics—Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan—aims to strengthen regional cooperation across political, economic, and strategic domains.

Key Highlights

1. **Economic Cooperation:** Agreed to tap trade potential in pharmaceuticals, IT, textiles, energy, and agriculture.
2. **Digital and Technological Partnership:** Launched the India–Central Asia Digital Partnership Forum to promote collaboration in Digital Public Infrastructure, innovation, and research.
3. **Critical Minerals Collaboration:** Supported joint exploration following the 1st India–Central Asia Rare Earth Forum (2024).
4. **Global Partnerships:** India invited Central Asian nations to join International Solar Alliance (ISA), Global Biofuels Alliance (GBA), International Big Cat Alliance (IBCA) and Coalition for Disaster Resilient Infrastructure (CDRI) etc.
5. **UN & Global South Cooperation:** Central Asian states reaffirmed support for India’s UNSC bid and partnership through India’s Global South Centre – DAKSHIN.
6. **Security & Counterterrorism:** Condemned the Pahalgam terror attack and urged early adoption of the UN Comprehensive Convention on International Terrorism (CCIT).
7. **Connectivity & Regional Stability:** Emphasized INSTC, Chabahar Port, health cooperation under One Earth, One Health, and peace in Afghanistan.

Significance of the Central Asian Region for India

1. **Geostrategic Significance:** Situated at the heart of Eurasia, Central Asia acts as a land bridge connecting Europe and Asia. Its stability is crucial for India’s extended neighbourhood policy, particularly amid China’s Belt and Road Initiative (BRI) and Russia’s regional influence.
2. **Energy and Mineral Security:** The region is rich in hydrocarbons, uranium, and rare earth elements. **Kazakhstan is a leading uranium producer**, and Uzbekistan has significant uranium reserves. **Turkmenistan’s natural gas reserves** are vital for India’s energy diversification.

strategy. Initiatives like the **TAPI pipeline**, though stalled, reflect India's long-term energy engagement.

3. **Security Cooperation:** Terrorism, drug trafficking, and radicalization are shared concerns, especially following the Taliban's return to power in Afghanistan. Joint efforts in counterterrorism, intelligence sharing, and **military exercises (DUSTLIK, KAZIND)** enhance regional security collaboration.
4. **Trade and Investment Potential:** Bilateral trade between India and Central Asia reached around **\$1.7 billion in 2023**, up from \$500 million in 2010, with pharmaceuticals leading exports and Kazakhstan as the main source of imports. Since 2010, **India has invested about \$1.5 billion in the region**, mainly in coal, oil, and gas, though investment from Central Asia to India remains limited.
5. **Cultural and Soft Power Influence:** India has strong cultural and spiritual ties with Central Asia through shared Sufi and Buddhist heritage. It promotes its soft power using cinema, cuisine, yoga, and traditional medicine, while initiatives like Project Mausam strengthen cultural and maritime connections in the region.

Initiatives to Boost India-Central Asia Relations

1. Connectivity and Trade Corridors:

- **International North-South Transport Corridor (INSTC):** Launched with Iran and Russia in 2000, now expanded to include Central Asian countries, facilitating cargo movement and reducing trade costs.
- **Chabahar Port:** Developed with Iran since 2003 to bypass Pakistan, though US sanctions on Iran delayed implementation.
- **Ashgabat Agreement:** India, along with all five Central Asian Republics, is a party to this agreement, promoting multi-modal transport networks to enhance connectivity.
- **TAPI Pipeline:** Intended to transport Turkmen gas to India via Afghanistan and Pakistan; stalled due to regional security issues.

2. Economic and Technological Collaboration

- **Trade and Investment:** Bilateral trade between India and Central Asia reached approximately \$1.7 billion in 2023, with potential for growth in sectors like pharmaceuticals, information technology, and agriculture.
- **Digital Public Infrastructure:** India has introduced its digital governance models, such as Aadhaar and UPI, to Central Asian countries, promoting e-governance and financial inclusion.
- **Capacity Building:** Through the **Indian Technical and Economic Cooperation (ITEC) program**, India offers training and scholarships in various fields, enhancing human resource development in Central Asia.

