



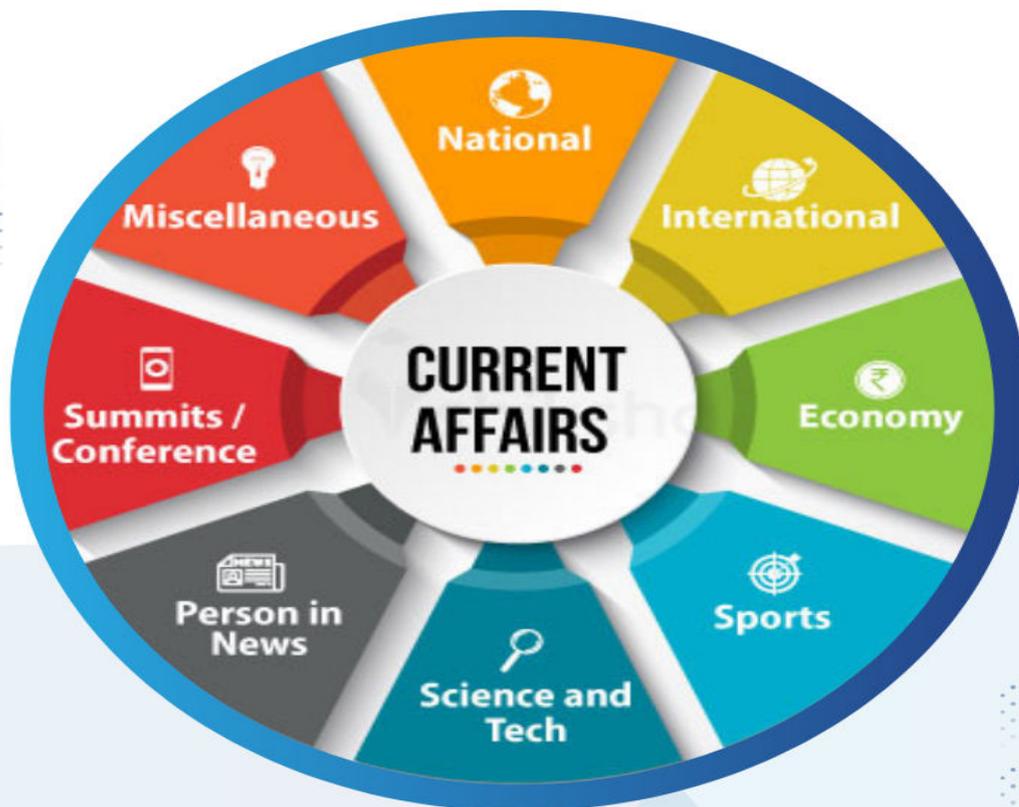
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Table of Contents

1. India–EU FTA Nears Breakthrough: Navigating Trade Winds Amid Trump Tariffs <i>India seeks stable and diversified export markets as talks with the European Union reach decisive stages.</i>	2
2. India–China Border Talks: Renewed Stability, Pending De-escalation <i>At the 23rd Corps Commander-level talks, both sides agree to maintain peace along the LAC even as full troop disengagement remains incomplete.</i>	3
3. Cloud Seeding in Delhi: Experimenting with Artificial Rain for Pollution Control	6
4. India Maritime Week 2025: India as the ‘Steady Lighthouse’ of Global Maritime Growth	7
5. PM-POSHAN 2.0: States Push for Breakfast Inclusion Under the Midday Meal Scheme	10
6. National FPO Samagam 2025: Empowering Farmer Producer Organizations through Innovation, Inclusion, and Market Linkages	13
<i>Strengthening Collective Farming for an Inclusive and Resilient Agri-Economy</i>	13
7. KOYLA SHAKTI & CLAMP: Digital Transformation in India’s Coal Governance	15
<i>Building a Transparent, Data-Driven, and Efficient Coal Ecosystem</i>	15
8. Indi & Puliyanakudi Limes Take Flight: India’s GI-Tagged Citrus Finds Global Market in the UK	18
<i>APEDA’s Export Initiative Strengthens India’s Agri-Branding and Farmer Prosperity</i>	18
9. Samridh Gram Phygital Services Pilot Project: Bridging India’s Rural Digital Divide <i>BharatNet-powered initiative to integrate physical and digital services for inclusive rural transformation</i>	20
10. 8th Central Pay Commission: Balancing Fiscal Prudence and Public Sector Motivation <i>India’s once-in-a-decade salary revision faces the twin test of equity and economic discipline</i>	23



1. India–EU FTA Nears Breakthrough: Navigating Trade Winds Amid Trump Tariffs

India seeks stable and diversified export markets as talks with the European Union reach decisive stages.

Background & Context:

India and the European Union (EU) are in the advanced stages of negotiating a Free Trade Agreement (FTA) aimed at enhancing bilateral trade, investment, and technology cooperation. The development comes at a time when steep tariffs imposed by US President Donald Trump on Indian goods have started affecting export competitiveness. In FY 2024–25, India's exports to the EU stood at \$82 billion, slightly lower than to the US (\$86.5 billion). Commerce Minister Piyush Goyal's visit to Brussels (October 26–28, 2025) marked substantial progress — closure of 10 out of 20 negotiating chapters. Both sides have reaffirmed their commitment to conclude the FTA by end-2025, following the direction from Prime Minister Narendra Modi and European Commission President Ursula von der Leyen. The FTA is vital to India's strategy of export diversification, reducing dependence on the US and leveraging Europe's stable trade ecosystem.

Concept/Definition:

A Free Trade Agreement (FTA) is a pact between two or more countries to reduce or eliminate tariffs, quotas, and other trade barriers on most goods and services. It facilitates trade liberalisation, investment flows, and regulatory cooperation. The India–EU FTA, originally termed the Broad-based Trade and Investment Agreement (BTIA), was launched in 2007 but stalled due to differences over tariffs, market access, and regulatory standards.



Key Features or Changes:

- Out of 20 chapters, 10 have been closed, covering customs, digital trade, and dispute settlement.
- Outstanding issues include Carbon Border Adjustment Mechanism (CBAM), automobiles, steel, and beverages, which are sensitive sectors.
- India seeks preferential access for labour-intensive exports like textiles, leather, gems, and jewellery.
- Technology, data protection, and skilled mobility form part of the ongoing discussions.
- EU has insisted on stringent sustainability and labour provisions, while India advocates for developmental flexibility and fairness.
- The Ministry of Commerce highlighted progress in aligning “non-sensitive industrial tariff lines” and addressing non-tariff measures.

Economic Context & Market Response:

India's exports to the US fell by 12% in September 2025, owing to renewed protectionist measures, but higher exports to the UAE and China sustained overall export growth at around 6%. Experts (CRISIL, ICRIER) estimate that a balanced FTA with the EU could boost India's exports by 25–30% over five years, particularly in high-value segments. The EU remains India's second-largest trading partner (11% share in total trade) and a major source of foreign investment. The move is seen as a strategic hedge against US-China trade volatility and a step towards sustainable integration into global value chains.

Legal and Institutional Framework:

The negotiation is being led by the Ministry of Commerce and Industry under the Foreign Trade (Development & Regulation) Act, 1992. On the EU side, the Directorate-General for Trade (DG Trade) leads the process. Key frameworks influencing discussions include the EU Carbon Border Adjustment Mechanism (Regulation 2023/956), India's Foreign Trade Policy (2023–28), and domestic initiatives like Make in India and the Production-Linked Incentive (PLI) Scheme. Institutional coordination also involves the Trade and Economic Partnership Agreement (TEPA) mechanism and Parliamentary oversight through the Standing Committee on Commerce.

**Broader Economic & Policy Implications:**

- Strengthens India's trade diversification and resilience.
- Encourages European investment in Indian manufacturing, renewable energy, and digital sectors.
- Pushes Indian exporters to adopt greener production standards aligned with the EU Green Deal.
- Promotes collaboration in technology, semiconductors, and clean energy transitions.
- Spurs regulatory convergence in data privacy, environmental standards, and certification — essential for integration into global supply chains.

Critical Analysis:*Benefits:*

- Expands India's access to a high-income, stable market.
- Enhances FDI and technology transfer from Europe.
- Strengthens India's post-RCEP trade positioning.

