Forum IAS

7 PM COMPILATION

August, 2026

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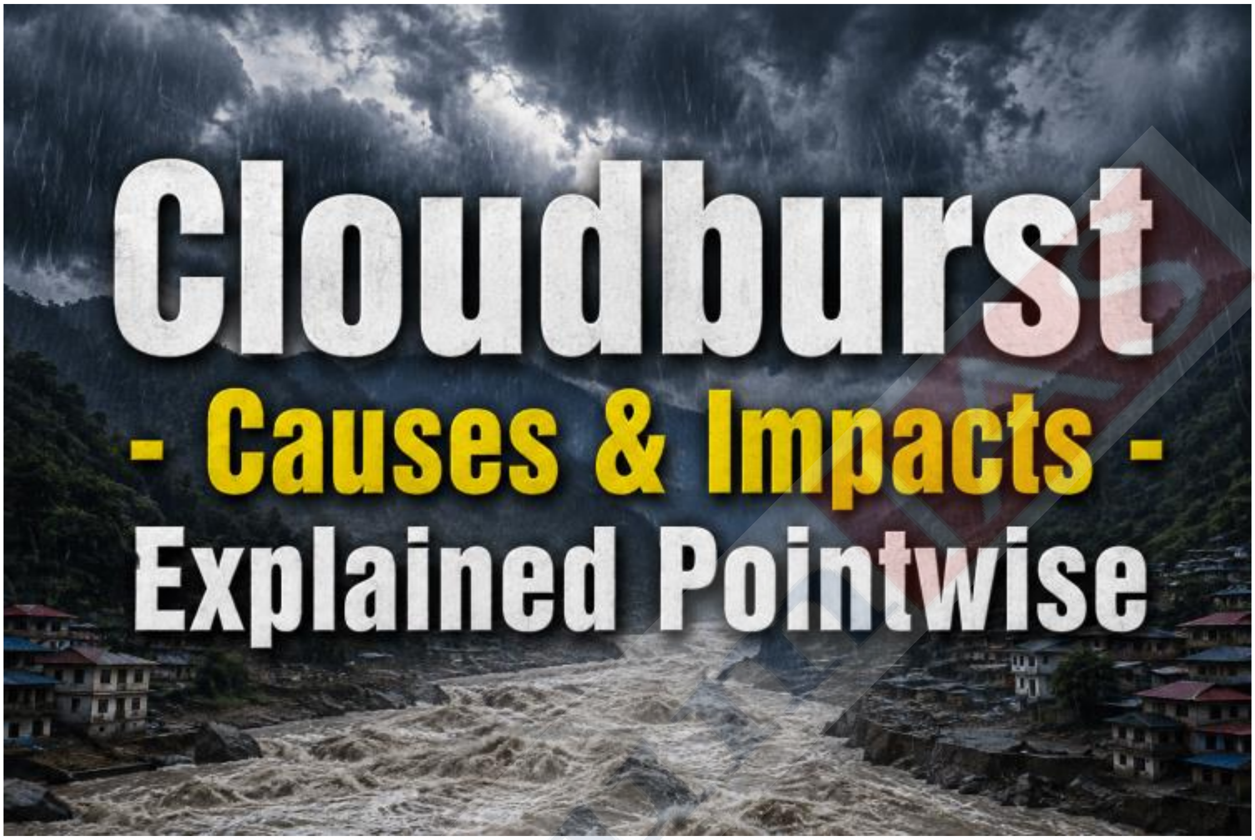
Cloudburst – Causes & Impacts – Explained Pointwise



Recently, the IMD rejected claims of cloudbursts triggering devastating floods in Assam and Nagaland, clarifying that while heavy precipitation occurred, rainfall intensity fell short of the official 100 mm/hour threshold.

A **cloudburst** is an extreme meteorological phenomenon involving a sudden, heavy downpour concentrated over a short duration and a small geographic area. It is defined in India by the Indian Meteorological Department (IMD).

What is a cloudburst?

- A **cloudburst** is an **extremely intense spell of rainfall over a small geographical area within a short period**, typically involving **more than 100 mm of rain in one hour** over an area of about **20–30 square kilometres**.
- Such intense rainfall often overwhelms the drainage capacity of the region, leading to **flash floods, landslides, and widespread destruction.**
- Cloudbursts are very difficult to forecast. Meteorologists can usually say whether a region is at risk of heavy rain but cannot say precisely which patch of land will experience a cloudburst.

How does a cloudburst form?

The phenomenon is driven by intense updrafts and moisture accumulation:

1. **Moisture Trapping:** Warm, moisture-laden air rises rapidly due to convection or topographic lifting (orographic lift) along mountain slopes.
2. **Updraft Hold:** Strong upward air currents hold huge volumes of condensed water drops high in the upper atmosphere, preventing them from falling as normal rain.
3. **Sudden Collapse:** As the cloud continues to accumulate water droplets, the weight eventually overcomes the strength of the upward air currents. The updraft collapses suddenly, dropping millions of tons of water over a tiny footprint within minutes.

How common are cloudbursts in India?

- **Spatial pattern**: Cloudbursts are almost exclusively a phenomenon of high-altitude and rugged terrains in India:

The Himalayan Belt (Primary Zone)	○ Over 90% of cloudbursts occur across **Uttarakhand, Himachal Pradesh, Jammu & Kashmir, and Ladakh**. ○ Steep valley topography (between 1,000 m and 2,500 m elevation) acts as a funnel for moisture-laden monsoon winds.
The Western Ghats (Secondary Zone)	○ Occasional short-duration, high-intensity downpours occur along the windward slopes of **Maharashtra, Karnataka, and Kerala.**

- **Temporal pattern:**
  - Cloudburst mainly occur during the **southwest monsoon season (June-Sept)**.
  - According to the Ministry of Earth Sciences (2021), **climate change** has increased the incidence of cloudbursts by about 5 every decade since 1969, particularly on the west coast and in the Himalayan region.
  - Cloudburst frequency in some Himalayan basins has increased measurably over the past two decades, as documented in IMD reports and peer-reviewed analyses, with the risk zone expanding to higher altitudes and new geographies.

What are the factors responsible for a cloudburst?

Cloudbursts result from a combination of atmospheric, geographic, and thermodynamic factors that together allow a huge volume of moisture to build up and then release suddenly.

1. **Orographic lift**: When moisture-laden winds are forced upward rapidly by steep mountain slopes, the air rises quickly and cools. As the air rises, it cools and condenses rapidly, forming dense clouds that can produce intense rainfall. This is why cloudbursts are so heavily concentrated in the Himalayas and Western Ghats because the terrain itself acts as a trigger.
2. **Abundant moisture supply**: Warm, moisture-rich winds from the **Arabian Sea** and the **Bay of Bengal** supply large amounts of water vapour to the atmosphere. Without a steady moisture feed, the cloud can't build the volume needed for such intense rainfall.

3. **Strong updrafts holding water aloft**: As the cloud develops into a towering cumulonimbus, powerful vertical updrafts suspend water droplets and ice crystals in the cloud instead of letting them fall immediately. This lets enormous quantities of water accumulate before release.
4. **Sudden updraft collapse**: Eventually the updraft can no longer support the accumulated weight of water. When it collapses, all that moisture falls at once rather than gradually.
5. **Local topography and valley funneling**: Narrow valleys and confined drainage basins (common in the Himalayan region) don't cause the cloudburst itself but dramatically worsen its impact. .
6. **Atmospheric Instability**: The coexistence of warm, moist air near the surface and cooler air at higher altitudes makes the atmosphere unstable. This instability promotes vigorous upward movement of air and rapid cloud development.
7. **Low-pressure pockets over high terrain**: A localized low-pressure zone forming over a mountain peak can pull clouds forcefully toward it, concentrating moisture in a very small area before releasing it.
8. **Climate change**: Global warming is causing rising atmospheric moisture-holding capacity and faster warming in the Himalayan region compared to the global average – amplifying cloudburst frequency and intensity.

What are the socio-economic and environmental impacts of cloudbursts in India?

Socio-Economic Impact	1. **Loss of Human Lives**: Due to the rapid onset and lack of lead time for early warnings, cloudbursts lead to high mortality rates for e.g. 2025 **Kishtwar flash flood** killed 68 people. 2. **Damage to Infrastructure**: High-velocity flash floods wash away mountain roads, bridges, power distribution grids, and communication networks, isolating remote districts for weeks. Run-of-the-river hydroelectric power plants suffer heavy damage when intake tunnels and turbines are choked with massive volumes of silt, sand, and heavy boulders for e.g. 2023 Sikkim GLOF destroyed the Chungthang Dam. 3. **Loss of Livelihoods**: Cloudbursts during peak summer/monsoon months paralyze regional tourism and pilgrimage routes (e.g. the Char Dham Yatra in Uttarakhand or the Amarnath Yatra in Jammu & Kashmir), inflicting severe losses on local hospitality, transport, and commercial sectors. 4. **Displacement of People**: Settlements located along riverbanks, valley floors, or steep fans are frequently swept away or buried under mud, creating large numbers of internally displaced persons. 5. **Economic Losses**: Governments incur substantial expenditure on rescue, relief, rehabilitation, and reconstruction, while local economies experience prolonged disruptions. 6. **Disruption of Essential Services**: Water supply, electricity, healthcare, education, and transportation services are interrupted, affecting normal life.

Environmental Impact	1. **Flash Floods**: Sudden, high-intensity rainfall causes rivers and streams to overflow, resulting in widespread flooding. 2. **Landslides**: Sudden, intense rainfall saturates soil rapidly, triggering landslides that permanently alter hillslopes and increase vulnerability to future events. 3. **Soil Erosion**: Heavy runoff removes fertile topsoil, reducing agricultural productivity and increasing land degradation. 4. **River Siltation**: Large quantities of sediments are deposited in river channels and reservoirs, reducing their carrying and storage capacities. 5. **River Course Changes**: Rivers can swell dramatically within minutes, eroding banks, altering river paths, and depositing debris that changes local hydrology long-term for e.g. as seen when Sikkim's GLOF raised the Teesta riverbed. 6. **Loss of Biodiversity**: Forests, wildlife habitats, and aquatic ecosystems may be damaged or destroyed. Debris flows uproot dense forest patches along mountain gullies, destroying wildlife habitats and fragile flora. 7. **Water Pollution**: Floodwaters often carry sediments, sewage, chemicals, and debris, contaminating rivers and drinking water sources.

What measures has the government taken to improve preparedness and response to cloudburst-induced disasters in India?

1. **Mission Mausam & Radar Expansion:** Early warning systems are being expanded under Mission Mausam. The India Meteorological Department (IMD) is deploying X-band and S-band **Doppler Weather Radars (DWRs)** across high-altitude Himalayan sectors (including locations like Mukteshwar, Surkanda Devi, Kullu, Mandi, Jammu, and Leh) to detect convective cloud formation in valley blind spots.
2. **High-Density Monitoring Networks:** Automated Weather Stations (AWS) and Automatic Rain Gauges (ARGs) are being installed across micro-watersheds to provide real-time rainfall intensity alerts.
3. **CAP (Common Alerting Protocol):** The National Disaster Management Authority (NDMA) uses cell-broadcast technologies (SMS and app alerts via **Sachet**) to send geo-targeted early warnings directly to mobile phones in high-risk zones. The Sachet app, developed by NDMA, delivers disaster early warnings and is available in 12 Indian languages, including Hindi, English, Bengali, Gujarati, Kannada, and Tamil.
4. **NDMA Management Guidelines:** The NDMA has published specialized guidelines for flash flood, landslide, and cloudburst hazard management. These emphasize micro-watershed mapping, slope stabilization, and continuous hazard monitoring in vulnerable valleys.
5. **Hazard & Vulnerability Zoning:** The National Remote Sensing Centre (NRSC) and State Disaster Management Authorities (SDMAs) map flash-flood and landslide hazard zones.
6. **NDRF & SDRF Pre-positioning:** Prior to the monsoon, National Disaster Response Force (NDRF) and State Disaster Response Force (SDRF) teams are forward-deployed at strategic, high-risk hubs across Himalayan states for immediate search-and-rescue operations.
7. **Aapda Mitra Scheme:** The NDMA trains thousands of community volunteers ("Aapda Mitras") in hill districts in basic search, rescue, first aid, and evacuation procedures.

What are the short-term and long-term strategies required to enhance India's resilience against cloudburst-induced disasters?

Short-Term Strategies:

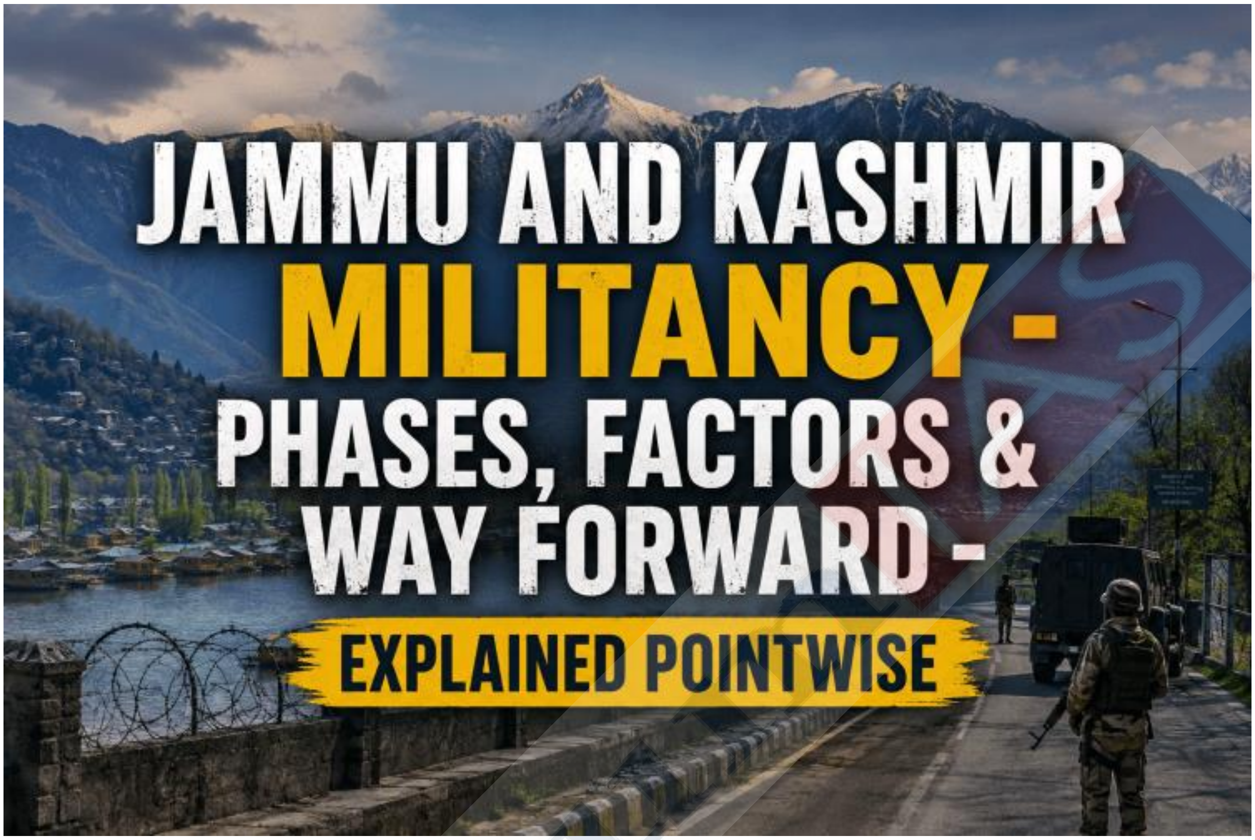
1. **Strengthen Early Warning Systems**: Expand Doppler Weather Radar (DWR) coverage in radar-gap mountain zones. Integrate mobile cell-broadcast technology (NDMA's *Sachet*) with local automated siren networks along major river corridors to bypass internet delays during power outages.
2. **Debris & Drainage Clearing:** Desilt and unblock natural mountain streams, culverts, and highway drainage lines before monsoon onset to prevent water bottlenecking.
3. **Pre-position emergency response teams**: Station NDRF/SDRF units, medical teams, and rescue equipment in known high-risk pockets (Uttarakhand, Himachal, J&K/Ladakh) ahead of and during peak monsoon months, rather than mobilizing after disaster strikes.
4. **Hazard Audits for Pilgrimage & Tourist Hubs:** Enforce strict carrying-capacity caps and dynamic closures on high-risk pilgrimage routes (e.g. Char Dham, Amarnath Yatra) during extreme rainfall alerts.

Long-Term Strategies:

1. **Micro-Watershed Hazard Mapping:** Mandate GIS-based, high-resolution hazard mapping (integrating geological stability, slope angle, and historic debris flows) to designate non-buildable river buffer zones.
2. **Carrying-Capacity Audits:** Enforce legally binding limits on urban construction, hotel expansion, and multi-story building heights in fragile hill stations (e.g. Shimla, Joshimath, Dharamshala).
3. **Climate-resilient infrastructure standards**: Mandate design codes for hill roads, bridges, and embankments that account for debris flow and high sediment loads, and retrofit existing critical infrastructure rather than only applying standards to new construction.
4. **Catchment Area Restoration:** Scale up bio-fencing, gully plugs, check dams, and targeted afforestation in upper catchments to absorb kinetic rainfall energy, slow surface runoff, and reduce sediment loads down-valley.
5. **Protection of Natural Floodplains:** Ban all permanent infrastructure on active river channels and natural floodplains, restoring degraded river corridors to act as natural shock absorbers.

UPSC GS-3: Disaster Management
Read More: The Hindu

Jammu and Kashmir Militancy – Phases, Factors & Way Forward – Explained Pointwise



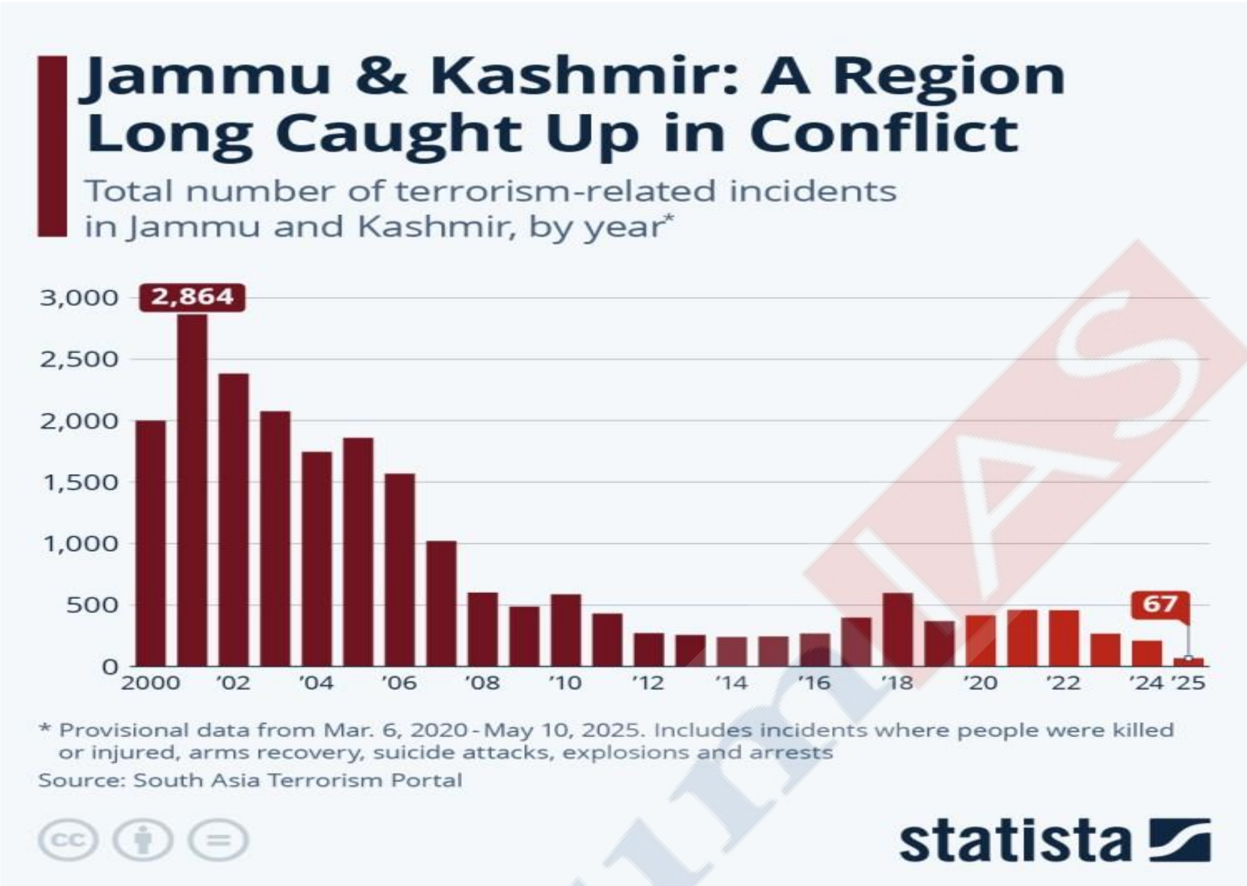
Recent targeted attacks by militants on migrant workers from Chhattisgarh in the Kulgam district of Jammu and Kashmir have triggered severe security concerns. Designed to disrupt regional stability and instill fear, these violent incidents against vulnerable non-local laborers highlight ongoing security challenges. Earlier also, a constable of J-K Special Operations Group was killed by the militants. These killings may point to the changing strategy on the part of terror groups like LeT & TRF (The Resistance Front), and their handlers in Pakistan.