3. Defence and Security Cooperation:

- **Strategic Partnership Agreements (SPA):** Signed with Kazakhstan, Tajikistan, and Uzbekistan to deepen defence and trade ties.
- **Military Exercises:** Joint exercises, such as KAZIND-2024, and cooperation at Ayni Airbase in Tajikistan, enhance interoperability and strengthen defence relations.

- **NSA-Level Consultations:** Institutionalized dialogue on counterterrorism, Afghanistan, and regional stability.
- **Multilateral Engagement:** India leverages platforms like the Shanghai Cooperation Organization (SCO), Conference on Interaction and Confidence-Building Measures in Asia (CICA), and DAKSHIN (Global South knowledge exchange) to maintain continuous engagement with Central Asian countries

4. Science, Innovation & Critical Minerals

- **Rare Earth Forum:** The first India-Central Asia Rare Earth Forum was held in September 2024 in New Delhi, focusing on joint exploration and cooperation in critical minerals.
- **Space Technology Cooperation:** Collaborations in space technology and innovation enhance strategic and economic ties between India and Central Asia.

5. Cultural Diplomacy

- **Youth Exchange Programs:** India hosted the third Central Asian Youth Delegation from 22nd to 28th March 2025, fostering youth collaboration and cultural exchange.
- **Cultural Centers and Initiatives:** Promotion of Indian cultural centers, Sanskrit chairs, and youth exchange programs strengthen people-to-people connections.

Challenges in India-Central Asia Relations

- **Geography and Connectivity-** India has no direct land border with Central Asia and depends on third countries for access. Projects like the INSTC and Chabahar Port are still partially operational, and air connectivity is limited and costly.
- **Low Trade Volumes-** Bilateral trade is around \$1.7 billion in 2023, far below China's \$100 billion with the region. High logistics costs, tariff barriers, and banking challenges restrict growth.
- **Chinese Dominance-** China's Belt and Road Initiative (BRI) and CPEC investments in Central Asia are faster and larger, overshadowing India's presence.
- **Security Concerns-** The Taliban's control in Afghanistan increases risks from terrorism, drug trafficking, and arms smuggling. India lacks direct hard-security influence in the region.
- **Political and Bureaucratic Hurdles-** Authoritarian regimes, opaque regulations, language barriers, and limited transparency make business and diplomatic engagement difficult.
- **Limited People-to-People Links-** Despite shared cultural and spiritual heritage, exchanges in education, tourism, and culture remain weak, limiting deeper connections.
- **Financial and Banking Gaps-** Lack of direct banking channels hampers trade, remittances, and currency conversion. Joint financial working groups are still in early stages.

Way Forward

- **Enhance Connectivity-** Make INSTC and Chabahar Port fully operational, develop multimodal transport corridors, digitize customs processes, and encourage full participation of Turkmenistan and Uzbekistan to strengthen regional links.

- **Secure Energy and Minerals-** Resume TAPI pipeline discussions once Afghanistan stabilizes, collaborate on rare earth exploration, and ensure long-term uranium supply agreements with Kazakhstan to support India's energy and strategic needs.
- **Strengthen Financial and Trade Links-** Create a joint financial connectivity group, promote rupee settlements and digital payments, and enhance business-to-business engagement through the India–Central Asia Business Council (ICABC).
- **Promote Digital Cooperation-** Share India Stack and digital governance solutions, roll out pilot Digital Public Infrastructure (DPI) programs, and deepen collaboration through the India–Central Asia Digital Partnership Forum.
- **Develop Human Capital-** Expand ITEC scholarships, vocational training, and medical fellowships, while supporting Indian university campuses and joint research initiatives to build skills and promote innovation.
- **Enhance Security Cooperation-** Institutionalize NSA-level consultations, conduct joint training in counterterrorism and cybersecurity, and use platforms like SCO and bilateral mechanisms to address regional security challenges.
- **Deepen Cultural and Trade Ties-** Strengthen cultural centers, Sanskrit chairs, and youth exchange programs, hold regular Culture Ministers' Meetings, and expand trade and investment in sectors like IT, pharmaceuticals, tourism, and energy.

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UPSC Syllabus- GS 2– Bilateral Relations