Challenges:

- Compliance with stringent carbon and labour regulations may increase production costs.
- Tariff reduction could expose sensitive sectors like automobiles to competition.
- Divergences on data protection (GDPR) and intellectual property rights persist.
- CBAM may reduce the cost competitiveness of India's steel and aluminium exports.

UPSC Relevance:

- **GS Paper 2:** India–EU relations, bilateral and regional groupings, trade negotiations.
- **GS Paper 3:** Effects of liberalisation, external sector reforms, global trade issues.
- **Prelims Focus:** CBAM, DG Trade (EU), India's top export destinations (FY25).
- **Keywords:** India–EU FTA, CBAM, tariff barriers, carbon levy, trade liberalisation, export diversification.

Conclusion:

The India–EU Free Trade Agreement, progressing rapidly after years of stagnation, reflects India's evolving trade diplomacy—pragmatic, sustainability-oriented, and strategically diversified. As the global trade landscape becomes uncertain with renewed protectionism in the US and environmental regulation in Europe, this FTA represents India's effort to secure a stable and balanced trading framework. If concluded equitably, it could serve as a model for India's future trade engagements—balancing competitiveness, sustainability, and inclusive growth.

2. India–China Border Talks: Renewed Stability, Pending De-escalation

At the 23rd Corps Commander-level talks, both sides agree to maintain peace along the LAC even as full troop disengagement remains incomplete.

Background & Context:

India and China held the **23rd round of Corps Commander-level talks** on October 25, 2025, at the Chushul-Moldo border point to review the situation along the Line of Actual Control (LAC) in eastern Ladakh. The meeting came amid efforts to consolidate relative peace following the 2020 military standoff and the subsequent disengagement of troops from several friction points in 2024. The Ministry of External Affairs (MEA) described the talks as “friendly and cordial,” emphasizing continued use of **existing diplomatic and military mechanisms** to maintain stability.

While peace has largely been preserved since disengagement last October, complete de-escalation—particularly in the **Depsang Plains and Demchok sectors**—remains pending. This makes the talks significant for ensuring sustained calm along one of the world's most sensitive borders.

**Concept/Definition:**

The **Line of Actual Control (LAC)** refers to the de facto boundary between India and China, stretching approximately **3,488 km** across Ladakh, Uttarakhand, Sikkim, Arunachal Pradesh, and Himachal Pradesh. It is not an internationally demarcated boundary but an outcome of differing perceptions of territorial limits between the two nations.

Since the **1962 Sino-Indian War**, the LAC has witnessed multiple standoffs and skirmishes. Peace and tranquility along this line are governed by a series of **bilateral agreements and protocols** signed since 1993.

Key Features or Changes:

- Both sides reaffirmed commitment to maintain stability through **existing border mechanisms** such as the Working Mechanism for Consultation and Coordination (WMCC) and Special Representatives' dialogue.
- Continued emphasis on **confidence-building measures (CBMs)** — coordinated patrols, hotline communications, and local commander meetings to prevent flare-ups.
- Discussions covered **border management practices**, joint efforts to avoid face-offs, and further steps towards troop de-escalation.
- Agreement to sustain military and diplomatic dialogues “under the guidance of the leaders” — Prime Minister Narendra Modi and President Xi Jinping.
- The meeting follows the **2024 breakthrough disengagement agreement** at Depsang and Demchok, achieved after the Modi–Xi interaction at the BRICS Summit in Kazan, Russia.

**Economic Context & Market Response:**

While primarily a security and diplomatic issue, India–China border tensions have a **broader economic dimension**. Bilateral trade crossed **\$118 billion in FY 2024–25**, with India importing machinery, electronics, and chemicals, while exporting minerals and pharmaceuticals. Prolonged border tensions have prompted India to:

- Diversify supply chains and encourage “**China+1**” **manufacturing strategies**.
- Increase scrutiny under **FEMA and FDI regulations** for investments from bordering nations. The recent dialogue has been viewed positively by markets, as stability along the LAC reduces geopolitical risks that could affect investor sentiment and regional trade corridors such as the **International North-South Transport Corridor (INSTC)**.

Legal and Institutional Framework:

The border management framework is rooted in a series of bilateral agreements:

- **Agreement on the Maintenance of Peace and Tranquillity along the LAC (1993)**
- **Agreement on Confidence-Building Measures (1996)**
- **Border Defence Cooperation Agreement (BDCA), 2013**
Institutional mechanisms include:
 - **WMCC (Working Mechanism for Consultation and Coordination on India-China Border Affairs)** – regular diplomatic interface.
 - **Corps Commander-level talks** – operational coordination.
 - **Special Representatives' Dialogue** – strategic-level framework led by India's NSA and China's State Councillor.



The **MEA** and the **Ministry of Defence (MoD)** coordinate India's position, supported by the Army's **14 Corps Headquarters** based in Leh.

Broader Economic & Policy Implications:

- **Strategic stability:** Reduces the likelihood of military escalation, preserving peace along a nuclear-armed frontier.
- **Diplomatic normalization:** Enables gradual resumption of bilateral engagements — seen in the reopening of the **Kailash Mansarovar Yatra** and restoration of direct flights.
- **Defence preparedness:** The standoff has accelerated India's investment in border infrastructure, advanced surveillance systems, and logistics along the LAC.
- **Regional security architecture:** Stability on the border enhances India's ability to engage constructively within forums like **SCO** and **BRICS**.
- **Economic confidence:** A peaceful frontier improves the environment for trade, tourism, and cross-border cooperation in multilateral frameworks.

Critical Analysis:

Benefits:

- Maintains relative calm, preventing escalation and preserving strategic focus on domestic and global priorities.
- Reinforces communication channels that reduce the risk of miscalculation.
- Creates a diplomatic opening for resumption of broader India–China cooperation.

Challenges:

- **Full de-escalation remains elusive**, with around 50,000–60,000 troops still deployed on either side.
- China's incremental disengagement strategy raises concerns over trust and verification.
- Continued military buildup and infrastructure development by China in the region challenge India's long-term security calculus.
- Periodic tensions could derail progress and hinder economic normalization.

UPSC Relevance:

- **GS Paper 2:** India–China relations, border management, international groupings, diplomacy.
- **GS Paper 3:** Internal and external security, border infrastructure, defence preparedness.
- **Prelims Focus:** LAC, WMCC, BDCA 2013, Depsang Plains, Demchok sector.
- **Keywords:** LAC, Corps Commander talks, confidence-building measures, de-escalation, WMCC, Indo-China diplomacy.

Conclusion:

The 23rd Corps Commander-level dialogue underscores a cautious yet steady movement towards **border stability and mutual accommodation**. While disengagement from key friction points has reduced the immediate risk of confrontation, the absence of full de-escalation keeps tensions latent. The gradual restoration of dialogue, confidence-building, and surveillance-led deterrence marks a pragmatic phase in India's border policy — balancing vigilance with diplomacy. For India, the focus must remain on ensuring **peace with preparedness**, securing territorial integrity while fostering a predictable and cooperative neighbourhood environment.



3. Cloud Seeding in Delhi: Experimenting with Artificial Rain for Pollution Control

A Science-Driven but Uncertain Leap Toward Cleaner Skies

1. Background & Context

Delhi's worsening air quality, particularly during the winter months, has prompted authorities to explore innovative, technology-based pollution control methods. In October 2025, the Delhi government, in collaboration with **IIT-Kanpur**, conducted **cloud seeding trials** aimed at inducing artificial rainfall to settle particulate pollutants. However, after two trials failed to produce rain due to low atmospheric moisture, the third scheduled sortie was called off. Despite limited success, Environment Minister **Manjinder Singh Sirsa** termed it a "science-driven, evidence-based intervention," reinforcing the government's commitment to tackling air pollution through advanced technologies.

2. Concept / Definition

Cloud Seeding refers to the **artificial enhancement of precipitation** by dispersing substances such as **silver iodide, sodium chloride, or potassium iodide** into clouds to stimulate rainfall. The process typically involves aircraft or drones releasing these aerosols into **moisture-laden clouds**. These particles act as **nuclei** around which water vapor condenses, potentially leading to precipitation. It is a form of **weather modification technology**, endorsed in principle by the **World Meteorological Organization (WMO)** but with acknowledged scientific uncertainties.