Introduction:

- Militancy in Jammu and Kashmir (J&K) represents one of the longest-running and most complex internal security challenges in modern Indian subcontinent history.
- Militancy in Jammu & Kashmir involves the use of armed violence by terrorist and militant groups to challenge India's sovereignty and destabilise the region.
- Spanning over three decades, the conflict has its roots in a combination of internal political disillusionment, governance deficits, and external geopolitical proxies.
- Despite significant improvements in the security situation, it continues to remain a major internal security challenge for India.

What are the Key Phases of Militancy in Jammu & Kashmir?

Phase 1: **The Rise** **(Late 1980s – Mid-1990s)**	• **Indigenous Start:** Initially, the movement was dominated by groups advocating for independence (Azaadi) or merger with Pakistan. The **Jammu and Kashmir Liberation Front (JKLF)**, which fought for independence, was prominent. • **Escalation:** The period saw massive infiltration, targeted killings of government officials and security personnel, and the migration of the Kashmiri Pandit minority community from the Valley. • **Shift in Ideology:** Over time, the more nationalist JKLF was overshadowed by groups that were religiously conservative and heavily supported by Pakistan, such as the **Hizbul Mujahideen (HM)**.
Phase 2: **The Foreign Jihadi Wave** **(Late 1990s – Early 2000s)**	• **De-Indigenization:** As the native Kashmiri militant leadership was decimated by counter-insurgency operations, foreign fighters (mainly from Pakistan, Afghanistan, and other countries) began dominating the ranks. Groups like **Lashkar-e-Taiba (LeT)** and **Jaish-e-Mohammed (JeM)** became the primary actors. • **Major Incidents:** This phase was marked by high-profile attacks, including the Kargil War (1999) and the attack on the Indian Parliament in 2001, which brought India and Pakistan to the brink of war. • **Decline in Local Support:** The increasing brutality and hardline religious ideology of foreign groups led to a dip in local support for the armed struggle.
Phase 3: **Resurgence and the 'New Age Militancy' (2011-2019)**	• **Shift to Homegrown Militancy:** A new wave of militancy emerged, primarily fueled by young, highly educated, and radicalized local Kashmiris, often through social media and online propaganda. • **Mass Public Support:** The killing of popular militant commander Burhan Wani in 2016 triggered widespread public uprisings and a culture of youth rushing to encounter sites to disrupt operations by security forces. • **Hybrid Terrorism:** The focus shifted from conventional attacks to **"hybrid terrorism,"** where local, often non-listed militants carry out targeted, small-scale attacks before disappearing back into the civilian population.
Phase 4: **Post-Article 370 Abrogation Phase** **(2019-Present)**	• **Targeted Killings:** Militants increasingly carried out **targeted killings** of civilians (including migrant workers and minority community members) and security personnel. • **Technology-Driven Militancy**: Use of **drones**, encrypted communication, online radicalisation, and cross-border smuggling of arms and narcotics became more prominent.



What are the factors behind militancy in J&K?

1. **Political and Constitutional Grievances (The Internal Catalyst):** The primary driver of alienation and subsequent militancy stems from a breakdown of trust between the people of the Kashmir Valley and the Central Government of India:
   a. **The Disputed Accession and Autonomy:** While J&K acceded to India in 1947, the subsequent agreement (Article 370) promised a high degree of internal autonomy. Over the decades, this autonomy was progressively eroded by the central government, leading to a strong feeling that the constitutional relationship was being diluted unilaterally.
   b. **Political Disenfranchisement and Rigged Elections:** The most crucial trigger was the widespread perception of political manipulation, particularly the widely believed rigging of the **1987 State Assembly Elections**. Many young political activists who had faith in the democratic process saw this event as definitive proof that legitimate political avenues were closed to them, pushing them toward armed insurgency.
   c. **Lack of Responsive Governance:** Poor governance, corruption, and a lack of accountability in the local political system compounded the sense of betrayal. The absence of credible local leadership exacerbated the disconnect with the mainstream Indian political system.
   d. **Human Rights Concerns:** The deployment of large numbers of security forces and the implementation of laws like the Armed Forces (Special Powers) Act (AFSPA) led to allegations of human rights abuses, arbitrary detentions, and extrajudicial killings. These incidents became powerful rallying points for militant recruitment.

2. **Socio-Economic Pressures:**
    a. **High Unemployment:** Despite high literacy rates, the region consistently suffered from high rates of educated unemployment, particularly among the youth in the Valley. The lack of viable economic opportunities made extremist narratives appealing.
    b. **Stagnant Tourism and Industry:** Political instability and recurring violence severely damaged the vital tourism industry and prevented large-scale industrial investment, thus limiting employment prospects.
    c. **Development Deficit:** Many areas felt neglected in terms of infrastructural development, contrasting sharply with perceived central spending on security and administrative apparatus.
3. **External and Geopolitical Intervention (The Primary Enabler):**
    a. **Pakistan's Active Role:** Pakistan views J&K as "unfinished business" from the 1947 Partition. Its intelligence agency, the Inter-Services Intelligence (ISI), began actively supporting, arming, funding, and training militant groups in the late 1980s. This policy is often termed **"proxy warfare."**
    b. **The Afghan Factor (1980s):** The Soviet-Afghan War created a pool of battle-hardened, religiously motivated foreign fighters and an abundance of weapons. Following the Soviet withdrawal, these resources and fighters were diverted toward the Kashmir conflict, escalating the violence dramatically.
    c. **Ideological Shift (Global Jihad):** The initial, more nationalist and pro-independence groups (like the JKLF) were systematically marginalized and replaced by Pakistan-backed and religiously focused organizations like Lashkar-e-Taiba (LeT) and Jaish-e-Mohammed (JeM). This shift globalized the ideology, moving the conflict beyond local political grievances to a broader jihadist narrative.
    d. **Propaganda and Radicalization:** Pakistan uses vast propaganda networks (both media and online) to fuel anti-India sentiment and radicalize Kashmiri youth, often exploiting historical and religious narratives to encourage armed recruitment.

What are the challenges in tackling militancy in Jammu & Kashmir?

1. **Porous Borders:** The mountainous, forested terrain along the LoC/IB (740 km LoC, 192 km IB in Jammu) enables infiltration and arms smuggling despite fencing, particularly during snow-melt and low-visibility periods.
2. **Difficult Terrain**: While security grids successfully compressed militant activity in the Kashmir Valley, militant cells have increasingly shifted operations to the densely forested, rugged terrain of the Jammu division (specifically the Pir Panjal mountains and the Chenab Valley). This landscape heavily favors hit-and-run tactics, ambushes, and natural hideouts, making traditional cordon-and-search operations (CASO) less effective.
3. **Hybrid Militancy & Support Networks:** Security forces face severe tracking difficulties due to the rise of "hybrid militants". They are activated anonymously via digital channels to execute isolated, targeted shootings before blending back into civilian life.
4. **Encrypted Communication:** Militants and their handlers rely heavily on modern, end-to-end encrypted messaging applications, virtual private networks (VPNs), and dark web communication, making real-time interception difficult for intelligence agencies.
5. **Human Intelligence Gaps:** Counter-terrorism heavily relies on local human intelligence (HUMINT). Distrust or friction between local communities (such as nomadic or border-dwelling populations who

historically acted as eyes and ears for security agencies) and state apparatuses can temporarily rupture intelligence pipelines.

6. **Coordination Challenges**: Effective counter-militancy requires seamless coordination among the Army, CRPF, J&K Police, and intelligence agencies. The gaps in inter-agency intelligence sharing and operational coordination have periodically been flagged as a vulnerability exploited by militant groups.
7. **Radicalisation & Local Sympathy:** Insurgent networks leverage cross-border social media handles, deepfakes, and information warfare to amplify grievances, propagate radical narratives, and fuel online recruitment.
8. **Pakistan's Proxy Role:** Continued Pakistani state and non-state support (ISI-backed training, funding, arms) for groups like LeT, JeM, and Hizbul Mujahideen means India's domestic counter-insurgency measures alone cannot eliminate the root external supply of militancy.

What measures have been taken to tackle militancy in Jammu & Kashmir?

Security and Counter-Insurgency Operations	• **Border Management and Infiltration Control:** 1. **Smart Infiltration Grids:** To seal cross-border infiltration routes along the LoC and International Border (IB), the military has deployed modern surveillance architecture under frameworks like the Border Infrastructure and Management (BIM) Scheme. This includes thermal imagers, laser fences, night-vision devices, and autonomous aerial drone monitoring. 2. **Village Defence Guards (VDGs):** In vulnerable remote and hilly areas, local volunteer groups have been organized, armed, and trained as VDGs to provide early-warning systems and local community protection against incursions. • **Counter-Terror Operations:** 1. **Operation All-Out:** A systematic, intelligence-driven approach to targeting and neutralizing top leadership and local militant commanders across various terror outfits (Hizbul Mujahideen, LeT, JeM). 2. **Operation Sindoor (2025)**: In response to the Pahalgam terror attack, India conducted nine targeted strikes against terror hideouts and camps within Pakistani territory, including PoK, eliminating around 100 terrorists. • **Intelligence Sharing and Synergy:** The Unified Command Structure, involving the Army, CRPF, BSF, and J&K Police, ensures seamless coordination and real-time intelligence sharing to execute surgical operations. • **Addressing Hybrid Terrorism:** Recent measures focus on identifying and neutralizing "hybrid terrorists" and over-ground workers (OGWs) who provide logistics, shelter, and intelligence to active militants, thereby breaking the support structure. • **Deradicalization Efforts:** Local police have engaged in counseling and surrender policies to bring local youth who joined militancy back into the mainstream. Sustained local outreach programmes by the administration and security agencies have contributed to a dramatic decline in local militant recruitment – from 166 in 2020 to just 7 in 2024, and near-zero in 2025.

	• **Legal and Administrative Tools:** 1. **Armed Forces (Special Powers) Act (AFSPA):** Provides legal immunity to security forces for actions taken during counter-insurgency operations, although its scope has been debated and reduced in some areas. 2. **Unlawful Activities (Prevention) Act (UAPA):** Used to designate individuals and organizations as terrorist entities, freeze assets, and prosecute individuals involved in terror financing and recruitment.
Political and Constitutional Measures	1. **Revocation of Article 370:** This measure revoked the special constitutional status of J&K and converted the state into two Union Territories (J&K and Ladakh). 2. **Delimitation and Electoral Process:** Restoration of J&K Assembly elections (2024), signaling a return to electoral political processes and an attempt to rebuild democratic legitimacy and local political engagement. 3. **Empowering Local Governance:** Efforts have been made to strengthen the Panchayat Raj institutions (village councils) to decentralize power and fund development at the local level, bypassing traditional political elites.
Socio-Economic and Developmental Initiatives	1. **Infrastructure Investment:** Accelerated development of road networks, power projects, and healthcare facilities under various central schemes (e.g. Prime Minister's Development Package – PMDP). 2. **Employment and Skill Development Schemes:** Special economic packages and initiatives such as the **HIMAYAT** (skill development for youth) and **UMEED** (women's self-help empowerment) programs, aim to counter unemployment-driven vulnerability. 3. **Industrial Incentives:** The introduction of comprehensive industrial development policies (including the New Central Sector Scheme) has aimed to inject private-sector capital, create local jobs, and boost economic integration. 4. **Boosting Tourism and Handicrafts:** Focused efforts to restore peace and create a safe environment to revitalize the tourism sector, a major employer in the Valley. Financial assistance and marketing support are provided for the traditional handicraft sector. 5. **Educational Outreach:** Initiatives aimed at keeping educational institutions operational and engaging students through competitive exams and scholarships to encourage future-oriented career paths over radicalization.

What should be the way forward to address militancy in Jammu & Kashmir?

1. **Empowering the Local Police Force:** The Jammu and Kashmir Police must remain the primary fulcrum of counter-terrorism operations. Because local personnel possess deep linguistic, cultural, and topographical familiarity, strengthening their capability ensures operations are precise and deeply integrated with local realities.
2. **Deepening Participatory Governance and Democratic Accountability**: Strengthening elected representative structures (from grassroots local bodies (panchayats) to legislative and municipal

levels) ensures that civic grievances are addressed through democratic channels rather than alienation.

3. **Responsive Administration:** Bridging the gap between the administration and the public through transparent, corruption-free governance helps restore institutional trust and counters the narrative exploited by separatist or militant networks.
4. **Balancing TechInt and HUMINT:** While technical intelligence (TechInt) (such as satellite monitoring, drones, and communication intercepts) is essential, it must be closely coupled with ground-level intelligence to track shifting "hybrid" militant cells effectively.
5. **Targeted Employment Generation:** Scaling up large-scale private sector investments, industrial expansion, and skill-development initiatives (such as Himayat) can directly combat chronic youth unemployment, which remains a key vulnerability for recruitment.
6. **Choking Terror Funding Networks:** Continuing aggressive financial investigations through bodies like the National Investigation Agency (NIA) to systematically target underground hawala channels, front organizations, and Over-Ground Worker (OGW) financing matrices.
7. **Sustain Diplomatic and International Pressure on Pakistan**: Continue leveraging tools like the Indus Waters Treaty suspension as calibrated pressure, while pursuing sustained diplomatic efforts at multilateral forums (FATF, UN) to secure genuine accountability and isolation of Pakistan-based terror infrastructure.

Conclusion: Addressing militancy and achieving long-term, sustainable peace in Jammu and Kashmir (J&K) requires moving beyond a purely reactive, security-centric framework. Security operations are vital for deterrence, but lasting stability depends on a holistic strategy that bridges governance gaps, heals social fractures, and addresses root economic causes.

Read More: [The Indian Express]
UPSC GS-3: Internal Security (Terrorism)

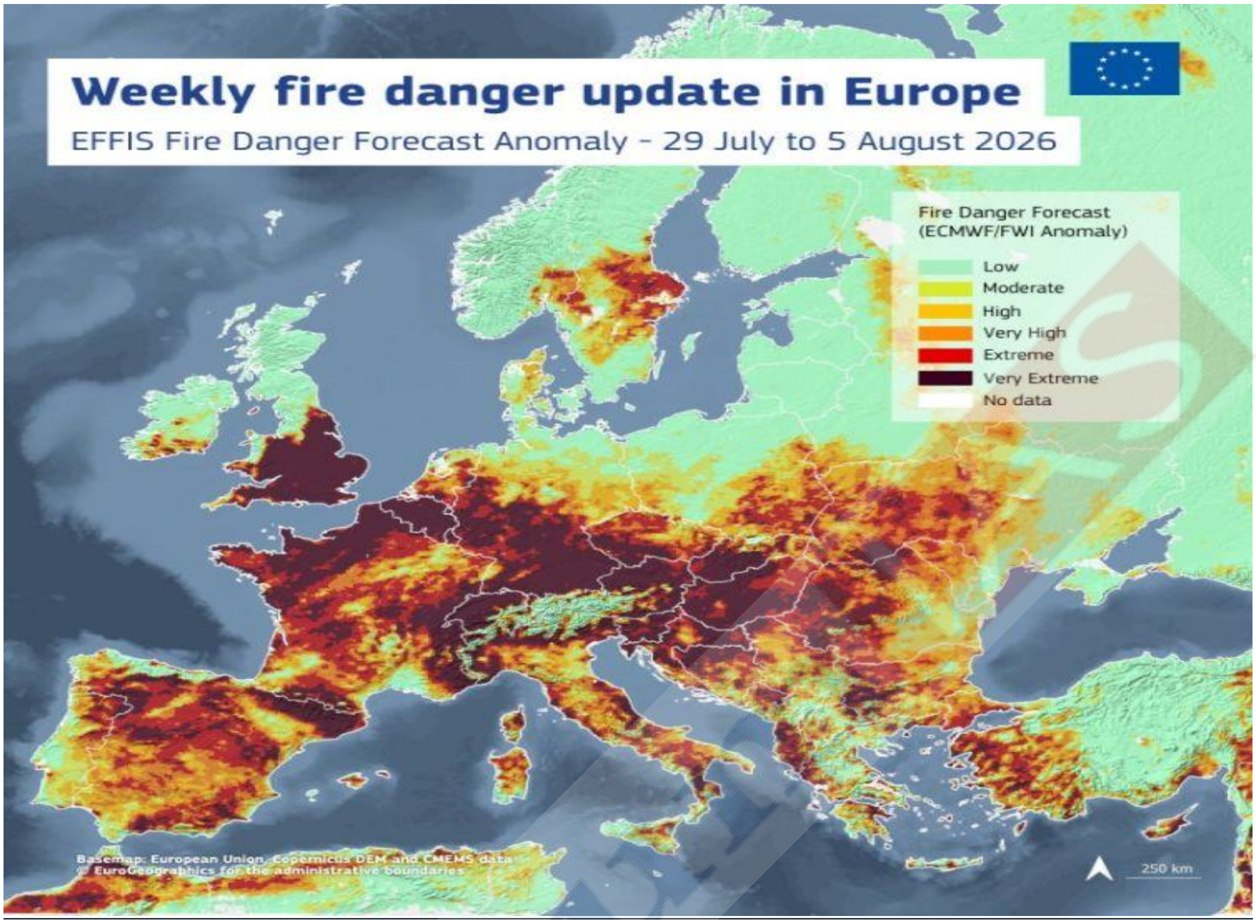
Wildfires in Europe – Causes & Consequences – Explained Pointwise

Europe has witnessed severe wildfires in recent years, driven by prolonged heatwaves, droughts, and strong winds linked to climate change. Countries such as Greece, Portugal, Spain, France, and Italy have experienced widespread forest destruction, and loss of lives and livelihoods. These exceptionally intense and fast-spreading fires, which destroy biodiversity, release vast quantities of carbon dioxide, and further accelerate global warming, have been described by experts as **sixth-generation wildfires**.

What are the major causes of the increasing incidence of wildfires in Europe?

1. **Record Heatwaves & Prolonged Droughts:** Europe is now the fastest-warming continent on Earth, with temperatures increasing twice as fast as the global average since 1980. Rising global temperatures create persistent summer heatwaves and extended dry spells that deplete soil moisture and dry out vegetation, turning forests into highly combustible tinderboxes.
2. **"Climate Whiplash":** Climate whiplash refers to the rapid swings between weather extremes. Europe is seeing more rapid swings between extreme precipitation and severe drought. Unusually wet winters promote rapid undergrowth (grasses, shrubs), which then rapidly dries out during summer heatwaves, creating massive amounts of dry fuel.
3. **Rural Outmigration & Land Abandonment:** Over recent decades, traditional rural activities, such as agricultural farming, small-scale forestry, and livestock grazing, have steadily declined as populations move to urban areas. Unmanaged & abandoned rural land undergoes natural re-vegetation, creating an uninterrupted layer of flammable fuel across landscapes that were historically broken up by managed pastures and crops. This creates continuous "fuel loads" that allow fires to spread rapidly.
4. **Monoculture Forestry:** The widespread expansion of single-species commercial plantations, particularly highly flammable trees like pine and eucalyptus, makes forests significantly more susceptible to fast-spreading fires compared to biodiverse natural forests.
5. **Direct Ignitions:** The vast majority of wildfire ignitions in Europe (often estimated at over 90%) are directly caused by human activity, whether intentional or accidental (discarded cigarette butts, agricultural debris burning, power line sparks, or machinery). As residential developments, infrastructure, and tourism extend deeper into wild spaces, the probability of human-caused ignition increases.
6. **Self-Sustaining PyroCb Clouds:** Severe fires now generate their own atmospheric conditions. Massive intense heat creates pyrocumulonimbus (pyroCb) clouds capable of generating localized high winds and dry lightning, which ignite new fires miles away from the main front.

Which regions in Europe are most affected by wildfires?



Source: EU in emergencies

What are the economic, social and ecological consequences of wildfires in Europe?

Economic	1. **Damage to Assets & Infrastructure:** Wildfires destroy homes, agricultural crops, livestock, energy grids, and transport links. In 2026 alone, just five of the worst-hit Eurozone countries (France, Spain, Portugal, Greece, and Romania) saw nearly 5,00,000 hectares burn, with estimated economic losses exceeding **€3.1 billion** by early August. 2. **Impact on Tourism & Local Economies:** Regions heavily reliant on summer tourism (such as coastal Greece, Southern France, Spain, and Portugal) face immediate cancellations, lost revenue, and long-term brand damage during peak seasonal periods. 3. **Forestry & Resource Destruction:** Burning timber stands destroys timber supply chains for decades. Replanting costs and timber value devaluation severely hit forestry sectors. 4. **Industrial Shutdowns:** In the Gironde region of France, a hub for the defense and aerospace industries, fires forced major companies like **Safran and Dassault Aviation** to halt production.

Social	1. **Loss of Lives & Mass Displacement:** Wildfires have directly claimed lives across the region and forced mass evacuations. Over 6,00,000 internal displacements due to wildfires were recorded in the EU/EEA between 2008 and 2023. 2. **Public Health Risks & Mortality:** Wildfire smoke spreads fine particulate matter (PM2.5) across hundreds of kilometers & poses a severe public health crisis. It is linked to respiratory and heart conditions, and the 2025 fire season alone resulted in **over 2,000 premature deaths** from smoke exposure in the Iberian Peninsula.
Ecological	1. **Loss of Protected Habitats:** A high percentage of burned areas in Europe occur within **Natura 2000** networks (Europe's designated biodiversity strongholds) destroying critical habitats for endangered plant and animal species. 2. **Carbon Emissions & Feedback Loops:** Healthy forests act as carbon sinks; when burned, they release millions of tonnes of stored carbon dioxide (CO_2) into the atmosphere, accelerating the global warming feedback loop. 3. **Soil Erosion & Watershed Degradation:** High-intensity heat strips protective vegetation and creates hydrophobic (water-repellent) soil layers. Post-fire rain leads to severe topsoil erosion, landslides, and flash flooding while contaminating freshwater supplies with ash.

What measures have European countries adopted to reduce the risk of wildfires?

Landscape & Forest Managemen t	1. **Prescribed Burning & Grazing:** Countries like Portugal, Spain, and France systematically use controlled, low-intensity winter burns to clear dry brush under guidance. Pastoral grazing is actively incentivized to maintain natural fuelbreaks in hilly terrain. 2. **Transition to Mixed & Resilient Forests:** Forestry policies are shifting away from dense, flammable monocultures (such as eucalyptus and pine) toward climate-resilient mixed broadleaf species (e.g. oak and chestnut).
Use of Modern Technology	1. **Satellite Monitoring & High-Res Earth Observation:** The EU relies on the **European Forest Fire Information System (EFFIS)** and the Copernicus satellite constellation for real-time thermal monitoring, daily danger rating mapping, and rapid scar mapping. 2. **AI & Automated Optical Cameras:** Countries like Germany, France, and Greece have deployed high-definition thermal and optical camera networks atop towers and high-risk forest zones. AI algorithms analyze smoke signatures within minutes, alerting emergency services long before human reporting. 3. **Drone Patrols:** Drones equipped with infrared sensors patrol high-risk wildland-urban interfaces (WUIs) during heatwaves to detect illicit ignitions, unauthorized agricultural burning, or nascent spot fires.

Cooperation & Emergency Preparedness	1. **rescEU Fleet Expansion:** The EU has established a strategic reserve of firefighting aircraft (rescEU), which is 100% financed by the EU to assist countries when national capacities are overwhelmed. The fleet is being expanded with 12 more planes and 5 helicopters. 2. **Pre-Positioning Firefighters:** During peak summer seasons, European firefighters from less fire-prone regions (e.g. Germany, Scandinavia, the Baltic states) are pre-deployed to high-risk areas in Greece, France, Spain, and Portugal to ensure immediate ground support. 3. **Cross-Border Research Initiatives:** EU-funded flagship research programs (such as **FIRE-RES** and **FirEUrisk**) develop standardized risk-modeling tools and test novel landscape restoration practices across European biomes.

What are the key challenges faced by European countries in managing wildfires?

1. **Over-reliance on Emergency Response:** Historically, European disaster management has prioritized extinguishing active blazes rather than proactive prevention. The vast majority of national budgets go toward firefighting equipment, aircraft fleets, and personnel rather than year-round fuel management.
2. **Uncontrollable "Megafires":** High-intensity fires now generate extreme heat capable of creating localized fire-weather systems (pyrocumulonimbus clouds). These extreme fires travel too fast and burn too hot for conventional ground and aerial firefighting teams to combat safely.
3. **Shifting Fire Geography:** Wildfires are no longer confined to the Mediterranean basin. Temperate and northern regions (such as Germany, Scandinavia, and the Baltic states) are increasingly experiencing severe fire weather. Many of these regions lack specialized equipment, firefighter training, and local expertise to handle forest fires.
4. **Fragmented Private Ownership:** A substantial portion of European forests is broken into millions of small, privately owned parcels. Coordinating landscape-scale clearing, thinning, or firebreak construction across thousands of individual landowners is legally and logistically difficult.
5. **Compounding Droughts:** During severe summer heatwaves, local water reservoirs and rivers often dry up or drop to critically low levels, forcing firefighting teams to haul water over much longer distances.
6. **Operational Bottlenecks:** Simultaneous, widespread fire outbreaks across multiple countries during peak summer heatwaves strain shared European resources (like the **rescEU** aircraft fleet), creating operational bottlenecks when several nations request emergency aid at the same time.

What should be the way forward?

1. **Transitioning Forest Composition:** Accelerate the replacement of flammable, dense monocultures (eucalyptus and pine) with climate-resilient, biodiverse native broadleaf species (oak, chestnut) that naturally retain moisture.
2. **Managed Grazing and Agroforestry:** Using livestock like goats to clear dry brush and grass, which acts as fuel for fires. Projects like **LIFE LANDSCAPE FIRE** have successfully halved the number of fires in project areas in Spain and Portugal using this method.
3. **Prescribed Burning:** Deliberately setting controlled, low-intensity fires to reduce accumulated fuel and restore ecological balance. This is used effectively in **Sweden and Finland** to maintain biodiversity and prevent larger, uncontrollable blazes.

4. **Supporting Rural Retention:** Combat rural abandonment by offering incentives for sustainable forestry enterprises, eco-tourism, and young farmers to keep rural working landscapes populated and actively managed.
5. **Strengthen Early Warning System**: Expand and refine **EFFIS and Copernicus-based forecasting** to better anticipate "weather whiplash" fuel-load dynamics, enabling more precise pre-positioning of firefighting resources before peak-risk windows.
6. **Engaging Local Communities:** The **Council of the EU** has highlighted the importance of involving local communities in preparedness and risk reduction . Projects like **Life2Taiga** demonstrate that effective communication with residents is key to successfully implementing measures like controlled burns.
7. **Investing in Public Education:** Scale up public awareness campaigns and enforcement targeting negligence-related ignitions (agricultural burning, campfires, discarded cigarettes).

UPSC GS-3: Environment
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Monetary Policy – Significance & Challenges – Explained Pointwise

The Monetary Policy Committee (MPC) of the RBI will unveil its next policy statement today. The MPC regularly releases its monetary policy statement bi-monthly, meeting six times a year. By adjusting benchmark interest rates like the repo rate, it regulates inflation and money supply.

What is Monetary Policy?

- Monetary policy refers to the actions and strategies used by a central bank (RBI) to manage money supply, interest rates, and credit in the economy, ensuring price stability, supporting economic growth, and ensuring financial stability.
- The Reserve Bank of India (RBI) is vested with the responsibility of conducting monetary policy in India. This responsibility is explicitly mandated under the **Reserve Bank of India Act, 1934**. Since 2016, the monetary policy operates under a formal **flexible inflation targeting (FIT) framework**, established via the **RBI Act Amendment, 2016** and the **Monetary Policy Framework Agreement.**
- In any meeting, the RBI has three choices – **Hike interest rates, Cut interest rates** or **Maintain status quo**.

Monetary Policy Committee:

- The Monetary Policy Committee (MPC) is constituted by the Central Government under **Section 45ZB** of the **RBI Act 1934.**
- The Reserve Bank's Monetary Policy Department (MPD) assists the MPC in formulating the monetary policy.
- **Situation before MPC**: Before the constitution of the MPC, a **Technical Advisory Committee (TAC) on monetary policy** with experts from monetary economics, central banking, financial markets, and public finance, used to **advise** the Reserve Bank on monetary policy. With the formation of MPC, the TAC on Monetary Policy **ceased to exist.**
- **Structure of MPC**: 6 members
    - Governor (Chairperson of MPC)
    - Deputy Governor (in-charge of monetary policy)
    - One officer of the RBI to be nominated by the Central Board – Member, ex officio
    - 3 members to be nominated by the government (These members will hold office for a period of **four years or until further orders**, whichever is earlier).
- Each member of the MPC has **one vote**, and in the event of an equality of votes, the Governor has a second or **casting vote**.
- Under the flexible inflation targeting (FIT) framework, the "repo rate" is the policy rate. It is determined by the MPC based on the assessment of the macroeconomic condition and with the aim to keep CPI inflation near 4%+/-2%, as discussed above.
- Currently, MPC is only responsible for setting policy (repo) rate and performing the liquidity operations to operationalize the monetary policy lies with the RBI.

What are the Types of Monetary Policy?

There are two types of monetary policy:

Contractionary/	• It seeks to reduce the money supply in the economy. • Used when the economy is overheating and inflation is too high. • The central bank **raises interest rates** or sells government securities to reduce the money supply.

Dear Monetary Policy	● Under this policy: ○ These rates are **increased**: CRR, SLR, Bank Rate, Repo Rate, Reverse Repo Rate, MSF. ○ Under OMO, RBI will sell G-secs.
Expansionary / Cheap Monetary Policy	● It aims to increase the money supply in the economy. ● It is usually followed when RBI wants to push economic growth or counter recession. ● The central bank **lowers interest rates** or buys government securities to inject money into the system. ● Under this policy: ○ These rates are **decreased**: CRR, SLR, Bank Rate, Repo Rate, Reverse Repo Rate, MSF. ○ Under OMO, RBI shall purchase G-secs.

What are the Objectives of Monetary Policy?

1. **Price Stability:** This is the most important objective of monetary policy. Price stability refers to keeping inflation low, stable, and predictable. In India, the Monetary Policy Committee (MPC) targets headline inflation at **4%**, with a tolerance band of **±2%** (i.e., 2%–6%), to ensure stable prices of goods and services.
2. **Economic Growth**: Monetary policy aims to support **sustainable economic growth** by ensuring adequate credit availability and favorable borrowing costs for productive investment, without triggering inflationary overheating.
3. **Financial Stability:** Ensuring the soundness and stability of the banking and financial system, preventing systemic risks, asset bubbles, and financial crises that could destabilize the broader economy. To ensure financial stability, the central banks act as the "lender of last resort" to commercial banks and oversee systemic liquidity.
4. **Exchange Rate Stability:** Excessive exchange rate volatility can disrupt trade competitiveness, increase import costs (particularly for crude oil), and weaken investor confidence. Therefore, through monetary policy, the central bank manages the external value of the rupee by intervening in the foreign exchange market to curb excessive volatility and support the competitiveness of the country's export and import sectors.
5. **Interest Rate Stability:** Monetary policy aims to prevent excessive fluctuations in interest rates, ensuring a stable borrowing environment that enables businesses and households to plan investments, consumption, and financial decisions with greater certainty and confidence.
6. **Support Priority Sectors:** Monetary policy promotes inclusive growth by ensuring affordable credit to agriculture, MSMEs, housing, and other priority sectors, boosting employment, income generation, financial inclusion, and poverty reduction.
7. **Employment Generation**: Monetary policy's growth-supportive role indirectly contributes to employment generation through its impact on investment and economic activity.
8. **Complementing Fiscal Policy**: Monetary and fiscal policy operate as **complementary macroeconomic tools.** Effective coordination (e.g. managing government borrowing costs,

supporting counter-cyclical fiscal stimulus without triggering inflationary pressure) is essential for overall macroeconomic stability.

What are Tools of Monetary Policy in India?

<table>
<tr><td>Quantitative tools</td><td>1. Policy Rates:
a. Repo Rate: The rate at which RBI lends short-term funds to commercial banks against government securities under the Liquidity Adjustment Facility (LAF).
b. Reverse Repo Rate: The rate at which RBI absorbs excess liquidity from banks by borrowing against government securities.
c. Standing Deposit Facility (SDF) Rate: The rate at which the RBI absorbs surplus liquidity from banks without taking any collateral in return.
d. Marginal Standing Facility (MSF) Rate: An emergency overnight borrowing window for banks. Banks can borrow funds at this rate, which is higher than the repo rate.
2. Reserve Requirements: The mandatory percentage of deposits that commercial banks must keep in reserve rather than lending out:
a. Cash Reserve Ratio (CRR): The fraction of total customer deposits banks must hold in cash reserves.
b. Statutory Liquidity Ratio (SLR): Requires banks to maintain a percentage of deposits in liquid assets like government securities or gold.
3. Open Market Operation (OMO): The buying and selling of government securities (bonds or treasury bills) in the open market by the central bank.</td></tr>
<tr><td>Qualitative Tools</td><td>● Credit Rationing: Fixing maximum credit quotas or ceilings for specific sectors to prevent over-concentration of debt in high-risk areas.
● Margin Requirements: Setting the minimum percentage of down payment required when taking loans to buy financial assets (e.g. stocks or real estate). Raising margin requirements slows speculative borrowing.
● Moral Suasion: Informal persuasion, meetings, and guidelines issued by the central bank to encourage or discourage commercial banks from specific lending practices without enacting strict law.
● Direct Action: Imposing fines, sanctions, or operational restrictions on banks that fail to comply with monetary directives.</td></tr>
</table>

What is the Significance of Monetary Policy?

1. **Price Stability & Inflation Control:** By targeting inflation and managing money supply through rates, the RBI preserves the purchasing power of citizens, prevents economic disruptions, and gives long-term domestic investors confidence.

2. **Supports Sustainable Economic Growth:** India requires high economic growth rates to create employment and absorb its growing labor force. The RBI adjusts policy benchmark rates (repo rate) to ensure adequate credit availability for productive sectors, enabling investment, entrepreneurship, and employment generation, which drive India's development.
3. **Financial Sector Stability:** Monetary policy tools (CRR, SLR, liquidity management) help maintain banking sector soundness, preventing excessive credit expansion that could lead to asset bubbles or banking crises.
4. **Exchange Rate Stability:** India is a net importer of crude oil and raw commodities, making its current account deficit and currency vulnerable to global developments. Monetary policy balances domestic interest rates against global rates (such as the US Federal Reserve) to manage foreign portfolio investment (FPI) flows.
5. **Interest Rate & Credit Flow Management:** By influencing lending rates and credit conditions, the RBI supports business planning, housing markets, consumption, and investment.
6. **Directing Credit to Priority Sectors**: Commercial banks are required to direct a minimum percentage of their total credit toward agriculture, Micro, Small & Medium Enterprises (MSMEs), housing, and education. This prevents formal financial capital from concentrating solely in urban sectors or large corporate conglomerates.
7. **Responding to Global Economic Shocks**: Monetary policy provides India crucial **flexibility to respond to external shocks** such as global financial crises, commodity price volatility (especially oil), capital flow reversals, and geopolitical disruptions — cushioning the domestic economy from external volatility.

What are the Challenges or limitations of Monetary Policy?

1. **Monetary Policy Transmission:** Reductions or hikes in the RBI's policy rates (e.g. repo rate) do not always reflect quickly or fully in the lending rates offered by banks due to inflexible deposit costs, high small savings interest rates, and administered pricing.
2. **Inflation Targeting Constraints:** Monetary policy is effective mainly for demand-driven inflation, but much of India's inflation is supply-side (especially food and fuel), which the RBI cannot address directly.
3. **Incoherence between Fiscal & Monetary Policy:**
    - High fiscal deficit and government borrowing can crowd out private investment and reduce the effectiveness of monetary policy.
    - Price controls, subsidies, and MSP (Minimum Support Price) interventions can conflict with policy aims, limiting the RBI's independence and flexibility.
4. **Policy Rate Rigidity & Administered Rates:** Administered rates on small-savings greatly influence household deposit decisions, causing banks to hold their deposit and lending rates steady even when RBI signals rate changes.
5. **Structural Rigidities & Market Constraints:** India's financial markets are still evolving. Limited integration, underdeveloped bond markets, and preference for cash transactions reduce the impact of policy tools.
6. **Large Informal Sector**: Many small businesses, agricultural workers, and self-employed individuals rely on informal credit channels (money lenders, local networks) rather than formal bank loans. The large informal sector, which operates outside formal banking, means monetary policy changes might not reach a significant portion of the economy.
7. **External Factors:** Factors such as capital flows, global recession, US monetary policy, and geopolitical risks can impact India's currency, capital markets, and inflation, often beyond RBI's control.

8. **Conflicting Objectives:** The need to simultaneously control inflation and promote growth can create trade-offs. Expansionary policies boost growth but risk inflation, while contractionary policies fight inflation but slow growth.
9. **Trilemma Constraints**: India faces the macroeconomic "Impossible Trinity" (or Policy Trilemma), which states an economy cannot simultaneously maintain: **A fixed or stable exchange rate, Free capital mobility, and Independent monetary policy.** When major central banks like the US Federal Reserve raise interest rates, foreign capital can flow out of emerging markets like India. To prevent severe currency devaluation, the RBI may be forced to raise domestic interest rates even if domestic economic conditions favor rate cuts.

What should be the way forward?