3. Key Features of the Delhi Experiment

- **Conducting Agency:** IIT-Kanpur in collaboration with Delhi Government.
- **Aircraft Used:** *Cessna 206H* equipped for cloud seeding.
- **Chemicals Released:** Silver iodide and sodium chloride.
- **Coverage Area:** ~300 sq. km across Burari, Mayur Vihar, and Karol Bagh.
- **Cost:** ₹60 lakh (≈ ₹20,000 per sq. km).
- **Objective:** Reduce **PM2.5 and PM10** concentration through induced rainfall.
- **Outcome:** No rainfall, but measurable reduction in particulate matter observed.
- **Future Plans:** Possible repetition of trials depending on **humidity levels** and **IMD forecasts**.

4. Economic Context & Market Response

The cost estimate for a **full-season cloud seeding program** in Delhi is around **₹25–30 crore**, which experts like IIT-Kanpur's Director **Prof. Manindra Agrawal** termed "reasonable" compared to the city's annual pollution control budget exceeding **₹500 crore**. AQI improved slightly from **294 to 279**, though causation remains unproven. Experts from **Skymet Weather** and **IITM Pune** highlighted that **only 15% moisture content** in clouds was insufficient for successful rainfall, stressing the **uncertainty** inherent in such operations.

5. Legal and Institutional Framework

- **Regulatory Oversight:** **Directorate General of Civil Aviation (DGCA)** – flight permissions and safety. **Indian Meteorological Department (IMD)** – weather assessment and forecasting. **Central Pollution Control Board (CPCB)** – AQI data and post-trial analysis.



- **Policy Linkages:** Aligned with the **National Clean Air Programme (NCAP)** (2019) targeting 40% reduction in PM levels by 2026. Linked to **Delhi's Comprehensive Action Plan (CAP)** under the **Environmental Protection Act, 1986**. Supported by the **Air (Prevention and Control of Pollution) Act, 1981** for legal authority in pollution interventions.

6. Broader Economic & Policy Implications

- **Positive Implications:** Promotes **science-based governance** and **climate-tech innovation**; enhances India's research base in **weather modification and geo-engineering**; potentially applicable in **drought-prone regions** and **urban pollution control**.
- **Concerns:** Uncertainty in rainfall outcomes due to atmospheric variability; possible **chemical residue impacts** on soil, water, and aquatic life; ethical concerns around **weather manipulation** without regional coordination.

7. Critical Analysis

- **Benefits:** Represents a shift toward **data-driven environmental management**; encourages collaboration between academia (IITs) and government; symbolically important in **public environmental communication**.
- **Challenges:** High dependency on **cloud moisture levels** (>60% typically needed); **limited evidence** of significant AQI improvement; requires **cost-benefit evaluation** vis-à-vis established methods (road dust control, vehicular emission reduction); **public skepticism** due to previous unsuccessful attempts (2018–2023).

8. UPSC Relevance

GS Paper Linkages: **GS Paper 3:** Environment – Pollution Control, Science & Technology in Environment, Climate Change Mitigation. **GS Paper 2:** Governance & Policy Interventions, Inter-Governmental Coordination.

Prelims Focus Areas: Concept of Cloud Seeding; Chemicals used: Silver Iodide, Sodium Chloride; Role of IIT-Kanpur, DGCA, CPCB, IMD; National Clean Air Programme (NCAP).

Keywords: Artificial Rain, Cloud Seeding, Geoengineering, Air Quality Management, NCAP, IIT-Kanpur.

9. Conclusion

The **Delhi cloud seeding initiative** underscores India's growing inclination toward **tech-enabled environmental interventions**. While the trial's limited success reveals the constraints of weather modification, it also highlights the **value of experimentation in public policy**. Going forward, a **hybrid strategy** — combining proven ground-level pollution controls with **innovative atmospheric interventions** — will be essential to achieve sustainable air quality improvement. *A science-led approach is necessary, but it must be backed by realistic expectations, regulatory clarity, and robust data evaluation.*

4. India Maritime Week 2025: India as the 'Steady Lighthouse' of Global Maritime Growth

PM Modi charts India's course toward becoming a global maritime and logistics powerhouse

1. Background & Context

Prime Minister Narendra Modi's address at **India Maritime Week 2025** in Mumbai has placed India's maritime vision firmly on the global map. With participation from over **85 countries**, the event symbolizes international confidence in India's maritime ecosystem. The PM's declaration that India is ready to play the role of a "steady lighthouse" comes amid **global supply chain disruptions, geopolitical tensions**, and a



renewed global focus on **Blue Economy and sustainable sea-based trade**. The government's decision to invest **₹70,000 crore** in maritime infrastructure marks one of the largest public-private maritime initiatives in Indian history.

2. Concept / Definition

The **Maritime Sector** encompasses ports, shipping, inland waterways, coastal trade, shipbuilding, fisheries, logistics, and marine services that together drive the **Blue Economy**—sustainable use of ocean resources for economic growth, improved livelihoods, and environmental health. India's maritime policy aligns with the **Maritime India Vision (MIV) 2030** and the broader **Amrit Kaal Vision 2047**, focusing on port-led growth, green shipping, and regional connectivity under the **Sagarmala Programme**.

3. Key Features and Announcements at India Maritime Week 2025



- **Investment Commitment:** ₹70,000 crore to boost port capacity, establish new greenfield and brownfield shipyards, and modernize port infrastructure.
- **Coastal Shipping Act:** Introduced to simplify trade, improve coastal logistics, and ensure balanced development of coastal regions.
- **Operational Transformation:**
 - Port capacity doubled in the last decade.
 - **Turnaround time** significantly reduced; **cruise tourism** expanded.
 - **Inland waterway cargo movement** increased **700%** (from 3 to 32 operational waterways).
 - **Port surplus** rose **ninefold** in 10 years.
- **Human Capital Growth:** Number of **Indian seafarers** grew from **1.25 lakh** to **over 3 lakh**, placing India among the **top three nations globally** in seafaring.
- **Global Recognition:** India's improvement in the **World Bank's Logistics Performance Index (LPI)** reflects efficiency and competitiveness in port management.
- **Sustainability Focus:** Push for **green logistics, decarbonized shipping, and sustainable coastal development** through renewable energy adoption at ports.

4. Economic Context & Market Response

The maritime sector contributes around **\$60 billion** to India's economy, supporting **95% of trade by volume** and **70% by value**. Private sector participation in ports has increased, with leading players investing in container terminals, ship repair, and logistics hubs. According to **RBI's FY2025 economic review**, improved port efficiency and multimodal logistics could enhance India's export competitiveness by **10–15%**. Maritime analysts note that India's push aligns with the '**Make in India**' and **PM Gati Shakti National Master Plan**, integrating ports, railways, and highways. Globally, India's maritime development is viewed as a stabilizing anchor amid disruptions in the **Red Sea** and **South China Sea**, making it a preferred logistics hub in the **Indo-Pacific corridor**.



5. Legal and Institutional Framework

- **Governing Acts:** Major Port Authorities Act, 2021; Indian Ports Act, 1908 (amended); Merchant Shipping Act, 1958; Coastal Shipping Act (proposed).
- **Institutional Mechanisms:**
 - **Ministry of Ports, Shipping and Waterways (MoPSW)** oversees policy implementation.
 - **Sagarmala Development Company Ltd. (SDCL)** drives port-led development.
 - **Inland Waterways Authority of India (IWAI)** manages riverine transport.
 - **Directorate General of Shipping** regulates maritime safety and seafarer training.
- **International Alignment:** India's policies align with **IMO (International Maritime Organization)** guidelines on sustainable shipping and maritime safety.

6. Broader Economic & Policy Implications

- **Strategic Autonomy:** Positions India as a **reliable maritime hub** amid shifting global trade alignments.
- **Regional Connectivity:** Strengthens **SAGAR** (Security and Growth for All in the Region) vision, promoting cooperation among island and coastal nations.
- **Blue Economy Growth:** Enhances fisheries, tourism, renewable energy, and marine biotechnology sectors.
- **Employment Generation:** Shipbuilding and port modernization expected to create **1.5–2 million jobs** directly and indirectly.
- **Environmental Sustainability:** Focus on **green hydrogen-based shipping, solar-powered ports, and waste management systems** to meet India's **Net Zero 2070** goals.

7. Critical Analysis

Strengths:

- Reinforces India's identity as a **maritime civilization** with modern capabilities.
- Data-backed improvements show real sectoral transformation.
- Global partnerships reflect **trust in India's regulatory and policy environment.**

Challenges:

- Bureaucratic delays and overlapping port jurisdictions persist.
- Coastal erosion, pollution, and rising sea levels threaten port infrastructure.
- Need for **skill upgradation** and **technological adoption** in domestic shipbuilding.
- **Private investment** remains cautious due to long gestation periods in port projects.

8. UPSC Relevance

GS Paper 3: Infrastructure – Ports, Shipping, Investment Models, Blue Economy, Make in India, Environment.

GS Paper 2: India's Maritime Diplomacy, SAGAR Vision, Global Trade Partnerships.

Prelims Focus: Sagarmala Project, MIV 2030, Major Port Authorities Act, Inland Waterways, Logistics



Performance Index (World Bank).

Keywords: Blue Economy, Sagarmala, Coastal Shipping Act, Port Modernization, Maritime Vision 2030, SAGAR, IMO, Seafarers, Net Zero Ports.

9. Conclusion

India's maritime resurgence is a cornerstone of its 21st-century economic vision. From **historic maritime trade routes** to **modern global logistics corridors**, India is reclaiming its role as a **maritime power and responsible regional partner**. The “steady lighthouse” metaphor aptly captures India's dual role — a **reliable anchor in turbulent global seas** and a **driver of inclusive, sustainable maritime growth**. To sustain this momentum, the focus must remain on **green innovation, policy execution, and global cooperation** — guiding the nation's journey toward becoming a **maritime leader by 2047**.

5. PM-POSHAN 2.0: States Push for Breakfast Inclusion Under the Midday Meal Scheme

Seven States urge Centre to expand school nutrition to mornings — bridging hunger, learning, and equity gaps

1. Background & Context

In October 2025, seven States and Union Territories — including **Rajasthan, Kerala, Chhattisgarh, Delhi, Gujarat, Sikkim, and Lakshadweep** — formally urged the Union Government to extend the **PM-POSHAN (Pradhan Mantri Poshan Shakti Nirman)** scheme to include breakfast for schoolchildren. The request aligns with a key recommendation of the **National Education Policy (NEP) 2020**, which highlights the importance of a nutritious breakfast for improved learning outcomes. Eleven States and UTs have also demanded the scheme's extension to **Class 12**, beyond the current **pre-primary to Class 8** coverage. This renewed demand coincides with the Education Ministry's consultations with States ahead of the 15th Finance Commission cycle (2021–26), underscoring growing pressure on the Centre to expand the flagship school nutrition programme.

2. Concept / Definition

The **PM-POSHAN Scheme**, launched in 2021, is the restructured form of the **Midday Meal Scheme (MDMS)**—one of the world's largest school feeding programmes. Its objectives include addressing classroom hunger, improving nutritional levels among children, and boosting school enrolment, attendance, and retention. The **NEP 2020** recommends adding breakfast, noting that “*morning hours after a nutritious breakfast are particularly productive for cognitively demanding subjects.*” Thus, the breakfast inclusion proposal is not just a welfare measure but a **pedagogical and human capital investment**.



3. Key Features and the Proposed Changes

- **Existing Coverage:** PM-POSHAN covers **pre-primary to Class 8** students in government and government-aided schools.
- **Cost-Sharing Formula:**
 - **60:40** (Centre:State) for most States;
 - **90:10** for Northeastern and Himalayan States;
 - **100% Central funding** for UTs without legislatures.



- **Proposal for Expansion:**
 - **Addition of Breakfast:** To provide a simple, nutritious morning meal (e.g., porridge, idli, upma, fruits).
 - **Extension to Class 12:** To cover older students, addressing adolescent nutrition needs.
 - **Estimated Cost:** ₹6,000 crore annually (as per Education Ministry estimates).
- **State-Level Initiatives:**
 - **Tamil Nadu:** Introduced a breakfast scheme in 2022; expanded to government-aided schools after recording improved attendance and reduced tardiness.
 - **Telangana:** Rolled out breakfast for Classes 1–10 in 2023; continued under new government in 2025.
 - **Gujarat:** Launched a morning meal programme in 2024 for primary schools.
 - These States fund breakfast schemes **from their own budgets**, demonstrating feasibility and public support.

4. Economic Context & Expert Views

The **Economic Survey 2024–25** emphasized the role of school nutrition in improving human capital formation and productivity. Studies by the **World Bank** and **UNICEF** show that every ₹1 invested in school feeding yields up to ₹9 in social and economic returns through better health, cognition, and reduced dropouts. Tamil Nadu's **State Planning Commission Report (2024)** found:

- **15% reduction in absenteeism** within a year;
 - **12% improvement in classroom engagement;**
 - **Visible gains in BMI and hemoglobin levels** among students.
- Experts argue that including breakfast could boost India's **Global Hunger Index (GHI)** performance, where the country currently ranks low (111th/125, GHI 2024). However, the **Finance Ministry's earlier rejection (2021)** of the breakfast proposal at the Expenditure Finance Committee stage reflected fiscal caution amid competing welfare priorities.

5. Legal and Institutional Framework

- **Constitutional Basis:** Article 47 (Directive Principles) mandates improvement of nutrition and public health; Article 21A guarantees Right to Education.
- **Statutory Linkages:**
 - **National Food Security Act (NFSA), 2013** – Schedule II mandates nutritional support to schoolchildren.
 - **PM-POSHAN Rules, 2021** – Provide for cooked meals and nutritional norms (450–700 kcal per child).
 - **Institutional Oversight:** Ministry of Education (Department of School Education and Literacy), in coordination with State Education Departments, **FSSAI**, and local governance bodies.
- **Policy Alignment:** Breakfast inclusion aligns with **NEP 2020**, **NITI Aayog's National Nutrition Strategy (2017)**, and the **Poshan Abhiyaan (2018)**.



6. Broader Economic & Policy Implications

- **Education & Learning Outcomes:** Breakfast provision enhances concentration, attendance, and test performance, especially in early grades.
- **Nutritional Security:** Addresses morning hunger and micro-nutrient deficiency in children, complementing **Poshan Tracker** and **ICDS** efforts.
- **Equity & Gender:** Improves participation among girls and children from marginalized communities, who often skip breakfast at home.
- **Employment Generation:** Expanding the scheme would create additional jobs for **cook-cum-helpers** and local suppliers.
- **Fiscal Challenge:** Requires long-term budgetary commitment but offers high socio-economic returns.

7. Critical Analysis

Advantages:

- Empirical evidence from Tamil Nadu and Telangana shows tangible learning and health improvements.
- Integrates education, health, and social welfare outcomes under a unified framework.
- Strengthens **India's Human Capital Index**, aligning with **SDG 2 (Zero Hunger)** and **SDG 4 (Quality Education)**.

Challenges:

- **Fiscal Constraints:** Additional ₹6,000 crore burden may strain central finances.
- **Implementation Gaps:** Risk of food quality lapses, logistical delays, and monitoring inefficiencies.
- **Inter-Ministerial Coordination:** Requires consensus between **Education, Finance, and Women & Child Development Ministries**.

8. UPSC Relevance

GS Paper 2: Government policies and interventions in social sectors; Issues relating to health, education, and human resources.

GS Paper 3: Inclusive growth, human capital, and sustainable development.

Prelims Focus: PM-POSHAN, NEP 2020, NFSA 2013, Poshan Abhiyaan, cost-sharing ratios, nutritional norms.

Keywords: PM-POSHAN, Midday Meal, NEP 2020, School Nutrition, Breakfast Inclusion, Poshan Abhiyaan, Human Capital, NFSA.

9. Conclusion

The proposal to include breakfast under **PM-POSHAN** reflects a **progressive shift toward holistic child nutrition and learning**. As evidence from Tamil Nadu and Telangana demonstrates, morning nutrition can be transformative for cognitive and attendance outcomes. While fiscal prudence is necessary, the long-term gains in human productivity, health, and education justify the expansion. The Centre's decision will thus test India's resolve to transform **policy intent into nutritional justice**, aligning with the **NEP 2020 vision** of nurturing "*well-nourished, well-learned, and well-rounded citizens*."