1. **Strengthen Monetary Policy Transmission:**
   - Improve the transmission mechanism so changes in the RBI's policy rates reflect promptly and effectively into bank lending and deposit rates.
   - Encourage banking sector reforms to reduce NPAs, improve competition, and lower fixed costs so banks can adjust rates dynamically.
2. **Enhance Coordination between Fiscal & Monetary Policies:**
   - Improve synchronization between RBI and government budgetary policies to reduce fiscal dominance and its adverse effects on inflation and interest rates.
   - Rationalize subsidies and move towards better-targeted support to limit distortions in price signals.
3. **Target Broader Inflation Measure Responsibly:**
   - Balance headline and core inflation targeting, ensuring policymakers do not overlook essential goods impacting the poor.
   - Build public understanding and set expectations for acceptable inflation bands tailored to India's developmental context.
4. **Strengthen Regulatory Framework & Digital Infrastructure:**
   - Expand digital payments infrastructure to improve monetary policy transmission through formal financial channels.
   - Strengthen regulation and oversight of NBFCs and microfinance institutions to ensure credit flow and financial stability.
5. **Expand Formalization and Financial Inclusion**: Expanding formal credit access ensures that future interest rate changes directly affect everyday consumer and small-business borrowing.
6. **Enhance Global Risk Management:** Develop frameworks to better manage capital flow volatility, exchange rate fluctuations, and external shocks through a mix of monetary, fiscal, and macroprudential tools.
7. **Foster Transparency & Communication:**
   - Improve RBI's communication strategies to build market confidence and effectively anchor inflation expectations.
   - Publish detailed monetary policy reports, market surveys, and data releases for greater accountability.

Conclusion:

Monetary policy in India thus aims to maintain stable price levels, promote growth, and support broad-based, inclusive financial sector development, ensuring that its benefits reach every section of society.

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UPSC GS-3: Economics

Fiscal Federalism in India – Significance & Challenges – Explained Pointwise

Fiscal federalism in India balances resource distribution between the Union and states to ensure cooperative governance. The 16th Finance Commission, chaired by Dr. Arvind Panagariya, retained vertical tax devolution at 41% while introducing performance-driven criteria like GDP contribution. This framework aims to harmonize regional equity, fiscal discipline, and sub-national autonomy for 2026-31.

What is Fiscal Federalism? What are the constitutional provisions which provide for Fiscal Federalism in India?

- **Fiscal Federalism:** Fiscal federalism refers to the division of financial powers and responsibilities between the central government and state governments in India.
- **Constitutional Provisions:** The Indian Constitution defines the taxation and expenditure powers of the central and state governments through various provisions:
    1. **Seventh Schedule:** The Constitution assigns specific tax bases to the central and state governments, listed in the Union List and State List respectively.

2. **Article 270:** Article 270 of the Indian Constitution provides for the distribution of net tax proceeds collected by the Union government between the Centre and the States.
3. **Article 280:** The Finance Commission which is a constitutional body under Article 280, recommends the sharing of tax revenues and grants-in-aid to the states.
4. **Article 275:** It provides for the grants-in-aid system which involves discretionary transfers from the Centre to states for specific purposes.

- **Examples of Cooperative Fiscal Federalism:**
  1. **Introduction of GST:** The introduction of Goods and Services Tax (GST) through the 101st Constitutional Amendment is a historic example of cooperative fiscal federalism in India. The GST act has transformed India's indirect tax landscape, and fostered Centre-State cooperation.
  2. **Passage of FRBM Act:** The Fiscal Responsibility and Budget Management (FRBM) Act 2003 aims to promote fiscal discipline at the central and state levels. 21 states enacted their own FRBM Acts, incentivized by debt and interest rate relief provided by the 12th Finance Commission. This is a historic example of centre-state cooperation in maintenance of Fiscal prudence.
  3. **Introduction of performance based grants:** Performance-based grants are being used to incentivize states to achieve developmental targets. This has led to competitive and cooperative federalism between the Centre and States in the sphere of finances and public expenditure.

What are the Challenges to Fiscal Federalism in India?

1. **Vertical Fiscal Imbalance**: States bear a disproportionate share of expenditure responsibilities (agriculture, health, education, law and order, rural development) relative to their revenue-raising powers. The Centre collects a larger share of aggregate revenue but has comparatively fewer expenditure obligations, making states dependent on transfers.
2. **Reduced Financial Transfers to the States:** The share of states in the gross tax revenue (total tax revenue collected, which includes cess and surcharges) has decreased from 35% in 2015-16 to 30% in 2023-24.
3. **Disproportionate Growth between Union Govt's & State Govt's Revenue:** From 2015-16 to 2023-24, while the Union government's tax revenue has increased by 2.3 times from ₹14.6 lakh crore to ₹33.6 lakh crore, the states' share in the tax revenue has only doubled from ₹5.1 lakh crore to ₹10.2 lakh crore. This indicates a disproportionate growth between Union Govt's and State Govt's Revenues.
4. **Decrease in Grants-in-Aid to the states:** Direct financial support to states, in the form of grants-in-aid, has declined from ₹1.95 lakh crore in 2015-16 to ₹1.65 lakh crore in 2023-24.
5. **Increase in the share of non-devolvable cess and surcharge:** The increasing reliance on **cesses and surcharges**, which are **not shareable** with States under **Article 270**, has reduced the effective divisible pool. The share of cesses and surcharges in the Union's gross tax revenue has risen from **around 10% (2011–12)** to **about 20% in recent years**, reducing States' share.
6. **Centralisation of Public Expenditure:** Out of the combined allocation of ₹19.4 lakh crore for Centrally Sponsored Schemes (CSS) and Central Sector Schemes (CSec Schemes) in 2023-24, only ₹4.25 lakh crore was devolved to States. These are tied grants and the states have no autonomy to plan their expenditure.
7. **Interstate Inequality in public Finances through CSS schemes:** The Union government compels the State to commit more or less an equivalent quantum of financial resources in the implementation of CSS schemes. Wealthy States can afford to commit equivalent finances and leverage Union finances

inwards through the implementation of CSS. However, less wealthy States will have to commit their borrowed finances in these CSS, thus increasing their own liabilities. It has created inter-state inequality in public finances.

8. **Increase in Conditional Transfers:** Several grants to states are contingent on fulfilling certain conditions, including the insistence on specific labelling, which imposes Union government preferences over state priorities.
9. **Erosion of State Taxation Autonomy on account of implementation of GST:** The ability of states to set tax rates on their own revenue sources has been significantly diminished due to the implementation of GST. **For ex-** State VAT have been subsumed under GST.
10. **Issues with GST:** States surrendered the power to independently set rates for major indirect taxes (VAT, sales tax, entry tax) in favor of a unified GST regime. The GST Compensation Cess (guaranteeing 14% annual revenue growth to states) expired in 2022, and its extension has been used mainly to service compensation loan repayments, thus, leaving the states more exposed to GST revenue volatility.

Read More- On the Issues with Fiscal federalism

What is the Significance of Fiscal Federalism?

1. **Ensures Balanced Distribution of Resources:** Fiscal federalism allows the central and state governments to address the regional imbalances through mechanisms like tax sharing, grants-in-aid, and performance-based incentives. Thus, it enables states with lower revenue capacity to still deliver comparable public services through equalizing transfers.
2. **Strengthens Cooperative Federalism:** Fiscal federalism encourages cooperation and coordination between the Centre and states, as they negotiate the sharing of resources and responsibilities. **For e.g.** The GST Council brings together the Centre and states to jointly administer the Goods and Services Tax.
3. **Promotes Equitable Regional Development**: Devolution formulas (income distance, area, population, forest cover, demographic performance) aim to channel more resources to less-developed states, helping bridge regional disparities. Special provisions for hill states, North-East, and island territories address geographic and historical disadvantages.
4. **Ensuring Fiscal Discipline:** Fiscal federalism frameworks like the Fiscal Responsibility and Budget Management (FRBM) Act promote fiscal discipline at both the central and state levels. This helps maintain macroeconomic stability and sustainability.
5. **Enabling Decentralized Governance:** Fiscal federalism supports decentralization by empowering state and local governments with financial autonomy and resources. This strengthens grassroots democracy and responsive governance closer to the people. Local bodies with adequate finances can respond faster to local needs (sanitation, primary education, local infrastructure) than a distant central authority.
6. **Undertaking Economic Reforms:** Fiscal federalism helps to adapt to changes like the shift towards a market-oriented economy (1991 economic reforms), and undertake taxation reforms like the introduction of GST.

What are the finance commission recommendations for Fiscal federalism?

The Finance Commissions have made several important recommendations over the years to promote fiscal federalism in India:

1. **Vertical Tax Devolution:** The 14th Finance Commission radically increased the share of states in the central divisible pool of taxes from 32% to 42%, the biggest ever increase in vertical tax devolution. This enhances the fiscal autonomy and resources of state governments. The 15th Finance Commission reduced it to 41% & the 16th Finance Commission retained it at 41%.
2. **Horizontal Distribution Formula:** The 16th FC recommended distribution among States based on the following criteria: **Income Distance (42.5%)**, **Population 2011 (17.5%)**, **Demographic Performance (10%)**, **Area (10%)**, **Forest & Ecology (10%)**, and **Contribution to GSDP (10%)**, balancing equity with incentives for economic performance.
3. **Grants-in-Aid:** The Finance Commissions provide grants-in-aid to specific states or sectors that are in need of assistance or reform. This promotes the spirit of competitive and cooperative fiscal federalism.
4. **Fiscal Consolidation:** The finance commissions have suggested maintenance of fiscal prudence by the states. The 12th FC recommended a multi-dimensional restructuring aimed at both qualitative and quantitative aspects of managing government finances. The 16th FC recommended a medium-term fiscal path targeting **Union fiscal deficit of 3.5% of GDP** and **State fiscal deficit of 3% of GSDP** by **2030–31**, ensuring debt sustainability.
5. **Strengthening State Finance Commissions (SFCs)**: Various FC over the years recommended closer integration of Central Finance Commission transfers with timely SFC recommendations and suggested constitutional changes to improve the functioning of SFCs.

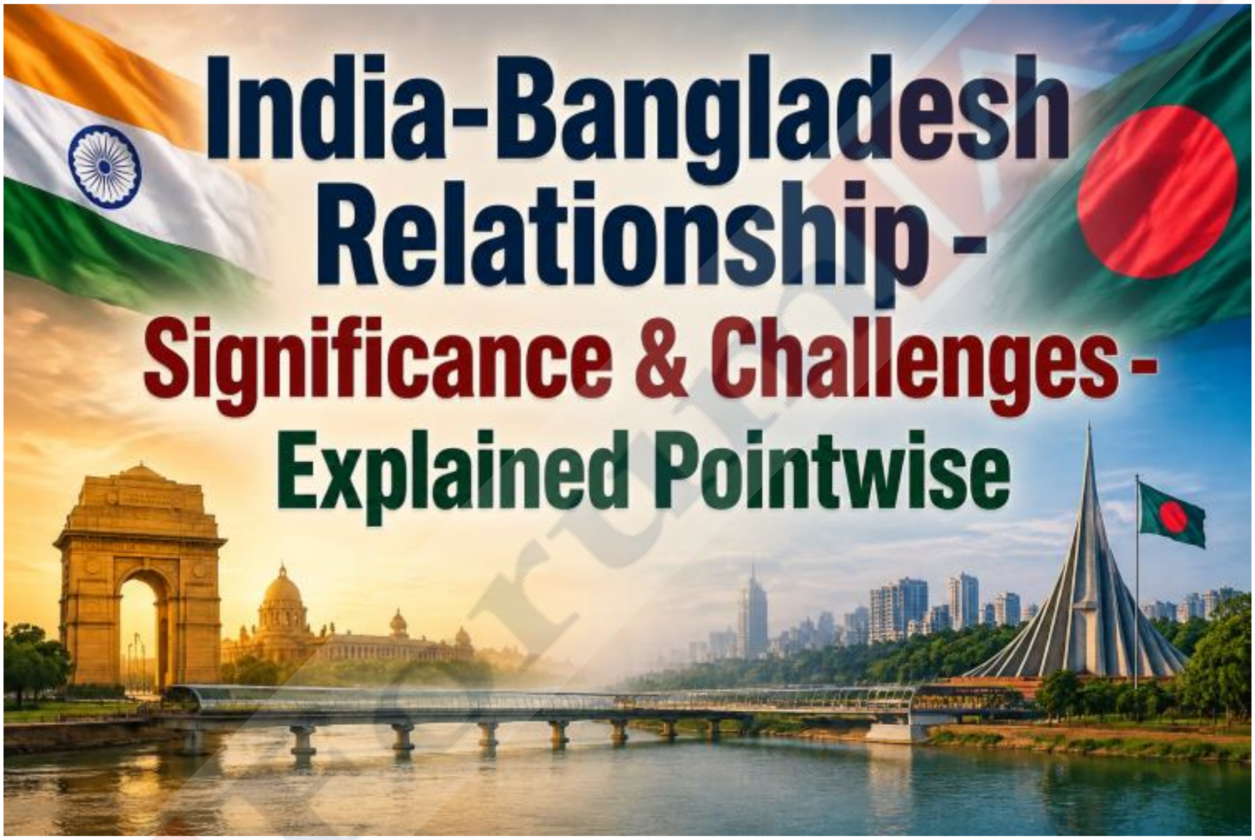
What should be the way Forward to strengthen Fiscal Federalism in India?

1. **Reform Horizontal Devolution Criteria**: Move toward a **more balanced formula** that doesn't penalize demographic and developmental success for e.g. using a rolling/updated population base rather than freezing it at 1971 or 2011, or giving greater weight to "demographic performance" alongside "need-based" criteria.
2. **Rationalisation of Public Expenditure by Central Govt:** A mechanism must be instituted for thorough financial rationalisation of the Central Sector and Centrally Sponsored schemes, in collaboration with state governments. Centrally Sponsored Schemes should be consolidated and pruned to cover only core national priorities (e.g. primary health, basic education, rural employment).
3. **Addressing the GST related Concerns:** The anomalies in GST like the Integrated GST which favours the consuming states like UP and Bihar, rather than the producing states of TN, Gujarat must be corrected. Also, efforts must be undertaken to open more avenues for revenue generation by broadening the scope of GST to include petrol, diesel etc.
4. **Revisiting Article 246 and the Seventh Schedule:** The taxation powers listed in the seventh schedule must be relooked in the context of fiscal federalism.
5. **List of Taxation for Third Tier of Govt:** Specific taxation powers must be devolved to the local self governments to help them raise their own resources and reduce their dependence on grant-in-aids. This will help in achieving fiscal federalism in its true sense.
6. **Reduction of Borrowing Constraints on States:** The Union government should revisit the borrowing constraints placed on state investment funds, as suggested by Kerala.
7. **Address the Issue of Cesses and Surcharges:** Bring cesses and surcharges into the divisible pool, or at minimum cap their share of gross tax revenue, since their rising share bypasses the Finance Commission's constitutional mandate (Article 270).
8. **Minimisation of the discretionary aspect of transfers to states:** Some of these transfers can be made automatic. For other transfers, clear and non-discriminatory methods should be followed.

9. **Mandatory State Finance Commission (SFC) Implementation:** Mandate that state governments accept and implement SFC recommendations within a strict statutory timeframe, or tie a portion of central transfers to SFC compliance.

Read More- The Hindu UPSC Syllabus- GS 2- Issues related Centre State Relations

India-Bangladesh Relationship – Significance & Challenges – Explained Pointwise



Former Bangladesh Prime Minister Sheikh Hasina recently gave her first media interview from India since her ouster, reaffirming her intention to return to Bangladesh despite legal proceedings against her. The remarks have added a new political dimension to India–Bangladesh relations, with Bangladesh expressing concern over the platform provided to the former leader.

The Evolution of India-Bangladesh relations over the years:

Liberation War & Early Friendship (1971-1975)	● India played a decisive role in Bangladesh's Liberation War, leading to its independence in **1971**. ● India was among the first nations to extend diplomatic recognition.

	• In 1972, the two nations signed the landmark **Treaty of Friendship, Cooperation, and Peace**.
Period of Strained Relations (1975-1995)	• Following the assassination of Sheikh Mujibur Rahman in **1975**, relations became strained. • Tensions escalated over cross-border sanctuary provided to North-East Indian insurgent outfits, river water distribution at the Farakka Barrage, and undemarcated land borders.
Renewed Engagement (1996-2008)	• Bilateral ties improved with the signing of the **1996 Ganga Water Sharing Treaty**, increased trade, and enhanced cooperation in border management and regional connectivity.
The 'Shonali Adhyay' (Golden Chapter) **(2009-2024)**	• Relations reached unprecedented levels under Sheikh Hasina through cooperation in counter-terrorism, connectivity, energy, trade, and defence. • **2014 Maritime Boundary:** Resolved via UNCLOS international arbitration without diplomatic friction. • **2015 Land Boundary Agreement (LBA):** Ratified by the Indian Parliament, facilitating the historic exchange of 162 enclaves and resolving undemarcated border segments. • Other landmark developments include the expansion of rail, road and inland water connectivity, power trade, and implementation of the BBIN Motor Vehicles framework.
Political Transition & Recalibration (2024–Present)	• The political transition in Bangladesh following the resignation of Sheikh Hasina in **August 2024** introduced uncertainty in bilateral relations. • While concerns emerged over border management, minority safety, and strategic issues, both countries have continued diplomatic engagement and cooperation in trade, connectivity, and security.

What recent political developments in Bangladesh have affected India-Bangladesh relations?

- **Fall of the Sheikh Hasina Government:** Student-led protests in 2024 led to Sheikh Hasina's exit and the establishment of an interim government led by Muhammad Yunus. While Yunus has underscored "fair and balanced" relations with India, some of his remarks – like describing Northeast India as "landlocked" – sparked sensitivities.
- **Attacks on minorities:** The ethnic attacks on Bangla-speaking Hindus in Bangladesh have strained the India-Bangladesh relations.
- **Resurfacing of security challenges:** There are risks of emergence of security challenges by the anti-India groups as encountered during the earlier BNP-Jamaat years. With the continuing tensions on the border with Pakistan, Indian Army's long standoff with the PLA in eastern Ladakh, has created a security-nightmare for India.
- **Threat to India's connectivity with the North-east:** A further deterioration in India-Bangladesh has restricted India's access to the Northeast. This region's connection to mainland India will only remain through the narrow "Chicken's Neck". With the Myanmar border remaining extremely volatile, the source of unrest in India's Northeast will increase.

- **Jeopardized the Bilateral trade and FTA:** Sheikh Hasina's exit has jeopardized the growing bilateral trade ties between India and Bangladesh. There has also been stagnation of talks in the potential free trade agreement (FTA) between the two countries.
- **Deterioration of people-people ties-** There are real risk of blowback from the Bangladeshi people and the new power centres in Dhaka- some of whom will carry past grudges against India.
- **Geopolitical challenges:** Pakistan and China will see the political change in Bangladesh as an opportunity to challenge India's presence in the country and try to tar it with a pro-Hasina brush.
- **Recent Policy Shifts and Frictions:**
  - **Transshipment Facility Withdrawal:** India revoked Bangladesh's right to ship exports through Indian ports citing congestion; Dhaka saw it as damaging to trade competitiveness.
  - **Extradition Tension:** The interim government has sought Hasina's extradition from India – causing diplomatic discomfort.
  - **Minority Concerns:** Reports of violence against Hindus post-regime change have worried New Delhi.
  - **China's Outreach:** Beijing has stepped up diplomatic and infrastructure engagement, raising strategic concerns in India.
  - **Summoning of Bangladesh High Commissioner:** India recently summoned the Bangladesh High Commissioner in India over the deteriorating security environment in the country & the threats posed by the extremists elements to the security of the Indian mission in Dhaka.