6. National FPO Samagam 2025: Empowering Farmer Producer Organizations through Innovation, Inclusion, and Market Linkages

Strengthening Collective Farming for an Inclusive and Resilient Agri-Economy

Background & Context

The **National FPO Samagam 2025**, organized by the **Ministry of Agriculture and Farmers' Welfare**, marks a pivotal moment in India's agricultural reform journey. Celebrated on **30th–31st October 2025** at the **NCDC and NCUI Complex, New Delhi**, this event commemorates the achievements under the **Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs) Scheme**, launched in 2020. With participation from over **500 farmers across 24 States and 140 districts**, the Samagam aims to showcase how farmer collectivization, technology integration, and market linkages are transforming rural economies.

The event aligns with the government's vision of **"One India – One Agriculture"**, emphasizing the need to empower farmers as entrepreneurs and stakeholders in a modern, market-driven agricultural system.

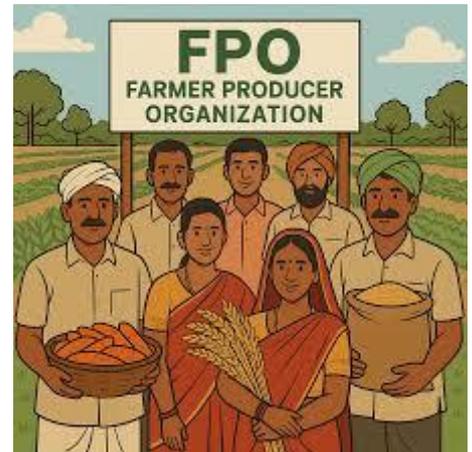
Concept/Definition

A **Farmer Producer Organization (FPO)** is a collective of farmers, typically registered as a company under the **Companies Act, 2013**, or a cooperative under the **Cooperative Societies Act**, formed to enhance the collective bargaining power, reduce transaction costs, and ensure better income realization through economies of scale.

The **Formation and Promotion of 10,000 FPOs Scheme (2020–2027)** seeks to organize small and marginal farmers into viable business entities, promoting **value addition, market access, and financial inclusion** in the agricultural value chain.

Key Features or Highlights of the National FPO Samagam 2025

- **Massive Farmer Participation:** Representation from **24 States and 140 districts**, showcasing India's agricultural diversity.
- **Product Exhibitions:** **267 FPOs** displaying agri-products — including grains, pulses, millets, spices, fruits, vegetables, honey, dairy, and organic items — emphasizing **value addition and branding**.
- **Technical Sessions on Key Themes:**
 - *Oilseed Production & Value Addition*
 - *Water Use Efficiency & Sustainable Irrigation*
 - *Natural Farming & Market Opportunities*
 - *Agriculture Infrastructure Fund (AIF): Access to Credit*
 - *Digital Commerce & Market Access (with Flipkart)*
 - *Honey Production & Marketing (in collaboration with NBB)*
 - *Fertilizer & Pesticide Management (by HIL)*
 - *Agmark Certification & Quality Standards (by DMI)*
 - *Seed Production & Marketing (by NSC)*
- **Buyer–Seller Meet:** Direct linkages between FPOs, agribusinesses, and e-commerce platforms.





- **Felicitation Ceremony:** Recognition of high-performing FPOs, CBBOs, and Implementing Agencies for excellence in innovation, digitalization, and market development.

Economic Context & Market Response

Agriculture contributes around **18% to India's GDP**, with over **85% of farmers being small or marginal**. Traditional fragmented production systems have limited profitability. FPOs bridge this gap by **aggregating produce, reducing costs, and enhancing market access**.

According to the **NABARD Annual Report (2024)**, FPOs associated with structured markets have witnessed **20–25% higher price realization** compared to individual farmers. The **AIF (Agriculture Infrastructure Fund)** has sanctioned over **₹60,000 crore** for agri-infrastructure, benefiting many FPOs. E-commerce and agri-tech collaborations, such as those with Flipkart and Amazon Kisan, are reshaping rural supply chains and promoting **farm-to-market transparency**.

Legal and Institutional Framework

- **Companies Act, 2013** – Enables registration of FPOs as Producer Companies.
- **National Cooperative Development Corporation (NCDC) and Small Farmers' Agribusiness Consortium (SFAC)** – Nodal implementing agencies.
- **NABARD & National Bank for Financing Infrastructure and Development (NaBFID)** – Provide financial support and credit facilitation.
- **Agriculture Infrastructure Fund (AIF)** – Financial backbone for FPOs' post-harvest and storage infrastructure.
- **Agmark Act & Food Safety Standards (FSSAI)** – Ensure product quality and certification.

Broader Economic & Policy Implications

- **Rural Transformation:** Strengthens rural entrepreneurship and employment.
- **Market Orientation:** Integrates farmers into national and global value chains.
- **Sustainable Agriculture:** Promotes natural farming, efficient irrigation, and reduced input dependency.
- **Inclusive Development:** Enhances the socio-economic status of smallholders, especially women farmers.
- **Digital Enablement:** Boosts transparency and efficiency through digital platforms and e-NAM integration.

Critical Analysis

Benefits:

- Enhanced bargaining power and market linkages.
- Improved access to finance, credit, and infrastructure.
- Promotion of value addition and branding for rural products.
- Boost to agricultural exports and diversification.

Challenges:

- Limited managerial capacity and governance issues in new FPOs.



- Difficulty in accessing working capital and navigating complex regulatory compliance.
- Market risks due to price volatility and logistical constraints.
- Need for sustained capacity-building and handholding support beyond the initial setup phase.

UPSC Relevance

- **GS Paper 3:** Agriculture – Marketing, Inclusive Growth, E-Technology in aid of farmers, and Government Schemes.
- **Prelims Focus:** FPO definition, AIF, SFAC, NCDC, NABARD, Agmark, e-NAM.
- **Keywords:** Farmer collectivization, market linkages, value addition, rural entrepreneurship, agricultural infrastructure, inclusive growth.

Conclusion

The **National FPO Samagam 2025** symbolizes India’s transformative agricultural shift — from individual subsistence to collective enterprise. By integrating innovation, inclusivity, and institutional support, the FPO model promises to reshape rural livelihoods and ensure **“Sahakar se Samridhi” (Prosperity through Cooperation)**.

However, realizing its full potential demands **capacity-building, financial deepening, and consistent policy support**. In the long term, robust FPO ecosystems could emerge as the cornerstone of **Atmanirbhar Krishi** — a self-reliant, resilient, and globally competitive Indian agriculture.

7. KOYLA SHAKTI & CLAMP: Digital Transformation in India’s Coal Governance

Building a Transparent, Data-Driven, and Efficient Coal Ecosystem

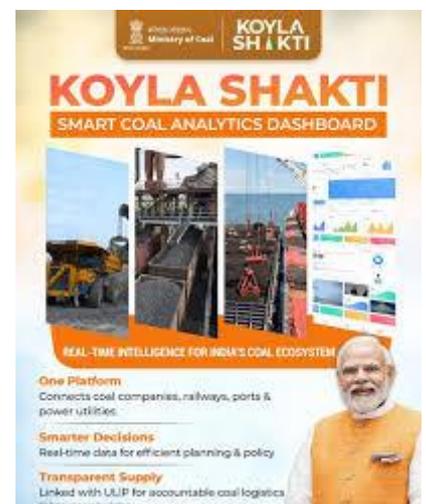
Background & Context

On **29th October 2025**, the **Union Minister of Coal and Mines, Shri G. Kishan Reddy**, launched two transformative digital initiatives — the **KOYLA SHAKTI Dashboard** and the **Coal Land Acquisition, Management, and Payment (CLAMP) Portal** — at an event in New Delhi. These platforms mark a critical milestone in India’s ongoing effort to **digitize the coal value chain**, strengthen transparency, and enhance governance efficiency.

The launch comes at a time when India is targeting **energy security and Aatmanirbhar Bharat** through sustainable coal production, improved logistics, and smart digital monitoring. The coal sector, which fuels nearly **55% of India’s total energy requirement**, has historically faced challenges of fragmented coordination, opacity, and inefficiency. These digital platforms aim to address these systemic gaps through real-time data integration and citizen-centric governance.

Concept/Definition

- **Koyla Shakti Dashboard (Smart Coal Analytics Dashboard – SCAD):** A unified, real-time digital platform integrating data across the coal ecosystem — from **mine to market**. It connects coal-producing companies, ministries, state departments, ports, railways, and end-users for seamless coordination, transparency, and analytics-driven decision-making.
- **CLAMP Portal (Coal Land Acquisition, Management, and Payment):** A digital platform to streamline land acquisition, compensation, and rehabilitation (R&R) processes for coal-bearing areas, ensuring transparency, accountability, and faster execution.





Key Features or Changes

Koyla Shakti Dashboard:

- **Integrated Data Architecture:** Links multiple stakeholders — coal PSUs, ministries (Coal, Power, Railways, Ports, Finance), state departments, and private players — into a single dashboard.
- **Real-Time Monitoring:** Tracks coal production, transportation, dispatch, and consumption across India.
- **Predictive Analytics:** Facilitates demand forecasting, logistics optimization, and supply chain efficiency.
- **Operational Efficiency:** Minimizes manual errors and delays through automated reporting and standardized metrics.
- **Transparency & Accountability:** Real-time KPIs enhance monitoring of coal dispatch, delays, and shortfalls.
- **Incident Response:** Auto-alerts and live data help mitigate bottlenecks in coal movement.

CLAMP Portal:

- **Digitized Workflow:** End-to-end management of land acquisition and compensation for coal projects.
- **Centralized Repository:** Maintains digital land records and stakeholder data.
- **Transparency in Compensation:** Ensures fair, time-bound payments to landowners and project-affected families.
- **Rehabilitation & Resettlement (R&R) Tracking:** Improves monitoring and accountability in compliance processes.
- **Inter-agency Coordination:** Integrates PSUs, state agencies, and district authorities for faster decision-making.

Economic Context & Market Response

India's coal production has risen to **993.5 million tonnes in FY 2024–25** (Ministry of Coal data), with **Coal India Ltd. (CIL)** accounting for over **76% of total output**. However, supply-demand mismatches and logistical inefficiencies often disrupt coal availability to power and industrial sectors.

- The **Koyla Shakti Dashboard** aims to reduce coordination lag and improve visibility in dispatch, which could **save significant logistics costs** and reduce power generation disruptions.
- According to **NITI Aayog's Energy Transition Report (2024)**, digital integration in coal logistics could enhance supply chain efficiency by **15–20%**, saving the sector over **₹8,000 crore annually**.
- Industry experts have lauded the move as pivotal for India's "coal-to-clean" transition strategy, where digital governance can reduce losses and carbon intensity through optimized operations.

Legal and Institutional Framework

- **Mines and Minerals (Development and Regulation) Act, 1957** – Governs exploration and development of mineral resources.
- **Coal Bearing Areas (Acquisition and Development) Act, 1957** – Basis for CLAMP's land acquisition processes.



- **National Coal Index (NCI)** – Tracks coal price movements and enables market-linked transparency.
- **Ministry of Coal & Nominated Authority:** Lead implementing bodies.
- **NITI Aayog and NIC (National Informatics Centre):** Technical collaborators ensuring platform design and interoperability.
- **PSUs involved:** Coal India Ltd., NLC India Ltd., and Singareni Collieries Company Ltd.

Broader Economic & Policy Implications

- **Data-Driven Governance:** Introduces evidence-based decision-making into coal production and logistics.
- **Transparency & Trust:** Minimizes disputes and corruption in land acquisition and dispatch processes.
- **Energy Security:** Enhances supply predictability, supporting stable power generation.
- **Digital India Integration:** Contributes to India's larger **Digital Public Infrastructure (DPI)** ecosystem.
- **Environmental Impact:** Optimized logistics can reduce idle transport, cutting emissions and improving sustainability metrics.
- **Ease of Doing Business:** Simplifies inter-agency approvals and ensures faster project execution timelines.

Critical Analysis

Strengths:

- Pioneers **digital transformation** in a traditionally opaque sector.
- Enables **predictive analytics**, real-time tracking, and centralized decision support.
- Strengthens **citizen-centric governance** through transparent compensation.
- Aligns with **Minimum Government, Maximum Governance** and **PM GatiShakti** visions.

Challenges:

- **Data reliability and standardization** across states and PSUs remain a challenge.
- Need for **capacity building** among officials to interpret and act upon analytics.
- **Cybersecurity risks** and data integrity issues require robust safeguards.
- Success depends on **inter-ministerial coordination** and timely data updates from all stakeholders.

UPSC Relevance

- **GS Paper 3:** Infrastructure, Energy, E-Governance, Inclusive Growth, Industrial Policy, and Mining Sector Reforms.
- **Prelims Focus:** Koyla Shakti Dashboard, CLAMP Portal, MMDR Act, Coal Bearing Areas Act, PM GatiShakti, Digital India.
- **Keywords:** Data-driven governance, coal logistics, e-governance, digital transformation, transparency, energy security.



Conclusion

The **Koyla Shakti Dashboard and CLAMP Portal** represent a **paradigm shift in coal sector governance**, embedding transparency, accountability, and efficiency into India's energy backbone. These platforms not only modernize operational processes but also align with India's vision of **Aatmanirbhar Bharat** and **Digital Governance for Growth**.

However, to realize their transformative potential, the government must ensure **data integrity, inter-agency coordination, and digital capacity enhancement**. In essence, these initiatives embody India's transition toward "**Smart Mining for Smart Governance**", setting a benchmark for digital reforms across the extractive industries.

8. Indi & Puliyanakudi Limes Take Flight: India's GI-Tagged Citrus Finds Global Market in the UK

APEDA's Export Initiative Strengthens India's Agri-Branding and Farmer Prosperity

Background & Context

On **28th October 2025**, the **Agricultural and Processed Food Products Export Development Authority (APEDA)**, under the **Ministry of Commerce and Industry**, facilitated the **first-ever air shipment of India's GI-tagged Indi Lime (from Karnataka) and Puliyanakudi Lime (from Tamil Nadu) to the United Kingdom**. This marks a **landmark moment in India's agricultural exports**, expanding the international footprint of **Geographical Indication (GI)-tagged horticultural produce**.

A total of **500 kg consignment** — 350 kg Indi Lime and 150 kg Puliyanakudi Lime — was exported, signalling a new era of **farm-to-global trade integration**. The initiative aligns with the government's vision of "**Vocal for Local and Local to Global**", empowering farmers through branding, market access, and premium pricing.

Concept/Definition

- **Geographical Indication (GI):** As per the **Geographical Indications of Goods (Registration and Protection) Act, 1999**, a GI is an intellectual property right that identifies a product as originating from a specific region, where its quality, reputation, or characteristics are essentially linked to that geography.
- **APEDA (Agricultural and Processed Food Products Export Development Authority):** Established under the **APEDA Act, 1985**, it is a statutory body under the **Ministry of Commerce and Industry**, responsible for promoting the export of agricultural and processed food products by developing infrastructure, branding, and market linkages.
- **GI-tagged Horticultural Produce:** These are fruits, vegetables, and spices recognized for their regional uniqueness — such as **Alphonso Mango, Naga Mircha, Coorg Orange**, and now, **Indi and Puliyanakudi Limes**.



Key Features or Developments

- **Historic First Shipment:** 500 kg of Indi and Puliyanakudi Limes exported by air to the **UK**, signifying entry of India's unique citrus varieties into premium European markets.
- **Institutional Coordination:** Supported by the **Departments of Horticulture** of Karnataka and Tamil Nadu, **Karnataka Lime Board**, and **farmer-producer organizations (FPOs)**.



- **GI-based Branding:** Enhances global awareness of India's regional agri-heritage and differentiates products in competitive markets.
- **Economic Empowerment:** Creates direct income benefits for small and marginal farmers through market diversification and premium realization.
- **Sustainability and Traceability:** Promotes clean, traceable, and quality-certified exports aligning with global consumer preferences.

Economic Context & Market Response

India is the **world's second-largest producer of fruits and vegetables**, with horticulture contributing over **33% to total agricultural GDP**. Despite this, India's **share in global fresh fruit exports** remains under **2%**, largely due to weak branding and fragmented logistics.