Reasons Behind Fall of Sheikh Hasina's Government:

1. **Peaceful Student demonstration evolving into a nationwide movement:** The peaceful student protest against the freedom fighter reservation of 30% in civil services, galvanized into a nationwide movement due to Government's heavy-handed approach. The attack on students by Awami League's student wing, Bangladesh Chhatra League, imposition of a strict curfew with a 'shoot-on-sight' order and labelling the demonstrators as '**Razakars**'(a term associated with collaborators during the 1971 war) further inflamed tensions.
2. **Slowing down of economic Growth:** Bangladesh made rapid economic progress under Sheikh Hasina's regime. The country's per capita income tripled in a decade, with the World Bank estimating that over 25 million people were lifted out of poverty in the last 20 years. However, the pandemic in 2020 and a slowing global economy, thereafter, hit the garment industry badly. This increased unemployment, inflation in the economy and discontent of Bangladeshi Population.
3. **Allegations of Electoral Irregularities:** The Parliamentary elections in 2014, 2018, and 2024 were controversial and non-participative as they were marred by low turnout, violence, and boycotts by opposition parties. **For e.g.** the 2024 general election was boycotted by the main opposition, the Bangladesh Nationalist Party (BNP).
4. **Reliance on Hard Power to maintain control:** Hasina's government increasingly relied on hard power to maintain control. This created a climate of fear and repression. **For e.g.** The Digital Security Act 2018, became a potent weapon for the government and ruling party activists to silence critics and stifle freedom of online expression.
5. **Increasing economic inequality:** The proliferation of Bank scams and an expanding list of defaulters, coupled with rampant corruption, fueled public discontent despite the overall economic progress. **For e.g.** Companies like CLC Power, Western Marine Shipyard, and Remex Footwear topped the list of defaulters, with bad loans ranging from 965 crore to 1,649 crore Bangladeshi Taka.

6. **Weakening Political Legitimacy**: Public confidence in the government declined due to perceptions of inadequate responsiveness to economic and governance challenges.

What is the significance of Bangladesh for India?

Geo-strategic & Security Significance	1. **Gateway to the North-East:** India shares a 4,096 km land border with Bangladesh (its longest with any neighbor). Bangladesh sits directly adjacent to the narrow Siliguri Corridor (the "Chicken's Neck"), the 22 km-wide land strip connecting mainland India to its North-Eastern states. Friendly ties with Dhaka reduce strategic vulnerability around this sensitive choke point. 2. **Maritime Security:** Bangladesh provides India with a crucial maritime anchor in the Bay of Bengal, aligning with India's **SAGAR** (Security and Growth for All in the Region) vision and balancing competing influence from external powers like China in the Indian Ocean Region. 3. **Counter-Insurgency & Border Security:** Historically, anti-India insurgent groups operating in the North-East used Bangladeshi territory as a sanctuary. Robust security cooperation with Bangladesh is vital to curbing cross-border militancy, arms trafficking, illegal immigration, and fake currency networks. 4. **Crux of 'Act East' Policy:** Bangladesh acts as the physical bridge connecting South Asia to Southeast Asia. It is a vital node in sub-regional integration initiatives like **BIMSTEC** (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) and the **BBIN** (Bangladesh, Bhutan, India, Nepal) motor vehicles framework.
Economic Significance	1. **Largest Trade Partner in South Asia:** Annual bilateral trade between India and Bangladesh stands at around $13-14 billion, making Bangladesh one of India's largest trading partners in South Asia. India exports vital commodities, raw cotton, power, and industrial inputs, while importing ready-made garments, textiles, and processed foods. 2. **Development Partnership:** Bangladesh is the largest recipient of Indian Lines of Credit (LoCs), amounting to over $7-8 billion for infrastructure projects involving rail restoration, port development, and road networks. 3. **Cross-Border Energy Grid:** India supplies electricity to Bangladesh via cross-border interconnections and energy pipelines (such as the India-Bangladesh Friendship Pipeline for diesel exports). Trilateral power arrangements also enable Nepal to export hydropower to Bangladesh using Indian transmission lines.
Shared Natural Resources	1. **Transboundary Water Management:** India and Bangladesh share 54 common rivers. Joint river basin management is crucial for flood forecasting, irrigation, and irrigation diplomacy, governed by landmark agreements like the Ganges Water Treaty. 2. **Ecological Protection:** The two nations share fragile ecosystems, most notably the **Sundarbans** (the world's largest mangrove forest) requiring coordinated conservation efforts against climate change, rising sea levels, and biodiversity loss.

Cultural Significance	1. **Civilizational Ties:** Bangladesh shares deep cultural and civilisational ties with India, including a large Bengali Hindu population and several religious-cultural sites such as Ranir Bunglow Temple and Bhoj Vihara that reflect shared heritage.

What are the areas of Cooperation between India and Bangladesh?

1. **Trade and Economic Cooperation:**
    a. **Duty-Free Access:** Under the South Asian Free Trade Area (SAFTA), India granted duty-free and quota-free access to Bangladeshi products on almost all tariff lines (except alcohol and tobacco).
    b. **CEPA Negotiations:** Both nations are advancing towards a **Comprehensive Economic Partnership Agreement (CEPA)** to boost trade integration, reduce non-tariff barriers, and generate investment opportunities.
2. **Connectivity and Infrastructure:**
    a. **Railway Grid:** Five historic cross-border rail links have been operationalized (e.g. Petrapole–Benapole, Gede–Darshana, Radhikapur–Birol). The **Akhaura-Agartala cross-border rail link** directly connects India's North-East to Bangladesh's rail network.
    b. **Port Access & Transit:** Bangladesh permits Indian cargo to utilize its **Chittagong and Mongla ports**, drastically shortening transit times and logistics costs between mainland India and the North-Eastern states.
    c. **Inland Waterways (PIWTT):** Under the Protocol on Inland Waterways Trade and Transit, cargo vessels and passenger cruise lines operate through shared river systems.
    d. **Bus Routes:** Multiple operational bus routes link major hubs like Kolkata, Agartala, and Guwahati directly with Dhaka and Khulna.
3. **Water and River Cooperation:**
    a. **Joint Rivers Commission (JRC):** Established in 1972, the JRC manages 54 transboundary rivers, sharing hydrological data for flood forecasting during peak monsoon periods.
    b. **Ganges Water Treaty (1996):** Governs the sharing of Ganges river waters at the Farakka Barrage.
4. **Security and Border Management:**
    a. **Joint Exercises:** Regular military engagements include Exercise **Sampriti** (Army), **BONGOSAGAR** (Navy), and coordinated patrols along the maritime boundary.
    b. **Border Management:** Both nations work through the Border Security Force (BSF) and Border Guard Bangladesh (BGB) to prevent trans-border crimes, human trafficking, drug smuggling, and fake currency circulation.
    c. **Land Boundary Agreement (LBA):** The historic 2015 LBA resolved decades-old enclave disputes, enabling peaceful boundary demarcation.
5. **Energy and Power Cooperation:**
    a. **Electricity Exports:** India exports over 1,160 MW of electricity to the Bangladeshi grid via high-capacity cross-border interconnections.
    b. **Maitree Super Thermal Power Plant:** Jointly developed at Rampal (Bagerhat), this 1,320 MW coal-fired power project strengthens Bangladesh's baseline grid capacity.
    c. **Indo-Bangla Friendship Pipeline (IBFP):** A 130 km high-speed diesel pipeline connects Siliguri in West Bengal to Parbatipur in Bangladesh, supplying energy directly into northern Bangladesh.

   d. **Trilateral Energy Trade:** India, Nepal, and Bangladesh executed a historic trilateral power transaction through the Indian grid to transmit Nepalese hydropower to Bangladesh.

6. **Multilateral and Regional Cooperation:** Both countries work closely in Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), Bangladesh, Bhutan, India, Nepal Initiative (BBIN), and South Asian Association for Regional Cooperation (SAARC) for trade, connectivity, and development. They also cooperate on climate change and disaster resilience through global forums like United Nations Framework Convention on Climate Change (UNFCCC) and Conference of Parties (COP) summits.
7. **Cultural and People-to-People Ties:**
   a. **Tourism and Education Cooperation:** Bangladeshis form the largest group of tourists in India, with joint promotion of cultural and Buddhist tourism circuits. Student exchanges and scholarships have strengthened educational links.
   b. **Health and Medical Cooperation:** Bangladesh accounts for over 35% of India's medical tourists, contributing more than 50% of medical tourism revenue. Partnerships include **medical visa facilitation**, hospital collaboration, and **telemedicine services**.
8. **Counter-Terrorism and Intelligence Sharing:** Bangladesh's crackdown on anti-India insurgents under Sheikh Hasina boosted security cooperation. Both nations coordinate on **intelligence sharing**, **counter-terrorism operations**, and **cybersecurity initiatives**, ensuring regional stability.

What are the Challenges in India-Bangladesh Relations?

1. **Political Realignment:** Following the resignation and departure of Prime Minister Sheikh Hasina in August 2024, Bangladesh underwent a major political shift under an interim administration, leading to an elected government led by the Bangladesh Nationalist Party (BNP). This transition disrupted years of close ties built primarily with the Awami League, forcing India to recalibrate its diplomatic engagement across the Bangladeshi political spectrum.
2. **Sharing of Transboundary River Waters:** India and Bangladesh share 54 common rivers, but only two transboundary water-sharing treaties have been signed so far: the **Ganga Waters Treaty** and the **Kushiyara River Treaty**. A major point of contention remains the **Teesta River** dispute, with Bangladesh seeking equitable distribution of its waters, which has not been agreed upon by India and the state of West Bengal.
3. **Deportation of Rohingyas:** India and Bangladesh have mutual but sometimes conflicting interests regarding the deportation of Rohingyas to mainland Myanmar. India prioritizes deportation from its own territory first and then later facilitates deportation from Bangladesh to Myanmar.
4. **Cross-Border Terrorism and Infiltration:** Terrorism and infiltration across the Bangladesh border pose significant internal security threats to India. Activities like armed dacoity in border districts, fake currency transfer, cattle smuggling, and prostitution have also raised security concerns.
5. **Stalled Economic Agreements:** Progress on concluding a **Comprehensive Economic Partnership Agreement (CEPA)** and streamlining cross-border credit facilities has faced delays due to political shifts and renegotiation demands.
6. **Drug Smuggling and Trafficking:** According to the **2007 International Narcotics Control Board (INCB)** report, India remains a prime transit route for heroin trafficking from South Asia to Europe through Bangladesh.
7. **Growing Chinese Influence in Bangladesh:** China's deepening footprint in Bangladesh, including involvement in Teesta river management projects and port infrastructure, is viewed as a strategic challenge in India. Bangladesh is also an active partner in China's **Belt and Road Initiative (BRI)**.

China has invested in 12 highways, 21 bridges, and 27 power and energy projects in Bangladesh. This growing involvement may undermine India's regional standing and impede its strategic aspirations.

8. **Rising Radicalization and Minority Persecution:** The surge in religious extremism and mistreatment of minorities in Bangladesh poses threats to both internal stability and regional security, potentially destabilizing Bangladesh and affecting India's security environment.
9. **Sports and People-to-People Fallout**: Political tensions have spilled over into sports, with Bangladesh earlier withdrawing from the 2025 Women's ODI World Cup in India due to security concerns, while uncertainty also surrounds the proposed bilateral cricket series, reflecting strained diplomatic ties.

What Should be the Way Forward?

1. **Broadening Political Engagement**: India should establish robust, multi-partisan diplomacy in Dhaka, engaging across the entire spectrum of Bangladeshi political parties, civil society, and youth leaders rather than relying primarily on any single political party.
2. **Timely Renewal of the Ganges Water Treaty (2026 Expiration):** Prioritize the renegotiation and smooth extension of the **1996 Ganges Water Treaty** before its expiration in December 2026, establishing a transparent, data-driven framework for dry-season water allocation.
3. **Concluding the CEPA Negotiations:** Fast-track the **Comprehensive Economic Partnership Agreement (CEPA)** to establish a stable trade framework as Bangladesh prepares to graduate from Least Developed Country (LDC) status.
4. **Establishment of Joint Task Forces and Smart Border Management:** Joint task forces comprising law enforcement agencies from both countries should be established to effectively combat cross-border drug smuggling, human trafficking, and illegal immigration.
5. **Establishment of a Digital Connectivity Corridor:** A digital connectivity corridor should be developed focusing on high-speed internet, digital services, and e-commerce to create new avenues for trade, collaboration, and technological exchange.
6. **Strategic Balancing Against China**: Counter China's deepening footprint by offering credible, competitive alternatives in trade, connectivity, and finance. Leverage BIMSTEC, BBIN, and the Act East policy to structurally integrate Bangladesh with India's Northeast and Southeast Asia, reducing Dhaka's incentive to tilt toward Beijing.
7. **Streamlining Visa & Medical Travel Services:** Fully restore and digitize the visa issuance framework for Bangladeshi citizens traveling to India for healthcare, business, and higher education to rebuild grassroots goodwill.

UPSC GS-2: International Relations
Read More: [The Indian Express]

Makkah Joint Defence Agreement (MJDA) – Explained Pointwise

The recently signed **Makkah Joint Defence Agreement (MJDA)** between Saudi Arabia, Pakistan and Türkiye marks a significant development in West Asian security architecture. By strengthening collective defence and strategic cooperation, the agreement could reshape regional power dynamics. Understanding its provisions and implications is therefore crucial for safeguarding **India's strategic, economic and security interests**.

What is the Makkah Joint Defence Agreement (MJDA)?

- The **Makkah Joint Defence Agreement (MJDA)** is a **trilateral mutual-defence pact signed by Saudi Arabia, Pakistan and Türkiye in Makkah on 7 August 2026.** It seeks to strengthen collective deterrence and defence cooperation amid growing instability in West Asia, including the ongoing Iran-related tensions in the Gulf.
- It builds on the 2025 bilateral **Saudi-Pakistan Strategic Mutual Defence Agreement (SMDA)** and the broader **Islamic Military Counter Terrorism Coalition (IMCTC)** framework.

What are some of the key provisions of the MJDA?

1. **Collective Defence:** An armed attack against any one member is to be treated as an attack against all three members. This provision, similar to **Article 5 of NATO**, has prompted analysts to describe the agreement as a **"Muslim NATO."**
2. **Mutual Security Commitment:** Saudi Arabia, Pakistan and Türkiye commit to strengthening their collective security and defence capabilities.

3. **Enhanced Military Cooperation:** The agreement seeks greater cooperation in defence planning, military training, exercises and expertise.
4. **Strategic Coordination:** The members will enhance coordination and consultations on common security threats and regional developments.
5. **Defence Technology Cooperation:** It provides scope for deeper cooperation in defence technologies, capabilities and military industries.
6. **Deterrence:** The agreement aims to strengthen collective deterrence and discourage potential military aggression against member states.
7. **No Nuclear Integration:** The pact's provisions pertain strictly to **conventional military cooperation** and do not establish a nuclear-sharing mechanism.
8. **Defensive Orientation:** The pact is presented as **defensive in nature** and is not formally directed against any particular country.
9. **Open to Other States**: The agreement is open to other countries in the region that are willing to uphold its principles.

How can the Makkah Joint Defence Agreement influence security dynamics in West Asia?

1. **Emergence of a New Security Bloc:** The MJDA could lead to the emergence of a new security bloc in West Asia, strengthening defence cooperation among Saudi Arabia, Pakistan and Türkiye while potentially encouraging other regional countries to join, thereby reshaping existing regional alliances.
2. **Shift in Regional Power Balance:** The MJDA could alter West Asia's power balance by combining Saudi Arabia's economic influence, Pakistan's military capabilities, and Türkiye's defence strength, potentially creating a stronger regional security grouping and affecting existing strategic alignments.
3. **Implications for External Powers:** The MJDA could influence the strategic calculations of the United States, China, Russia and India by reshaping regional alliances, defence partnerships and security dynamics. It may also encourage these powers to strengthen their diplomatic, military and economic engagement in West Asia.
4. **Risk of Militarisation:** Although the MJDA is defensive in nature, it could intensify regional arms competition, encourage counter-alliances, and deepen geopolitical rivalries. Increased military cooperation may contribute to bloc formation and make West Asia's already complex security environment more unstable.
5. **Increased Türkiye's Role in West Asia:** Turkey has sought a bigger role in West Asia for a very long time. The MJDA could enhance Türkiye's strategic influence in West Asia by expanding its defence cooperation with Saudi Arabia and Pakistan, strengthening its regional diplomatic leverage, and enabling Turkey to play a greater role in emerging security arrangements.
6. **Impact on Iran:** The agreement is widely seen as a direct "shield against Iran". It could alter Iran's strategic calculations by creating a stronger regional security grouping involving Saudi Arabia, Pakistan, and Türkiye. It may increase Iran's concerns over strategic encirclement, intensify regional competition, and influence its defence and diplomatic strategies.

What could be the implications of the Makkah Joint Defence Agreement for India's strategic interests?

1. **Impact on India-Saudi Arabia Relations:** India may need to carefully balance its growing strategic partnership with Saudi Arabia while managing its traditionally important relationship with the Gulf region.
2. **Implications for India's Gulf Interests:** The MJDA could affect India's energy security, trade, investments, and the welfare of its large diaspora in the Gulf. Any rise in regional tensions or militarisation may disrupt energy supplies, maritime trade routes, and economic stability as well as could have significant implications for the safety and economic well-being of this diaspora.

3. **Pakistan Factor:** Pakistan's participation in the MJDA could enhance its strategic relevance in the Gulf and may emerge as the West Asia security provider & mediator. Turkey and Pakistan already maintain tight military cooperation, with Turkey frequently backing Pakistan on regional issues like Kashmir and supplying advanced weapons. Formalizing Saudi Arabia into this fold risks giving Pakistan greater diplomatic leverage and institutional backing within the Islamic world.
4. **China Factor:** The MJDA could create opportunities for China to deepen its strategic engagement with Saudi Arabia, Pakistan, and Türkiye. China can use MJDA as a vehicle through which it could deepen the **Pakistan-Turkey-China defense axis** in the Gulf.
5. **Arms Supply Dynamics**: If joint ventures between Saudi Arabia, Türkiye, and Pakistan lead to advanced technology development, it might affect the qualitative military balance in the neighborhood, particularly concerning Pakistan's capabilities.
6. **Impact on Maritime Architecture:** The MJDA brings Turkish naval assets and Pakistani naval units into deeper joint operations across the Red Sea and Persian Gulf. An increased operational presence of Pakistani and Turkish naval platforms near critical choke points complicates the Indian Navy's posture as the primary "net security provider" in the Indian Ocean Region (IOR).

What should be India's strategic response to the Makkah Joint Defence Agreement (MJDA)?

1. **Protect Economic Leverage:** Emphasize India's role as Saudi Arabia's primary energy buyer and a key destination for Vision 2030 investments, ensuring Saudi Arabia understands that defense ties with Pakistan must not come at the expense of its economic partnership with India.
2. **Strengthen Maritime Security:** India should enhance naval presence, maritime-domain awareness, and security cooperation in the Arabian Sea and wider Indian Ocean Region to safeguard vital sea lanes, energy supplies, trade routes, and the security of its maritime interests. India must reinforce its standing as a primary "Net Security Provider" in the Indian Ocean Region (IOR).
3. **Diversify Energy Partnerships:** India should diversify its energy sources and suppliers, strengthen strategic petroleum reserves, and expand renewable energy to reduce vulnerability to geopolitical disruptions and ensure long-term energy security amid evolving security dynamics in West Asia.
4. **Protect the Indian Diaspora:** India should strengthen consular coordination, emergency-response mechanisms, and evacuation preparedness to safeguard the large Indian diaspora in West Asia during conflicts or instability, while ensuring uninterrupted access to essential services, employment opportunities, and secure channels of communication.
5. **Counterbalance China's Influence:** India should deepen strategic, economic and defence partnerships with Saudi Arabia, Türkiye and other West Asian countries to prevent excessive Chinese influence, strengthen its regional presence, protect strategic interests, and maintain a favourable balance of power in the region.

Conclusion: The Makkah Joint Defence Agreement marks a significant shift in West Asian security dynamics by strengthening collective defence and regional partnerships. For India, it underscores the need for strategic autonomy, diversified partnerships, maritime vigilance, and proactive diplomacy to safeguard its interests.