- In **FY 2024–25**, India's agricultural exports crossed **USD 53 billion** (Source: Ministry of Commerce), with APEDA accounting for **over 50%** through value-added and horticultural products.
- The UK, a **high-value agri-import market worth USD 28 billion**, presents immense potential for premium niche exports like GI-tagged limes.
- Experts note that GI branding typically leads to **price premiums of 20–30%** in global markets, especially when supported by traceability systems and collective branding.
- This initiative follows successful exports of **GI-tagged Nendran Banana (Kerala)** and **Banganapalle Mango (Andhra Pradesh)** earlier in 2025, reflecting APEDA's consistent focus on **GI-led agri-diplomacy**.

Legal and Institutional Framework

- **Geographical Indications of Goods (Registration and Protection) Act, 1999** – Legal basis for GI registration and protection.
- **APEDA Act, 1985** – Empowers APEDA to facilitate and promote export of agricultural and processed food products.
- **Foreign Trade Policy (2023–28)** – Encourages branding and export of GI and organic products under **District as Export Hub (DEH)** and **One District One Product (ODOP)** initiatives.
- **Bilateral Trade Agreements:** India–UK trade negotiations under the proposed **Free Trade Agreement (FTA)** include enhanced cooperation on agri-trade and mutual GI recognition.

Broader Economic & Policy Implications

- **Farmer Prosperity:** GI-linked exports generate higher income and incentivize quality-based cultivation.
- **Rural Industrialization:** Promotes agro-processing and packaging industries in GI-rich regions.
- **Soft Power & Agri-Diplomacy:** Strengthens India's global brand identity rooted in diversity and authenticity.
- **Trade Diversification:** Reduces overdependence on bulk commodity exports by shifting towards **value-added, niche produce**.
- **Food Traceability & Standards:** Encourages compliance with **Global Good Agricultural Practices (GAP)** and **Codex Alimentarius standards**, enhancing credibility of Indian exports.



Critical Analysis

Benefits:

- Enhances **global visibility** for Indian horticultural products.
- Strengthens **export competitiveness** through branding and certification.
- Encourages **sustainable farming** and region-specific cultivation.
- Aligns with India's **Atmanirbhar Bharat** and **Local to Global** initiatives.

Challenges:

- **Supply chain constraints**, especially in post-harvest handling and cold-chain logistics.
- Limited **GI awareness** and weak marketing infrastructure at grassroots levels.
- Need for **consistent quality control** and **traceability systems** to meet international standards.
- Vulnerability to **phytosanitary and tariff barriers** in advanced markets like the UK and EU.

UPSC Relevance

- **GS Paper 3:** Issues related to Agriculture, E-Technology in aid of farmers, Marketing and Exports, Inclusive Growth.
- **Prelims Focus:** APEDA, GI Tag, Indi Lime, Puliyanakudi Lime, Geographical Indications Act 1999, District as Export Hub Scheme.
- **Keywords:** GI-tagged exports, APEDA, Local to Global, horticultural branding, agri-value chain, farmer income diversification.

Conclusion

The export of **Indi and Puliyanakudi Limes** to the UK represents a **symbolic yet substantial leap in India's agri-export narrative**, showcasing how regional identity and scientific branding can together drive **inclusive, sustainable growth**. This milestone underscores the potential of **GI-based rural entrepreneurship** in transforming Indian agriculture into a globally recognized, high-value enterprise. Moving forward, strengthening logistics, quality certification, and branding capacity at the grassroots will be crucial for sustaining India's position as a trusted exporter of **heritage-linked, quality-assured agricultural produce** — a step closer to realizing the vision of a **Globally Competitive and Prosperous Bharat**.

9. Samridhh Gram Phygital Services Pilot Project: Bridging India's Rural Digital Divide

BharatNet-powered initiative to integrate physical and digital services for inclusive rural transformation

Background & Context

In a landmark initiative towards rural digital empowerment, the **Department of Telecommunications (DoT)**, under the **Ministry of Communications**, has launched the **Samridhh Gram Phygital Services Pilot Project** to bridge the digital divide and deliver essential citizen services in rural India. On **29th October 2025**, the **Telecom Centres of Excellence (TCoE), India**, signed agreements with key implementation partners—**Digital Empowerment Foundation (DEF)**, **I-Novate Infotech Pvt. Ltd.**, and **Corpus Enterprises Pvt. Ltd.**—to operationalize this pilot in three villages: **Ari and Umri**





(Madhya Pradesh), Narakoduru (Andhra Pradesh), and Chaurawala (Uttar Pradesh).

The initiative aligns with the government's **Digital India 2.0 vision** and **BharatNet mission**, aiming to transform rural areas into digitally inclusive ecosystems. By integrating physical infrastructure with digital platforms ("phygital" approach), it seeks to ensure equitable access to education, healthcare, agriculture, finance, and e-governance services.

Concept/Definition

- **Phygital Model:** The term *Phygital* combines *physical* and *digital*, representing a hybrid delivery model that integrates physical infrastructure (on-ground centres) with digital connectivity to ensure last-mile service delivery.
- **Samridhh Gram Project:** A DoT-led initiative leveraging **BharatNet's high-speed optical fibre connectivity** to establish **Samridhhi Kendras**—village-level digital hubs providing multi-sectoral citizen-centric services, thus fostering rural economic and social transformation.
- **BharatNet:** The world's largest rural broadband project, implemented by **Bharat Broadband Network Limited (BBNL)**, aims to connect all 2.5 lakh gram panchayats with fibre-based internet, enabling digital empowerment at the grassroots.

Key Features or Components of the Pilot

Each selected village will host a **Samridhhi Kendra**, serving as a one-stop service delivery hub integrating the following verticals:

- **Education & Skilling:** Smart classrooms, AR/VR-enabled learning, digital literacy, and skills training aligned with **Skill India** and **PM e-Vidya** initiatives.
- **Agriculture:** Internet of Things (IoT)-based soil analysis, drone-based crop monitoring, precision irrigation, and real-time weather data support.
- **Healthcare:** Health ATMs, telemedicine services, and digital health records integrated with **Ayushman Bharat Digital Mission (ABDM)**.
- **e-Governance:** Assisted access to government schemes, certificates, grievance redressal, and service delivery through **DigiLocker** and **CSC platforms**.
- **E-Commerce & Entrepreneurship:** Integration with **Open Network for Digital Commerce (ONDC)** and rural e-markets to support local enterprises and artisans.
- **Financial Inclusion:** Digital banking, Aadhaar-enabled payments, and microcredit linkages through **Jan Dhan–Aadhaar–Mobile (JAM) trinity**.
- **Connectivity Backbone:** Strengthened **BharatNet FTTH (Fiber to the Home)** infrastructure, **Village Area Network (VAN)**, and public Wi-Fi hotspots for universal digital access.

Economic Context & Market Response

India's **rural population (~65% of total)** remains underrepresented in the digital economy despite extensive telecom penetration. According to **TRAI (2024)**, rural broadband penetration stands at **36%**, compared to 79% in urban areas. The **BharatNet project**, with an outlay exceeding **₹61,000 crore**, has connected over **2.1 lakh gram panchayats**, forming the backbone for this pilot.

Experts view the Samridhhi Gram initiative as a **catalyst for digital inclusion**, enabling rural citizens to access education, telehealth, and financial services, thereby fostering **digital entrepreneurship and employment**. The pilot aligns with **India's G20 Digital Public Infrastructure (DPI)** commitments to ensure equitable and sustainable connectivity.



Legal and Institutional Framework

- **Department of Telecommunications (DoT):** Nodal ministry for telecom and broadband infrastructure.
- **Telecom Centres of Excellence (TCoE):** Public–private collaboration mechanism for telecom innovation and capacity-building.
- **BharatNet Scheme:** Implemented under the **Universal Service Obligation Fund (USOF)**, governed by the **Indian Telegraph (Amendment) Rules, 2021**.
- **Digital Personal Data Protection Act, 2023:** Ensures data privacy and secure handling of citizen information in digital service delivery.
- **Collaborating Schemes:** Digital India, PMGDISHA (Digital Literacy), National Digital Health Mission, PM-WANI (Public Wi-Fi).