UPSC GS-3: International Relations
Read More: [The Hindu]

MSMEs – Significance & Challenges – Explained Pointwise

The Parliament has recently passed the **Micro, Small and Medium Enterprises Development (Amendment) Bill, 2026.** The Bull that amends the 2006 Act strengthens delayed-payment mechanisms, mandates greater use of TReDS, streamlines dispute resolution, and promotes ease of doing business for MSMEs.

What are MSMEs?

- **MSMEs**: MSME stands for **Micro, Small, and Medium Enterprises.** They are businesses classified by their size, based on investment in plant, machinery, or equipment and annual turnover. MSMEs are often called the backbone of the Indian economy because of their large contribution to employment and widespread geographical presence.
- **MSME Regulation in India**: MSMEs are regulated under the Micro, Small & Medium Enterprises Development (MSMED) Act, 2006. In 2007, the Ministry of Small Scale Industries and the Ministry of Agro and Rural Industries were merged to form the Ministry of Micro, Small & Medium Enterprises.
- The Micro, Small, and Medium Enterprises (MSME) sector is a crucial pillar of the Indian economy, contributing significantly to industrial output, employment generation, and exports. **Driven by formalisation**, **digital transformation** and **sustained policy interventions**, the sector continues to expand. It is strengthening its contribution to the economy while advancing the vision of **Aatmanirbhar Bharat** and **Viksit Bharat 2047.**

What is the role of MSMEs in India's economic growth?

1. **Job Creation & Livelihood Opportunities:** After agriculture, the MSME sector is the **largest employer** in India. They absorb unskilled, semi-skilled, and skilled labor, acting as a major safety net for India's growing workforce. Currently, more than 1 crore registered MSMEs employ nearly 7.5 crore people across the country.
2. **Contribution to GDP & Industrial Development:** MSMEs play a pivotal role in India's economic framework, accounting for around 30% of the GDP and 45% of the total manufacturing output. They play a crucial role in industrial clusters by supplying raw materials and intermediates to large industries.
3. **Rural Development:** 51% of MSMEs are located in rural areas. In contrast to large corporations, MSMEs have aided in the industrialization of rural areas at a low capital cost. The sector has made significant contributions to rural socio-economic growth while also supplementing major industries.
4. **Enhancing Exports & Foreign Exchange Reserves:** MSMEs contribute significantly to exports (accounting for 49% of total exports) by manufacturing a wide range of goods and services for international markets. They often specialise in niche products and cater to specific market demands, enhancing the country's export competitiveness and widening its global market reach. Schemes such as the Government e-Marketplace (GeM) and the Production-Linked Incentive (PLI) program have strengthened MSMEs' integration into global supply chains.
5. **Advancing Digital & Technological Innovations:** Initiatives like the Open Network for Digital Commerce (ONDC) are fostering digital transformation within the MSME sector. Currently, 72% of MSME transactions are conducted digitally, enhancing financial inclusion and operational efficiency.
6. **Social Inclusion:** According to the Annual Report of The Ministry of MSMEs (2021-22), the socially backward groups owned almost 66.27% of MSMEs. In rural areas, almost 73.67% of MSMEs were owned by socially backward groups.

Statement No. 2.4: Percentage Distribution of enterprises by social group of owner in rural and urban Areas.

Sector	SC	ST	OBC	Others	Not known	All
Rural	15.37	6.70	51.59	25.62	0.72	100.00
Urban	9.45	1.43	47.80	40.46	0.86	100.00
All	12.45	4.10	49.72	32.95	0.79	100.00

Source: Annual Report, Ministry of MSMEs (2021-22)

7. **Promoting Women & Social Entrepreneurship:** Women-led MSMEs are contributing to gender equality and economic empowerment. Under the Mudra Yojana, loans worth ₹32.36 lakh crore have been sanctioned, benefiting 51.41 crore entrepreneurs, with 68% of them being women.

Source: PIB

What are the various government initiatives for MSMEs?

1. **Revised Classification Criteria:** To help MSMEs scale operations and access better resources, the investment and turnover limits for classification have been increased by 2.5 times and 2 times, respectively.

Classification of MSMEs

Category	Investment in Plant & Machinery/ Equipment	Annual Turnover
Micro Enterprise	Up to ₹ 2.5 crore	Up to ₹ 10 crore
Small Enterprise	Up to ₹ 25 crore	Up to ₹ 100 crore
Medium Enterprise	Up to ₹ 125 crore	Up to ₹ 500 crore

Source: PIB

2. **Udyam Registration Portal:** A paperless, free digital portal for formalizing MSMEs, integrated with PAN and Aadhaar. It provides simplified, online registration giving MSMEs formal recognition, essential for availing benefits across schemes. The registrations under the Udyam Registration Portal and Udyam Assist Platform has crossed 8.7 Crore.
3. **Enhanced Credit Availability:**
   a. **Pradhan Mantri MUDRA Yojana (PMMY):** It was launched in April, 2015 for providing loans up to INR 10 lakh to the non-corporate, non-farm small/micro enterprises. It encompasses 3 financing loans: **Tarun** (loans up to INR 10 Lakhs), **Kishore** (loan up to INR 5 Lakhs), **Shishu** (loan up to INR 50,000).
   b. **Credit Guarantee:** The credit guarantee cover for micro and small enterprises has been increased from ₹5 crore to ₹10 crore, enabling an additional credit infusion of ₹1.5 lakh crore over five years.
   c. **Credit Cards for Micro Enterprises:** A customized Credit Card scheme to provide ₹5 lakh in credit to micro enterprises registered on the Udyam portal.
   d. **Credit Guarantee Trust Fund for Micro and Small Enterprises (CGTMSE)**: It provides collateral-free credit to the micro and small enterprise sector.
   e. **Special Credit Linked Capital Subsidy Scheme (SCLCSS)**: This scheme was launched to help the enterprises in the services sector meet various technology requirements. It also has a provision to grant 25% capital subsidy for procurement of plant & machinery and service equipment through institutional credit to MSMEs owned by SC/ST entrepreneurs without any sector specific restrictions on technology upgradation.
   f. **PMEGP (Prime Minister's Employment Generation Programme):** A credit-linked subsidy scheme aimed at creating employment. It provides subsidies ranging from 15% to 35% on bank loans for setting up new micro-enterprises (up to ₹50 lakhs for manufacturing and ₹20 lakhs for services).
   g. **Self- Reliant India (SRI) Fund:** Launched under the Aatmanirbhar Bharat package, the SRI Fund is a Fund of Funds (FoF) initiative aimed at providing **equity support to promising MSMEs.** It is helping them overcome funding constraints, scale operations and attract further

investment. The SRI Fund has assisted **761 MSMEs** by way of investment worth **₹2,851 crore** (as of May 2026).

4. **Raising and Accelerating MSME Performance (RAMP)**: The scheme aims at strengthening institutions and governance at the Centre and State, improving Centre-State linkages and partnerships and improving access of MSMEs to market and credit, technology upgradation and addressing issues of delayed payments and greening of MSMEs.

Source: PIB

5. **Skill Development:**
    a. **A Scheme for Promotion of Innovation, Rural Industry & Entrepreneurship (ASPIRE)**: The objectives of this scheme are to create new jobs, promote entrepreneurship culture in the country, and promote innovation in the MSME sector.
    b. **Entrepreneurship and Skill Development Programmes (ESDP)**: Under this, the Ministry of MSME has been organising several programmes focusing on the process of improving skills and knowledge of entrepreneurs, and enhancing the capacity to develop, manage and organise a business venture.
    c. **PM Vishwakarma Scheme:** Launched to support traditional artisans and craftspeople (like weavers, blacksmiths, and potters). It provides end-to-end support, including skill upgradation, toolkit incentives, collateral-free enterprise development loans, and digital transaction incentives.
6. **Scheme of Fund for Regeneration of Traditional Industries (SFURTI)**: The objectives are to organise traditional industries and artisans into clusters to make them competitive and provide support for their long-term sustainability, enhance marketability of products of such clusters, build innovative products, improve technologies etc.
7. **Entrepreneurship & Inclusion:**
    a. **Stand-Up India:** Loans of ₹10 lakh–1 crore to support women and SC/ST entrepreneurs in setting up new businesses.
    b. **First-Time Entrepreneurs Scheme:** Loans up to ₹2 crore and capacity-building for disadvantaged groups.

c. **PM Vishwakarma:** Focuses on enabling traditional artisans and crafts people through training and access to markets, with special financial support.

8. **Technology & Quality Upgradation:**
    a. **MSME Sustainable (ZED) Certification Scheme:** Encourages sustainable and high-quality manufacturing with incentives for adopting energy efficiency and zero-defect practices.
    b. **Credit Linked Capital Subsidy Scheme (CLCSS):** Supports technology upgradation for MSMEs to make them globally competitive.
    c. **MSME Champions Scheme:** An umbrella initiative helping small businesses modernize. It includes components like **Digital MSME** (promoting cloud computing and software adoption), **Lean Manufacturing** (reducing waste and increasing productivity), and **Design Clinics** (for product innovation).

Source: PIB

9. **Public Procurement Policy:** The government has mandated that Central Ministries, Departments, and Public Sector Undertakings (PSUs) must procure a **minimum of 25%** of their total annual purchases from MSEs (with specific sub-targets reserved for women and SC/ST entrepreneurs).
10. **SAMADHAAN Portal:** One of the biggest complaints of MSMEs is large buyers delaying payments. The MSME Samadhaan portal allows small entrepreneurs to directly file cases against buyers who delay payments beyond 45 days. Buyers are legally liable to pay compound interest at three times the bank rate notified by the RBI if they default.
11. **ONDC (Open Network for Digital Commerce):** A government-backed initiative aimed at breaking the monopoly of massive e-commerce platforms, allowing local micro-retailers and MSMEs equal access to digital consumer markets.
12. **MSME Cluster Development Programme (MSE-CDP)**: MSE-CDP seeks to transform individual small enterprises into competitive industrial ecosystems through shared infrastructure, technology, skills and collective action. The programme is implemented through two main types of projects:
    a. **Common Facility Centres (CFCs):** These are shared production and testing hubs established within a cluster to provide individual units with access to advanced technologies and services they cannot afford independently.
    b. **Infrastructure Development (ID) Projects**: Focuses on upgrading the physical infrastructure of industrial areas, such as power supply, roads, drainage, and the construction of new industrial estates or flatted factory complexes.

13. **PM MITRA Textile Park**: PM MITRA (Mega Integrated Textile Regions and Apparel) seeks to transform India's fragmented textile industry into globally competitive, integrated manufacturing ecosystems by bringing the entire textile value chain under one roof. The Government has approved **7 PM MITRA Parks** in **Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, Telangana, Uttar Pradesh and Gujarat.**

Digital Initiatives in the MSME Sector

- **Udyog Aadhar Memorandum**: It is a 1-page **online registration system** for MSMEs based on **self-certification**.
- **MSME Databank**: It enables the Ministry of MSME to **streamline and monitor the schemes** and pass on the benefits directly to MSMEs. MSMEs can update their enterprise information as and when required.
- **MY MSME**: It is a web-based application module in the form of a mobile app to facilitate the MSMEs to enjoy benefits of various schemes.
- **MSME *Sampark***: It is a digital platform wherein jobseekers (students or trainees of MSME Technology Centres) and recruiters can register themselves for mutually beneficial interactions.
- **MSME *Sambandh***: For effective implementation of the Public Procurement Policy, Central Ministries and Public Sector Enterprises (CPSEs) must procure 25% annual procurement from MSEs. The Ministry of MSME has launched MSME Sambandh.
- **MSME *Samadhaan***: This portal gives information about pending payments with the Central Ministries, State Governments, with respect to micro and small enterprises (MSEs).
- **MSME *Sambhav***: It is a national-level awareness programme to push economic growth by promoting entrepreneurship and domestic manufacturing.
- **Grievance Monitoring**: The Ministry of MSME has started an **MSME internet grievance monitoring system** (e-Samadhan) to help track and monitor the grievances and suggestions.

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What are the challenges faced by the MSME Sector?

1. **Lack of Formalisation**: Almost 86% of the country's manufacturing MSMEs are unregistered. Only about 1.1 crore of the 6.3 crore MSMEs are registered with the Goods and Services Tax (GST) regime, and the number of income tax filers is even lower. As a result of limited availability and access to data, as well as legacy underwriting methods, the credit requirements of Indian MSMEs have largely gone unmet.
2. **Access to Technology**: The majority of MSMEs use outdated technology that prevents them from keeping up with the modern world. Adoption of new technology and training employees is difficult and expensive, especially in manufacturing where both physical equipment and software are involved. Another significant factor is a lack of awareness, which reduces willingness to invest in advanced technology solutions.
3. **Regulatory and Compliance Burden:** Small businesses frequently struggle with navigating complex and overlapping legal, taxation, and environmental regulations. The resources and time required to manage these compliance tasks can drain a small firm's operational capacity.
4. **Cumbersome Registration Process:** Lengthy registration procedures and inefficient single-window clearance systems create bureaucratic hurdles for MSMEs, delaying their formalization and operational setup.
5. **Lack of Awareness About Government Schemes:** Many MSMEs struggle to navigate the complex landscape of government schemes due to inadequate awareness and poor coordination between the Centre and States.

6. **Financial Constraints:** Limited access to institutional finance, stringent collateral requirements, and high interest rates make it difficult for MSMEs to secure the funds necessary for expansion and modernization.
7. **Delayed Payments**: Large corporate buyers and Public Sector Undertakings (PSUs) frequently delay paying their MSME vendors far beyond the legally mandated 45-day limit. Although the **MSME Samadhaan** portal exists, many small suppliers hesitate to legally pursue large clients for fear of being blacklisted or losing future contracts.
8. **Export-Related Challenges:** Poor infrastructure, inadequate trade facilitation, and difficulty in meeting Environmental, Social, and Governance (ESG) standards restrict MSME participation in global markets.
9. **Labour Shortages and Skill Gaps:** A lack of skilled workers, wage disparities across regions, and inefficient training centers result in low productivity and reduced competitiveness for MSMEs.
10. **Marketing and Supply Chain Issues:** Smaller enterprises often have limited marketing budgets and lack the expertise to build strong brand identities. Furthermore, they struggle to penetrate distribution networks and supply chains, which are typically dominated by larger businesses.

What are the key provisions of the Micro, Small and Medium Enterprises Development (Amendment) Bill, 2026?

1. **Strengthening the delayed-payment mechanism**: Seeks to make the mechanism for resolving payment disputes involving MSMEs faster and more effective. This is aimed at improving the cash flow and liquidity of MSMEs, which often face working-capital constraints because of delayed payments.
2. **Time-bound resolution of disputes**: Proceedings before the Micro and Small Enterprises Facilitation Council (MSEFC) are proposed to be streamlined. The Amendment introduces strict timelines for dispute processing, requiring mediation to be completed within **90 days** and arbitral awards to be finalized within **90 days**.
3. **Enforcement of arbitral awards**: Provides a mechanism for the enforcement of arbitral awards relating to micro and small enterprises. This seeks to ensure that favourable awards translate into actual recovery rather than remaining stuck in prolonged legal proceedings.
4. **Greater flexibility for MSEFCs**: States will get greater flexibility to determine the composition of the Micro and Small Enterprises Facilitation Councils. The amendment also enables the creation of more MSEFCs, which can help reduce the geographical and institutional burden on existing councils and expedite dispute resolution.
5. **Decriminalisation and simpler compliance**: Certain procedural/compliance-related defaults are sought to be treated more proportionately, reducing the possibility of criminal penalties for minor or technical violations and encouraging formalisation.
6. **Updating the MSME framework**: Authorizes the Central Government to notify and periodically revise investment and turnover criteria via gazette notifications as economic conditions evolve, bypassing the need for legislative amendments each time.
7. **Permanent Digital Framework:** Formalizes the **Udyam Registration Portal** as a permanent, paperless, voluntary, and free digital framework for enterprise management and scheme access.
8. **Mandatory TReDS settlement for CPSEs**: Central Public Sector Enterprises (CPSEs) and eligible government buyers are mandated to settle invoices through an RBI-authorised Trade Receivables Discounting System (TReDS) platform.

What should be the way forward?

1. **Strengthening Credit Access & Financial Support:**
   - Expand collateral-free lending via fintech platforms and alternative credit assessment models.

- Enhance the role and reach of MUDRA and SIDBI to facilitate easier credit access.
- Develop tailored fintech solutions and promote financial literacy programs for MSMEs.

2. **Reducing Compliance Burden & Regulatory Bottlenecks:**
   - Implement single-window clearance for faster approvals and streamlined processes.
   - Simplify GST registration and reduce the frequency of regulatory amendments to ensure ease of doing business.
3. **Enhancing Digital & Technological Adoption:**
   - Expanding schemes like RAMP to provide direct, hassle-free subsidies for green energy adoption (like solar rooftops), smart manufacturing tools, and cloud-based inventory management.
   - Facilitate adoption of AI, IoT, and automation through MSME technology hubs.
   - Launch Digital MSME 2.0 to improve cybersecurity, cloud computing access, and digital marketing capabilities.
   - Strengthen the Credit Linked Capital Subsidy Scheme (CLCSS) to support MSMEs investing in advanced technologies.
   - Promote MSME Innovation & Incubation Hubs in collaboration with academic and research institutions.
4. **Workforce Development & Skilling Initiatives:**
   - Ensure uniform labor wages and introduce affordable labor insurance schemes for MSME employees.
   - Align skill training programs under Skill India, PMKVY, and NAPS to address MSME workforce needs.
   - Promote women entrepreneurs through targeted vocational training and credit linkage schemes.
5. **Infrastructure Development & Cluster-Based Growth:** The cluster-based development approach can help MSMEs achieve economies of scale through shared infrastructure, technology, skills and market access. It can help geographically concentrated MSMEs producing similar or complementary products (e.g. Tiruppur knitwear, Ludhiana auto components, Surat textiles) to tackle structural vulnerabilities together rather than individually.

Case studies:

North Carolina Research Triangle	● The North Carolina Research Triangle is a prominent innovation cluster in the United States, centred around **Raleigh**, **Durham** and **Chapel Hill**. ● Anchored by universities (**Duke University, NC State University & UNC Chapel Hill**), research institutions and technology companies, it promotes collaboration, innovation, entrepreneurship & skilled employment – that helped in building biotechnology & pharmaceutical ecosystems by connecting research with industry.

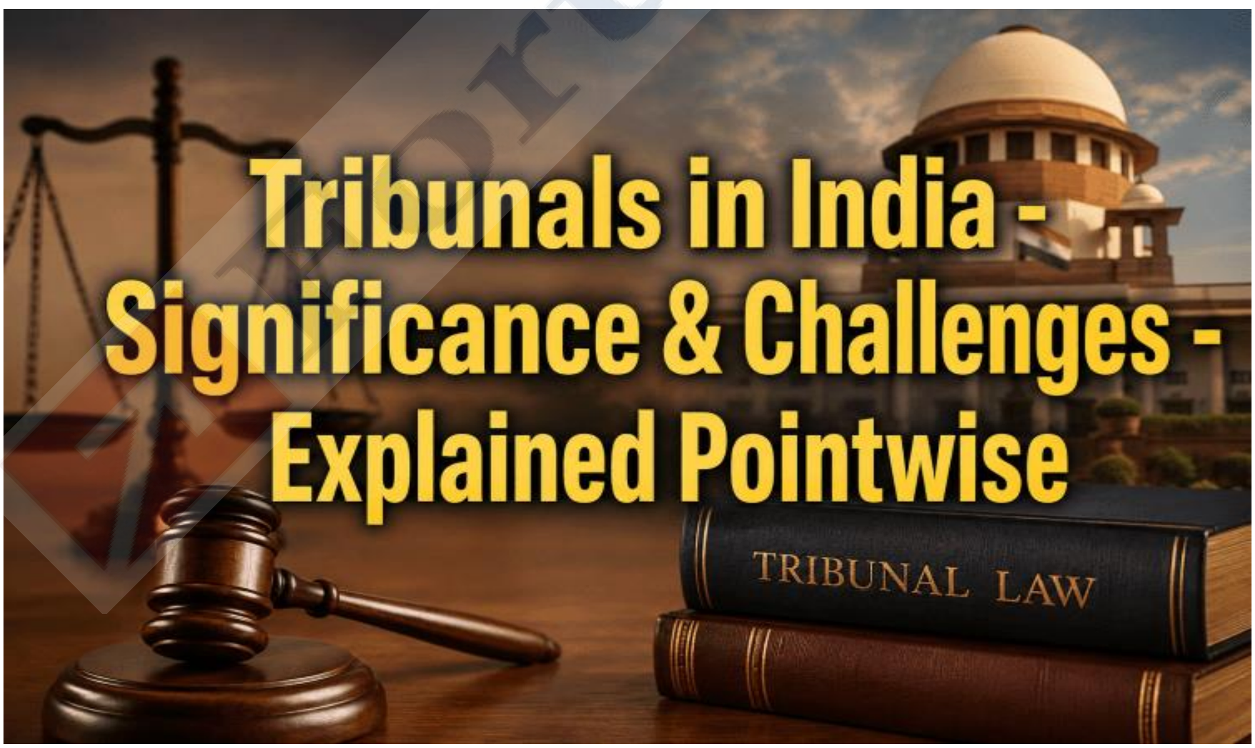
"Little Giant" Programme	● China's "**Little Giants**" refers to a state-backed initiative to identify and nurture specialized small and medium-sized enterprises (SMEs). ● It focuses on technically strong small firms that operate in narrow, specialized niches (often called "**hidden champions**"). These selected firms receive targeted help, including dedicated financing, tax support, and research and development (R&D) assistance. ● This policy is a key part of China's strategy to build deep industrial strength by creating dense, interconnected ecosystems.

Conclusion:

MSMEs can play a vital role in growth of the economy as India enters the **Amrit Kaal** phase. They can help in inclusive and balanced development and make India a global manufacturing hub. The Government has been supporting the MSMEs through various initiatives, the need is to focus on the implementation and realizing the outcomes.

UPSC GS-3: Economics
Read More: PIB, Indian Express

Tribunals in India – Significance & Challenges – Explained Pointwise



Recently, Parliament passed the Tribunals Reforms Bill, 2026, providing for an independent National Tribunals Commission (NTC) to oversee the appointments, administration and functioning of 16 major tribunals. This article examines the constitutional framework, historical evolution, significance, challenges for tribunals in India.

What are Tribunals, and what are their key characteristics?

- Tribunal is a specialized, quasi-judicial body established to resolve specific disputes, such as administrative or tax-related issues. It adjudicates disputes, determines rights, and reviews administrative decisions.
- They serve as alternatives to traditional courts and specialize in providing faster, cost-effective, and expert resolutions for particular kinds of cases.
- **Objective:** Tribunals reduce the burden on regular courts and provide specialized dispute resolution that is swift, efficient, and accessible.

Key Characteristics:

- **Quasi-judicial nature**: Tribunals exercise judicial power but aren't part of the traditional court hierarchy (though they perform similar functions).
- **Specialization:** They deal exclusively with matters requiring specific, domain-based expertise (e.g. tax, telecom, or electricity).
- **Faster Disposal:** They aim to offer a quicker and more efficient resolution mechanism than the regular civil courts.
- **Procedural flexibility**: They are not bound by the strict rules of evidence and procedure under the CPC (Civil Procedure Code). However, they follow principles of natural justice instead, making proceedings faster and less formal than regular courts.
- **Statutory creation**: Each tribunal is created by a specific Act of Parliament or State Legislature (not directly by the Constitution) for e.g. CAT under the Administrative Tribunals Act 1985, NGT under the National Green Tribunal Act 2010, ITAT under the Income Tax Act.
- **Composition:** They typically include both judicial members (retired judges or lawyers) and administrative/technical members who possess specialized knowledge in the relevant field.
- **Subject to Judicial Review**: In **L. Chandra Kumar v. Union of India (1997)**, the Supreme Court held that tribunal orders are subject to judicial review by High Courts under Article 226/227, striking down provisions that excluded High Court jurisdiction.

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

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

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

Provisions	**Description**

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

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

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

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

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

What are the key developments in the Indian tribunal system?

Pre-Independence Era (Before 1947)	The **Income Tax Appellate Tribunal (ITAT)** was established as India's first tribunal to reduce court workload and expedite tax dispute resolution
Post-Independence Era (1947-1980)	**1950**: Industrial Disputes (Appellate Tribunal) Act provided for an appellate tribunal to handle industrial disputes. **1969**: The **First Administrative Reforms Commission** recommended Civil Services Tribunals at national and state levels for service-related disputes. **1974**: The **Sixth Law Commission** suggested high-powered tribunals to reduce High Court case backlogs. **1976**: The **Swaran Singh Committee** recommended setting up: a. **Administrative Tribunals** ((both at national level and state level) for service-related cases. b. **All-India Appellate Tribunal** for labor disputes. c. **Sector-specific tribunals** for revenue, land reforms, and essential commodities. d. Supreme Court oversight for tribunal decisions.
Golden Era of Tribunalization (1980-2000)	Establishment of several tribunals, including: **a. Central Administrative Tribunal (CAT)** – for administrative matters. **b. Securities Appellate Tribunal (SAT)** – for financial sector disputes. **c. Film Certification Appellate Tribunal** – for film certification disputes. **d. Appellate Tribunal for Electricity** – for tariff-related cases.
2000-2016: Expansion of Tribunals	**2000**: **Debt Recovery Tribunal (DRT)** – for resolving disputes between banks and borrowers. **2002**: **Competition Commission of India (CCI)** and **Competition Appellate Tribunal (COMPAT)** – to regulate fair competition. **2010**: **National Green Tribunal (NGT)** – for environmental disputes. **2016**: **National Company Law Tribunal (NCLT)** & **National Company Law Appellate Tribunal (NCLAT)** – for corporate and insolvency matters.
2017- Merger of COMPAT with NCLAT	**Finance Act 2017** reduced the number of tribunals from 26 to 19 based on functional similarity. It gave the central government authority to define qualifications, appointments, and service conditions for tribunal members.

Tribunal Reforms Act 2021	The Tribunals Reforms (Rationalization and Conditions of Service) Bill, 2021 aimed to streamline the tribunal system. Nine tribunals were abolished, transferring their functions to existing judicial bodies, mainly High Courts.
Tribunals Reforms Bill 2026	The **Tribunals Reforms Bill, 2026** was introduced to repeal the **Tribunals Reforms Act, 2021**. The 2021 Act provides for appointments and terms and conditions of service for various Tribunals. The Bill seeks to provide for these matters in consonance with the directions of the Supreme Court. Certain provisions of the 2021 Act were struck down by the Supreme Court for contradicting the principles of separation of powers and the independence of judiciary.

What are the key provisions of the Tribunals Reforms Bill, 2026?

National Tribunals Commission	1. **National Tribunals Commission (NTC):** The Bill establishes the National Tribunals Commission. Its functions include: i. Conducting the selection process for filling vacancies in Tribunals. ii. Reviewing performance of Tribunals. iii. Overseeing inquiries into complaints against the conduct of chairpersons or members of the Tribunals iv. Developing and maintaining the National Tribunals Data Grid. 2. **Composition of the Commission:** The Commission will consist of: i. A **Chairperson**, who has been a Judge of the Supreme Court or a Chief Justice of a High Court, ii. **Two judicial members**, who have been a Chief Justice or Judge of a High Court iii. **Two technical members**. The technical members must have at least 25 years of experience in the fields of public administration, finance, law, accountancy, banking, management, or technology. 3. **Appointment**: Appointments to the Commission will be made by the central government. Appointments of the chairperson and judicial members must be made after consultation with the Chief Justice of India. 4. **Tenure of Chairperson & Members**: The chairperson and members of the Commission will hold office for a term of five years, or until the age of 70 years, whichever is earlier. 5. **Secretariat**: The Commission will have a secretariat, headed by a secretary of the central government. The Secretariat serves as the administrative support system for the National Tribunals Commission.

Selection process for Tribunals	1. **Search-cum-selection Committee**: The Commission will constitute a search-cum-selection committee to recommend appointment to a Tribunal. The Committee will be headed by: (i) the chairperson of the Commission in case of appointment of a chairperson of a Tribunal, (ii) a judicial member of the Commission in case of a member. For each vacancy, the Committee will recommend one name for appointment, and one additional name in the waiting list. The central government must make an appointment within three months from the recommendation. 2. **Members of the Committee**: The chairperson of the Commission will nominate to the Committee a retired: (i) Chief Justice of a High Court in case of appointment of a chairperson of a Tribunal, or (ii) Judge of a High Court in case of a member. Other members of the Committee will include: (i) a technical member of the Commission, (ii) a secretary of the government nominated by the central government, (iii) two expert members, and (iv) the Commission Secretary. 3. **Voting Power**: Expert members and the Commission Secretary will not have any vote. The chairperson of the Committee will have a casting vote.
Tribunals	1. **Term of office**: Chairpersons and members of Tribunals will hold office for five years, or until a specified age limit, whichever is earlier. Age limit will be 70 years for chairpersons, and 67 years for members. 2. **Re-appointments**: Chairpersons and members of Tribunals may be considered for re-appointment subject to: (i) consideration of previous work performance, and (ii) in case of a member, consultation with the chairperson of the concerned Tribunal. 3. **Removal of members:** The central government may remove a chairperson or member of the Commission or a Tribunal from office if the person: (i) is adjudged insolvent, (ii) is convicted of an offence involving moral turpitude, (iii) has become physically or mentally incapable, (iv) has abused his position, or (v) has acquired financial or other interest which is prejudicial to functions. In case of Tribunal chairpersons and members, additional grounds for removal include: (i) found to be incompetent or inefficient, or (ii) engaging in paid assignment. 4. **Terms of appointment and service:** The central government will prescribe through Rules: (i) qualifications, (ii) manner of selection, (iii) salaries and allowances, (iv) resignation, removal, and other conditions of service. 5. **Applicability**: The common rules for selection, tenure, and conditions of service apply uniformly across **16 major tribunals** listed in the First Schedule, which include – Central Administrative Tribunal (CAT), Income Tax Appellate Tribunal (ITAT), National Green Tribunal (NGT), National Company Law Appellate Tribunal (NCLAT) etc.

What is the significance of tribunals in the Indian judicial system?

1. **Speedy Justice:** Tribunals are designed to offer faster dispute resolution compared to traditional courts for e.g. The Consumer Disputes Redressal Commissions resolve cases within 3-6 months, NCLT expedited cases under the Insolvency and Bankruptcy Code (IBC), 2016, ensuring faster debt recovery.
2. **Specialized Expertise:** Tribunals were designed to handle complex, sector-specific disputes requiring technical expertise for e.g. Power sector (APTEL), taxation (ITAT), corporate law (NCLAT), copyright (IPAB). **National Green Tribunal (NGT)** includes environmental experts, enabling the bench to interpret complex environmental impact assessments without relying solely on external expert testimony.
3. **Reducing Court Burden:** By handling specialized cases, tribunals reduce the workload of high courts and the Supreme Court for e.g. Central Administrative Tribunal (CAT) has significantly reduced litigation burden in service-related disputes.
4. **Procedural Flexibility**: Traditional courts are bound strictly by the technicalities of the Code of Civil Procedure, 1908 (CPC) and the Indian Evidence Act, 1872. However, tribunals are not bound by the strict rules of evidence and procedure under the CPC. Freedom from strict procedural codes allows for rapid hearings, written arguments, and expedited orders.
5. **Economic Governance**: Tribunals like the NCLT and DRT play a critical role in ensuring economic stability and ease of doing business for e.g. Creditors have recovered approximately Rs 3.55 lakh crore by resolving 1,068 insolvency cases under the IBC, 2016, as of September 2024 since 2016**.**
6. **Environmental Protection & Protecting Fundamental Rights**: The National Green Tribunal (NGT) has played a pivotal role in environmental protection cases like the Vizag Gas Leak (2020)**.** It is also instrumental in addressing environmental issues, such as the Yamuna pollution case and illegal mining in Aravalli Hills.
7. **Cost-Effective and Accessible Justice:** Tribunals provide a cost-effective and accessible forum for resolving disputes, especially for marginalized groups.
8. **Alternative Dispute Resolution (ADR):** Tribunals provide an alternative dispute resolution mechanism, which can be less adversarial and more conducive to finding mutually agreeable solutions.

What are various challenges faced by Tribunals in India?

1. **Case Backlogs Rising**: Instead of reducing court burdens, tribunals have developed massive pendencies of their own. Key commercial tribunals. As of 2025, over **3.56 lakh cases**, worth **₹24.72 lakh crore** (about 7.5% of India's GDP), were pending across key commercial tribunals, with cases like company law matters taking an average of **752 days** to conclude, more than double the statutory limit.
2. **Chronic Vacancies**: As of late 2025, roughly 18% of sanctioned tribunal member posts (94 of 518) were vacant. Prolonged vacancies directly undermine the "speedy justice" rationale tribunals were created for, since benches can't function at full strength.
3. **Inadequate Physical & Digital Infrastructure**: The tribunals suffer from a massive infrastructure deficit, with many operating from rented, dilapidated premises. They also lack a modern, unified digital case management system, leading to fragmented and unreliable data.
4. **Judicial Overreach**: The Supreme Court's intervention in the Telecom Disputes Settlement and Appellate Tribunal (TDSAT) ruling on the Adjusted Gross Revenue (AGR) dispute has raised questions about the legal standing of tribunals.
5. **Appointment Concerns**:
    a. **Post-Retirement Placements:** Tribunals are often criticized for becoming "retirement homes" for former civil servants and public sector officials.

b. **Dilution of Specialization:** Rather than bringing in cutting-edge private-sector experts or domain specialists, technical posts are overwhelmingly filled by generalist bureaucrats who may lack deep legal training or specialized technical knowledge.

c. **Control Over Appointments & Tenure:** Executive control over appointment criteria, search-cum-selection committees, and short service tenures creates potential bias and undermines the principle of **separation of powers.**

6. **Conflict of Interest:** In most cases before administrative, tax, or regulatory tribunals, the State is the primary respondent/litigant. However, tribunals historically depend on their respective parent ministries for funding, office space, staff, and logistics.
7. **Lack of Uniformity:** Different tribunals follow varying procedures, leading to inconsistency. For instance, the Armed Forces Tribunal (AFT) and Central Administrative Tribunal (CAT) have different rules for evidence submission.
8. **Ineffective Implementation**: The appointment process for tribunal members is slow and opaque, leading to prolonged vacancies. For e.g. The Law Commission's 272nd Report (2017) recommended a central nodal agency, but no progress has been made.
9. **Economic Impact:** Delays in tribunal decisions have significant economic consequences. For e.g. unresolved tax disputes worth ₹12 lakh crore are pending before various tribunals, affecting government revenue and investor confidence.
10. **Dilution of Specialization:** Rather than bringing in cutting-edge private-sector experts or domain specialists, technical posts are overwhelmingly filled by generalist bureaucrats who may lack deep legal training or specialized technical knowledge.
11. **Prolonged Dispute Life Cycle:** Instead of offering finality, tribunal orders are frequently challenged in High Courts and subsequently the Supreme Court, effectively creating an extra layer of litigation rather than speeding up final resolution.
12. **Mergers and Abolitions Causing Hindrance**: The merger of tribunals like COMPAT with NCLAT has led to overburdened benches and loss of specialization.

What is the significance of the reforms proposed under the Tribunals Reforms Bill, 2026?

1. **Elimination of Conflict of Interest**: By transferring administrative, selection, and oversight functions to the independent, judicially-led National Tribunals Commission (NTC), the Bill decouples tribunals from executive ministries.
2. **Compliance with Constitutional Principles:** The Bill directly addresses the Supreme Court's directives in the landmark Madras Bar Association rulings, bringing the tribunal architecture into full alignment with the basic structure doctrine regarding judicial independence.
3. **Strict Statutory Timelines:** The Bill enforces a mandatory **3-month deadline** for the Central Government to finalize and issue appointments after receiving NTC recommendations. The NTC secretariat is required to transmit recommendations to the government within **3 days**, removing bureaucratic bottlenecks.
4. **Uniform and Secure Tenure:** It provides for a fixed, uniform 5-year tenure for Chairpersons (up to age 70) and Members (up to age 67), removing the executive's power to grant short, insecure terms that could influence tribunal decisions.
5. **Modernisation of Governance:** It sets the stage for a modern, uniform tribunal ecosystem with clear service conditions, promoting "ease of justice" and "ease of doing business".

What are the major concerns surrounding the Tribunals Reforms Bill, 2026?

1. **Centralisation of tribunal administration:** The proposed National Tribunals Commission (NTC) could concentrate substantial administrative powers at the central level, raising concerns about excessive centralisation.
2. **Executive Influence Remains**:
    a. **Presence of Executive Members on Selection Panels:** Search-cum-Selection Committees set up by the NTC still include Secretaries nominated by the Central Government. This could dilute the independence of candidate evaluations.
    b. **Executive influence over tribunal members:** The role of the government in determining the qualification, manner of selection, salaries, allowances and other service conditions of tribunal members remains a concern.
3. **Bureaucratic Over-Representation:** Technical members on the NTC require at least 25 years of experience in fields such as public administration, finance, or law. This condition favors senior, retired civil servants, potentially perpetuating the "bureaucratization" of tribunals rather than recruiting the technical domain experts.
4. **Re-appointment Clause:** The Bill allows tribunal members to be considered for re-appointment based on performance evaluations and administrative reviews. Enabling re-appointments could create incentives for tribunal members to favor government litigants toward the end of their terms in hopes of securing a second tenure.
5. **Data privacy concerns:** The proposed **National Tribunals Data Grid**, while useful for monitoring pendency and performance, raises questions regarding data security, access and privacy.

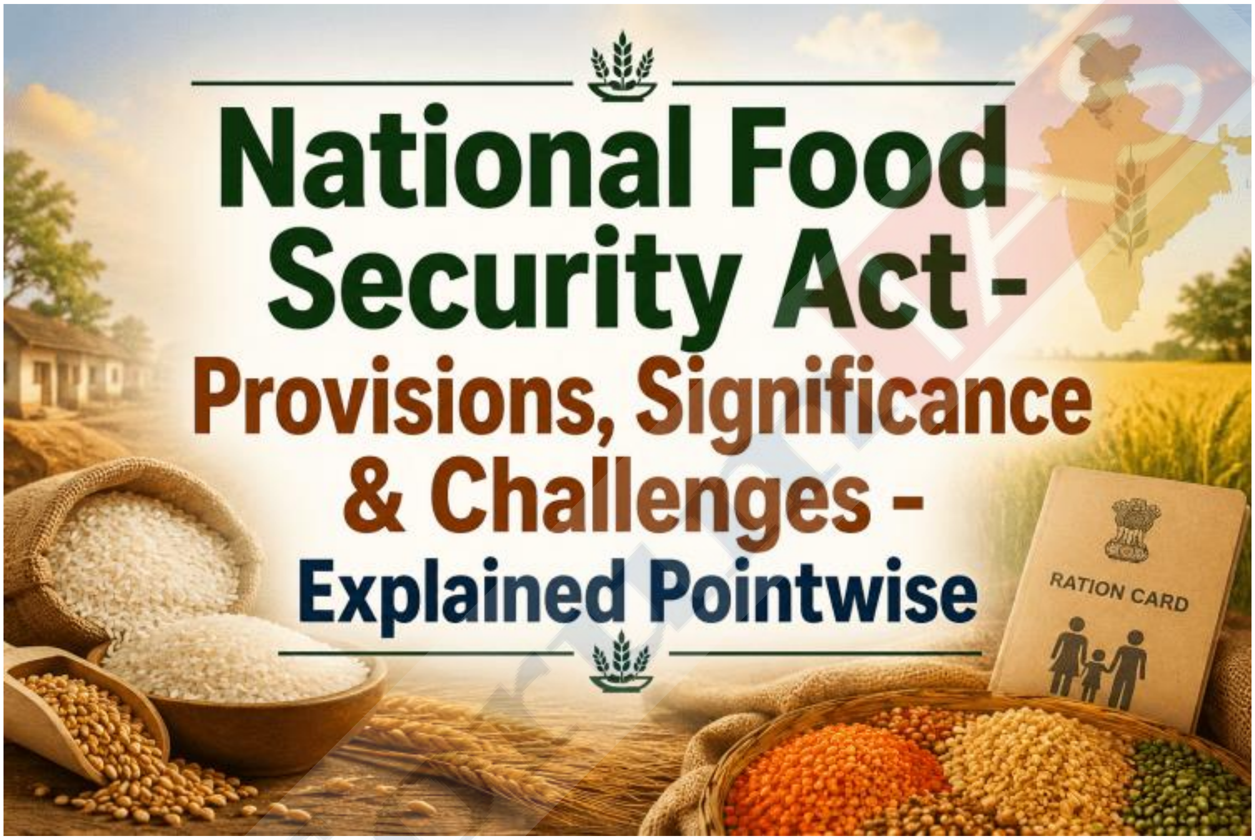
What should be the way forward?