Broader Economic & Policy Implications

- **Inclusive Development:** Reduces the rural-urban digital gap, ensuring access to basic services.
- **Rural Productivity:** Enhances agricultural efficiency through data-driven and technology-assisted practices.
- **Digital Governance:** Strengthens last-mile delivery of e-governance and welfare schemes.
- **Human Capital Development:** Encourages digital literacy and employability among rural youth.
- **Economic Multiplier Effect:** Expands local entrepreneurship through e-commerce integration and fintech adoption.
- **Sustainability:** Reduces the carbon footprint by minimizing travel for essential services.

Critical Analysis

Benefits:

- Democratizes access to education, health, and financial services.
- Integrates multiple Digital India initiatives on one platform.
- Strengthens digital resilience in underserved areas.
- Promotes decentralized and inclusive governance.

Challenges:

- **Infrastructure Gaps:** Inconsistent power supply and last-mile fibre connectivity in remote areas.
- **Digital Literacy Deficit:** Limited awareness and adoption among rural populations.
- **Sustainability Concerns:** Risk of project discontinuity after pilot phase without institutionalized funding.
- **Cybersecurity Risks:** Need for robust data protection mechanisms at local centres.

UPSC Relevance

- **GS Paper 2:** E-Governance, Government Policies and Interventions, Role of Civil Services in Digital Service Delivery.



- **GS Paper 3:** Infrastructure, Inclusive Growth, and E-Technology in Aid of Farmers and Citizens.
- **Prelims Focus:** BharatNet, TCoE, USOF, ONDC, Digital India Mission, PM-WANI, Digital Personal Data Protection Act.
- **Keywords:** Phygital governance, digital inclusion, BharatNet, Samridhi Kendra, rural connectivity, DPI.

Conclusion

The **Samridhi Gram Phygital Services Pilot Project** symbolizes India's transition from digital access to **digital empowerment**, leveraging technology to redefine rural service delivery. By combining **physical infrastructure with digital innovation**, it provides a scalable blueprint for inclusive growth and governance.

If successfully replicated nationwide, the initiative could become the **cornerstone of India's digital rural economy**, ensuring that every citizen, irrespective of geography, benefits from the promise of a **connected, inclusive, and empowered Bharat**.

10. 8th Central Pay Commission: Balancing Fiscal Prudence and Public Sector Motivation

India's once-in-a-decade salary revision faces the twin test of equity and economic discipline

Background & Context

On **28th October 2025**, the **Union Cabinet** finalized the **Terms of Reference (ToR)** for the **8th Central Pay Commission (8th CPC)**, mandating it to submit its report within **18 months**, with recommendations to take effect from **1st January 2026**.

The commission, set up every decade, reviews pay scales, allowances, pensions, and service conditions of **Central Government employees and pensioners**. Its decisions extend well beyond the **5 million Central Government employees and 7 million pensioners**, influencing **State Governments, defence personnel, and public sector employees**.

The ToR emphasizes that recommendations must be framed keeping in mind **"economic conditions and the need for fiscal prudence"**, highlighting the delicate balance between **employee welfare and macro-fiscal stability**.

Concept/Definition

- **Pay Commission:** A government-appointed expert body that reviews and recommends changes to the structure of salaries, pensions, and allowances of government employees and defence personnel.
- **Fiscal Prudence:** Responsible management of public finances through sustainable expenditure and revenue balance to ensure macroeconomic stability.

Since **1946**, seven Pay Commissions have been constituted, each significantly altering public wage structures and influencing India's fiscal dynamics. The **7th CPC (2016)**, for instance, recommended a **23.5% overall increase** in pay and pensions, imposing an annual financial burden of **₹1.02 lakh crore** on the exchequer.



Key Features or Mandate of the 8th Pay Commission

- **Scope:** To review salary structures, pensions, and other service conditions of Central Government employees and defence personnel.



- **Implementation Date:** Recommendations to be effective from **1 January 2026**.
- **ToR Highlights:**
 - Consider **economic conditions** and **fiscal sustainability**.
 - Ensure **adequate resources** remain available for **developmental and welfare expenditure**.
 - Assess **inter-sectoral equity** within public services to correct pay distortions.
 - Explore **performance-linked pay mechanisms** to enhance accountability.
 - Recommend measures to improve **pension sustainability** in light of rising life expectancy and fiscal pressures.

Economic Context & Market Response

India's wage bill, comprising salaries and pensions, accounts for nearly **12–13% of total government expenditure**. After the 7th CPC, the central government's wage and pension burden rose to about **2.3% of GDP**.

- **Fiscal Concerns:** Implementation of 8th CPC recommendations could cost an estimated **₹2–2.5 lakh crore annually**, potentially widening the **fiscal deficit**, currently targeted at **4.9% of GDP (FY2025-26)**.
- **Tax-to-GDP Challenge:** India's **tax-to-GDP ratio (11.7%)** remains lower than peers like Brazil (16%) and South Africa (27%), limiting fiscal headroom for major pay hikes.
- **Macroeconomic Effect:** A pay hike may stimulate **consumption demand** and **urban spending**, particularly in Tier-II and Tier-III cities, boosting sectors like housing, automobiles, and FMCG.
- **Private Sector Parity:** Given stagnating real wages in several private segments, the government's decision may influence broader labour market expectations.

Legal and Institutional Framework

- **Constitutional Basis:** Pay Commissions are established through an **executive resolution** by the Union Cabinet (not a constitutional body).
- **Ministry of Finance:** Nodal Ministry overseeing implementation.
- **Department of Expenditure:** Evaluates the financial feasibility of recommendations.
- **Finance Commission (Article 280):** While distinct, it works in parallel to ensure resource allocation between Centre and States aligns with overall fiscal capacity.
- **Fiscal Responsibility and Budget Management (FRBM) Act, 2003:** Provides the legal framework for fiscal prudence; any major pay revision must conform to FRBM targets.

Broader Economic & Policy Implications

- **Fiscal Sustainability:** A sharp rise in committed expenditure may squeeze fiscal space for **capital and social sector investments**.
- **State Finances:** States typically mirror central pay revisions, potentially straining subnational fiscal positions further.
- **Labour Market Dynamics:** Enhanced public-sector pay may attract talent away from private sectors, particularly in engineering, healthcare, and education.



- **Governance Efficiency:** The Commission's exploration of **outcome-based incentives** may improve accountability in public service delivery.
- **Social Impact:** Increased disposable incomes for millions of households may drive domestic demand and improve savings but could also stoke **inflationary pressures** in the short run.

Critical Analysis

Advantages:

- Boosts morale, motivation, and retention of skilled personnel in government service.
- Enhances consumer spending, thereby stimulating growth in the short term.
- Aligns compensation with evolving cost of living and inflationary trends.
- Provides pensioners a necessary cost-of-living adjustment, ensuring social security.

Challenges:

- Fiscal stress may undermine public investment in infrastructure and welfare.
- Risk of widening public-private wage disparity, especially at entry-level jobs.
- Rising pension liabilities threaten long-term fiscal sustainability.
- Lack of measurable **performance-linked parameters** reduces incentive efficiency.
- Potential inflationary spillovers due to higher liquidity in the economy.

UPSC Relevance

- **GS Paper 3:** Indian Economy – Budgeting, Government Expenditure, and Inclusive Growth.
- **GS Paper 2:** Government Policies, Civil Services Reforms, and Accountability in Governance.
- **Prelims Focus:** Pay Commission, FRBM Act, Tax-to-GDP Ratio, Fiscal Deficit, Finance Commission.
- **Keywords:** Pay Revision, Fiscal Prudence, Wage Bill, Public Expenditure Management, Performance-linked Pay, Pension Reforms.

Conclusion

The **8th Pay Commission** embodies the dual challenge of **ensuring fiscal discipline while maintaining a motivated and efficient bureaucracy**. In an era of rapid technological and administrative transformation, the focus must shift from mere pay enhancement to **performance-linked reforms, pension sustainability, and human capital optimization**.

As India aspires to become a **\$7-trillion economy by 2030**, sound public expenditure management — not pay restraint alone — will be the true measure of prudence. The success of this Pay Commission will thus hinge on whether it can strike the right balance between **economic realism and administrative motivation**, sustaining both fiscal health and governance excellence.