1. **Structured Tribunal Management System:** A Central Tribunal Division within the Ministry of Law and Justice should be implemented to streamline operations**.** Case management technology and AI-based analytics should be deployed to track tribunal performance.
2. **Implement a Double-Shift System to Expedite Disposal:** To clear the backlog, tribunals should operate in two shifts, a proposal discussed in 2011 but never implemented. This would increase case disposals without increasing infrastructure costs.
3. **Strengthen the Specialization and Independence of Tribunals:** Instead of appointing retired bureaucrats, tribunals must have domain-specific technical panels to ensure subject matter expertise. Reduce judicial interventions by strengthening tribunal autonomy under the Tribunals Reforms Act**.**
4. **Digital Transformation of Tribunals:** Fully digitalize tribunal processes through an e-Tribunals initiative, ensuring real-time case tracking. Integrate online dispute resolution (ODR) mechanisms to reduce case inflow into traditional tribunals. **E.g.** The UK's HM Courts & Tribunals Service.
5. **Minimizing Executive Control:** The legislature should reduce bureaucratic control over tribunal functioning, as recommended in Rojer Mathew (2019) case.
6. **Enhancing Judicial Autonomy:** Ensure tribunals operate with minimal interference from higher courts, as emphasized in the L. Chandra Kumar vs Union of India (1997) case.

Conclusion: Tribunals play a critical role in India's legal system by combining judicial powers with technical expertise to resolve disputes efficiently in domains requiring specialized knowledge. The decisions of these tribunals are generally subject to judicial review by the relevant High Court, and ultimately the Supreme Court. They serve as essential pillars of an effective governance system that requires specialized mechanisms for complex regulatory issues.

Read more: [PRS](), [The Hindu]()
UPSC Syllabus- GS 2– Quasi-judicial bodies

National Food Security Act – Provisions, Significance & Challenges – Explained Pointwise



India's journey towards food security reached a significant milestone with the enactment of the National Food Security Act (NFSA) 2013, transforming the "right to food" into a legal entitlement and marking a shift from a welfare to a rights-based approach.
Recently, the **Department of Food and Public Distribution** proposed the **Draft National Food Security (Amendment) Bill, 2026**. It seeks to change the Antyodaya Anna Yojana (AAY) entitlement from a flat **35 kg per household per month** to **7 kg per person per month**, subject to a maximum household ceiling of 35 kg.

What is the National Food Security Act (NFSA), 2013?

- The National Food Security Act 2013 was enacted with the objective of providing food and nutritional security by ensuring access to adequate quantity of quality food at affordable prices for people to live a life with dignity.
- Under NFSA, the government is obliged to give subsidized foodgrains every month to the beneficiaries identified by each state government based on the economic status of households.

- The Act covers up to **75% of the rural population** and up to **50% of the urban population** for receiving subsidized food grains under the Targeted Public Distribution System (TPDS), thus covering about two-thirds of the population.

What are the key provisions of the National Food Security Act?

1. **Centre-State responsibilities**: The Centre is responsible for allocating foodgrains from the central pool, while States/UTs identify beneficiaries and implement the Targeted Public Distribution System (TPDS).
2. **Identification of Beneficiaries:** The identification of eligible households is done by the State Governments, adhering to inclusion/exclusion criteria set by the central government.
3. **Two categories of beneficiary households:**
    a. **Antyodaya Anna Yojana (AAY):** AAY households receive 35 kg of foodgrains monthly.
    b. **Priority Households (PHH):** Each PHH member gets 5 kg of foodgrains monthly, including rice at Rs 3/kg, wheat at Rs 2/kg, and coarse grain at Rs 1/kg.
4. **Nutritional Support for Children:** Children between 6 months and 14 years receive nutritious, free meals through the Integrated Child Development Services (ICDS) and Mid-Day Meal (MDM) schemes.
5. **Maternity Entitlement:** Pregnant women and lactating mothers are entitled to a maternity benefit of at least ₹6,000 for six months to partially compensate for wage loss and ensure nutritional support.
6. **Food security allowance**: If entitled foodgrains or meals are not supplied, beneficiaries have a right to receive a food security allowance from the concerned government.
7. **Women empowerment**: The eldest woman aged 18 years or above in an eligible household is to be treated as the head of the household for the purpose of issuing ration cards.
8. **Grievance Redressal Mechanism:** The Act mandates a 3-tier grievance redressal mechanism, including an internal mechanism (like helplines), a **District Grievance Redressal Officer (DGRO)**, and a **State Food Commission** to handle complaints and monitor implementation.
9. **Transparency and accountability**: Requires disclosure of TPDS records, **social audits**, and the establishment of **vigilance committees.**

Amendments proposed by the Draft National Food Security (Amendment) Bill, 2026:

1. **Per-person entitlement for AAY households**: Presently, every AAY household is entitled to **35 kg of foodgrains per month**, irrespective of household size. The draft Bill proposes to **provide 7 kg of foodgrains per person per month** to every member of an AAY household.
2. **35 kg household ceiling retained**: The amendment proposes a maximum entitlement of **35 kg per AAY household per month.**
3. **State-wise specification**: The exact extent of entitlement would be **specified by the Central Government for each State** under the AAY scheme.

What is the significance of the National Food Security Act?

1. **Philosophical Shift – From Welfare to Rights:** The most profound change brought by the NFSA is its rights-based approach. Previously, food distribution was a matter of government policy, but the Act legally obligates the state to ensure the food security of its citizens. By explicitly stating that food access is a legal right for two-thirds of the population, the NFSA ensures that the government is legally obligated to provide subsidized food grains. This allows citizens to seek judicial recourse if entitlements are denied.

2. **Unprecedented Reach:** By covering up to **67% of the total population** (75% of rural and 50% of urban residents), NFSA serves as one of the largest safety-net programs in human history, protecting nearly 800 million people.
3. **Food & Nutritional Security:** Through the Public Distribution System (PDS), the Act ensures monthly entitlements of rice, wheat, and coarse grains at highly subsidized rates to nearly 800 million beneficiaries. By guaranteeing affordable access to staples, the NFSA combats undernutrition and food insecurity among the poor.
4. **Enhanced Social Inclusion:** The Act prioritizes marginalized sections, including SC/STs, women, and children, helping to address inequality. It also ensures women's empowerment with provisions for female household heads as ration card holders.
5. **Poverty Reduction:** The assured supply of foodgrains acts as a form of income transfer. By reducing household expenditure on essential food items, it frees up a significant portion of the income of poor families, allowing them to spend on education, health, and other needs. This indirectly aids in poverty reduction.
6. **Child Nutrition:** Integrating Anganwadi services and the Mid-Day Meal scheme (PM-POSHAN) ensures continuous nutritional support from age 6 months through Class VIII, boosting school attendance, cognitive development, and child health outcomes.
7. **Women's Empowerment**: The Act explicitly mandates that the eldest woman in a household (aged 18 or older) be designated as the official Head of Household on ration cards. This gives women direct control over household food supplies and financial decisions within the family unit.
8. **Anchors SDG commitments:** The NFSA supports India's commitment to **Sustainable Development Goal 2 (Zero Hunger)** by ensuring access to adequate food and nutrition, while also contributing to poverty reduction by protecting vulnerable households from food insecurity and strengthening social protection mechanisms.
9. **Crisis Management:** During national crises, such as the COVID-19 pandemic, the NFSA mechanism allowed the government to immediately scale up distribution (e.g. through schemes like PMGKAY), ensuring no person went hungry when livelihoods were lost. The existing buffer stock and distribution network were instrumental in this massive relief effort.
10. **Driver of PDS Reforms & Accountability:** The NFSA necessitated and accelerated long-pending reforms in the Public Distribution System (PDS), drastically improving its efficiency and reducing leakage such as:
    - **Technology Integration:** The mandate for effective delivery led to the widespread adoption of e-PDS (electronic PDS), including Aadhaar linking and the use of Point of Sale (PoS) devices at Fair Price Shops. This has significantly eliminated "ghost" beneficiaries and reduced the diversion of grains.
    - **Structural Accountability:** The Act introduces statutory grievance officers (DGROs), State Food Commissions, and compulsory social audits to reduce leakages, corruption, and exclusion errors in the Targeted Public Distribution System (TPDS).
    - **Portability (ONORC):** The success of the NFSA is closely tied to the One Nation, One Ration Card (ONORC) scheme, which ensures that NFSA entitlements are portable. This means a beneficiary can collect their subsidized food grains from any Fair Price Shop (FPS) across the country, hugely benefiting migrant workers.

What are the major limitations of the National Food Security Act?

1. **Leakages and diversion in PDS:** Despite Aadhaar-linking and ePoS machines, diversion of foodgrains from the Public Distribution System to the open market remains a persistent problem in several states.

2. **Quality of Foodgrains:** Storage inefficiencies in Food Corporation of India (FCI) godowns often result in damaged, pest-infested, or poor-quality foodgrains reaching beneficiaries.
3. **Fiscal Burden and Sustainability:** The shift to free foodgrain distribution (merging NFSA subsidy into PMGKAY since 2023) has substantially increased the food subsidy bill, raising sustainability concerns:
   - **Food Subsidy:** The difference between the Minimum Support Price (MSP) paid to farmers and the Central Issue Price (CIP) charged to beneficiaries (₹1, ₹2, ₹3) is borne by the government as the food subsidy. This subsidy is one of the largest items of non-developmental expenditure, putting pressure on the national fiscal deficit.
   - **Buffer Stocks:** Maintaining adequate buffer stocks for distribution requires significant investment in storage and incurs heavy costs related to interest, storage, and wastage.
4. **Supply Chain and Infrastructure Gaps:** Shortcomings in logistics, transportation, and storage infrastructure lead to wastage and inefficiency. Old and insufficient warehouses, especially in remote regions, make timely and quality delivery challenging.
5. **Exclusion and Inclusion Errors:**
   - **Exclusion Errors:** NFSA coverage caps (75% rural, 50% urban) were defined using the 2011 Census. Because the 2021 Census was delayed, population growth over the past decade means an estimated 14 crore eligible citizens remain excluded from legal entitlements.
   - **Inclusion Errors:** Due to political pressures and weak local auditing, non-poor households frequently retain ration cards, diluting the benefits intended for the most vulnerable.
   - **Technology-driven exclusion:** Biometric authentication failures (due to manual labor-worn fingerprints, elderly beneficiaries, connectivity issues in remote areas) have paradoxically caused genuine beneficiaries to be denied their entitlements.
6. **Limited Nutrition Focus:** The Act focuses mainly on calorie security through grains, neglecting dietary diversity and micronutrient requirements. Provisions for pulses, oils, and fresh foods are minimal or absent.
7. **Functioning of Fair Price Shops (FPS):** While the implementation of PoS devices has improved transparency, challenges remain. These include internet connectivity issues in remote areas, resulting in transaction failures, and residual corruption by FPS dealers regarding timing, weighing, and behavior.
8. **Weak Enforcement:** State-level Grievance Redressal Officers (GROs) often lack the authority, resources, or political will to effectively penalize violators or ensure timely resolution of complaints. The mandated Vigilance Committees are often defunct or non-functional.
9. **Market Distortion:** Massive state procurement at Minimum Support Prices (MSP) primarily benefits rice and wheat farmers in specific states, driving land degradation, groundwater depletion, and suppressing private grain markets.

What should be the Way Forward?

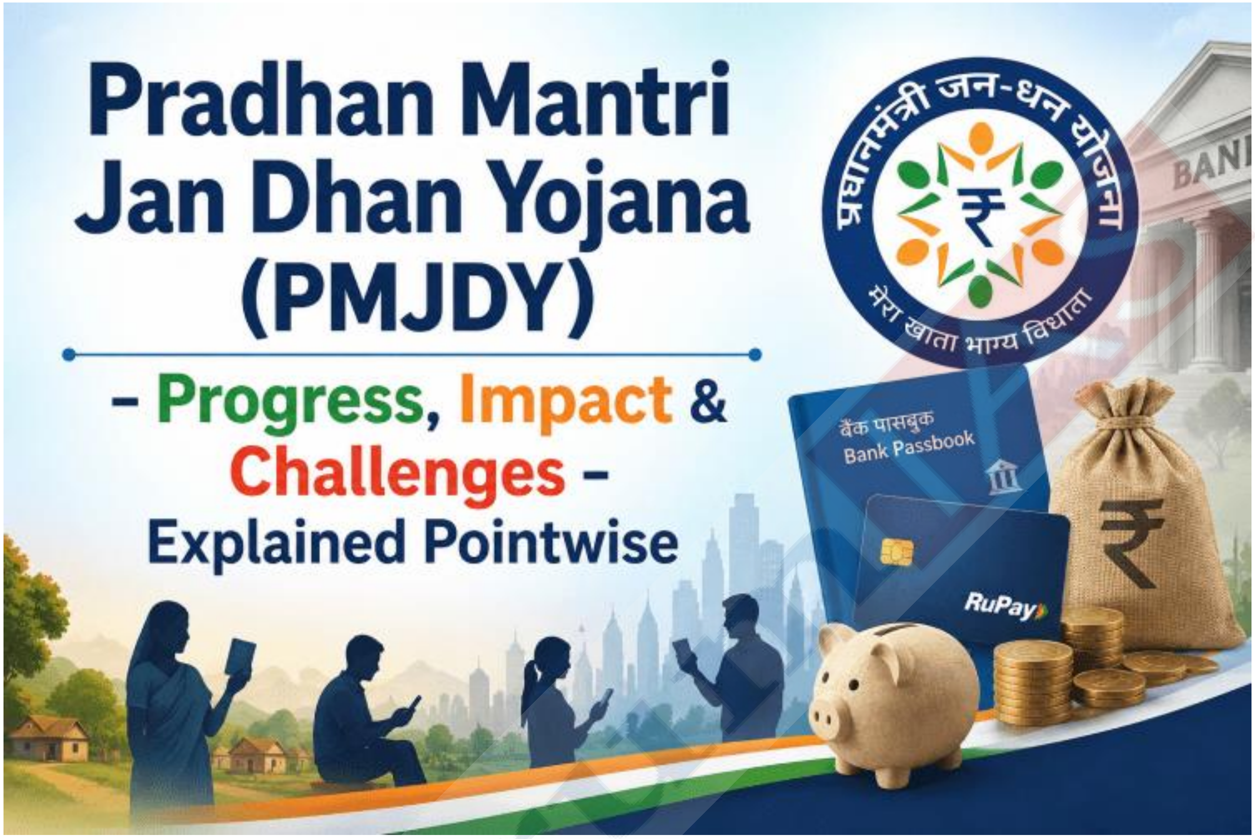
1. **Update Beneficiary Lists:** Beneficiary lists are outdated, having not been updated since the 2011 Census, leaving nearly 14 crore eligible people excluded. There is an urgent need to conduct a fresh, transparent, and participatory identification process to capture the current demographics and include internal migrants, the homeless, and the destitute.
2. **Dynamic Exclusion Criteria:** Instead of relying solely on old BPL (Below Poverty Line) lists, States should implement dynamic exclusion criteria using technology and data points (e.g. vehicle ownership, government employment status, electricity consumption) to regularly update and clean beneficiary lists.

3. **Universalizing ONORC:** While the One Nation, One Ration Card (ONORC) scheme has been implemented, continuous investment in seamless biometric and internet infrastructure is needed. The goal should be to make ration portability a frictionless experience, especially for internal migrant workers.
4. **Incorporate Millets & Coarse Grains:** Scale up procurement and distribution of climate-resilient coarse grains (ragi, bajra, jowar). This combats hidden hunger (micronutrient deficiencies) while reducing agricultural water stress.
5. **Mandating Fortification:** Central and state governments should mandate the fortification of all rice and wheat supplied through the PDS with essential micronutrients like Iron, Folic Acid, and Vitamin B12. This is a highly cost-effective public health measure.
6. **Integrating with Local Produce:** Pilot programs should be launched to link Fair Price Shops (FPS) with local self-help groups (SHGs) or farmer producer organizations (FPOs) to provide seasonal, locally sourced, and subsidized fresh fruits and vegetables to beneficiaries, particularly through ICDS and Mid-Day Meal schemes.
7. **Smart Procurement and Storage:** Modernize the food supply chain by shifting from traditional bag storage to steel silos and implementing End-to-End Computerization of the PDS. This drastically reduces storage costs and physical wastage (spoilage and theft).
8. **Empower State Food Commissions:** Make District Grievance Redressal Officers (DGROs) and State Food Commissions fully independent, adequately staffed bodies with statutory authority to enforce the Food Security Allowance when delivery fails.
9. **Mandatory Social Audits:** Standardize community-led social audits involving Gram Sabhas and local self-help groups (SHGs) to inspect ration quality, weighments, and distribution registers periodically.
10. **Implement Shanta Kumar Committee (2015) Recommendations**:
    a. Reduce coverage from **67% to around 40% of the population**, focusing subsidies on the genuinely vulnerable.
    b. Increase the entitlement for priority households from **5 kg to 7 kg per person per month.**
    c. Gradually shift from physical foodgrain distribution to **cash transfers**, beginning with large cities, followed by grain-surplus states and eventually allowing deficit states to choose between cash and foodgrains.
    d. The subsidised issue price of foodgrains for priority households should be **linked to the Minimum Support Price (MSP)**, rather than keeping it fixed.

Conclusion:
The NFSA can evolve from a basic food distribution program into a dynamic, transparent, and nutrition-sensitive social security pillar for the nation if its challenges are addressed & next-gen reforms are implemented properly. These next generation food reforms must protect people from hunger while also addressing the dietary drivers of diabetes & other NCDs.

UPSC GS-3: Agriculture
Read More: **Vikaspedia**, The Hindu

Pradhan Mantri Jan Dhan Yojana (PMJDY) – Progress, Impact & Challenges – Explained Pointwise



Launched on August 28, 2014, the **Pradhan Mantri Jan Dhan Yojana (PMJDY)** marked a major step towards bringing unbanked sections of society into the formal financial system. Completing **12 years** this year, the scheme has played a crucial role in advancing financial inclusion and enhancing the dignity and economic empowerment of millions, particularly women, youth and marginalised communities.

In this article, we will look at the features of the scheme, the achievements of the scheme, the challenges it faces and the way forward for achieving better financial inclusion through this scheme.

What are the features of Pradhan Mantri Jan Dhan Yojana (PMJDY)?

- Pradhan Mantri Jan Dhan Yojana (PMJDY) is National Mission for Financial Inclusion to ensure access to financial services, such as a basic savings & deposit accounts, remittance, credit, insurance, pension in an affordable manner.
- The Pradhan Mantri Jan Dhan Yojana was launched on August 28, 2014 under **National Mission on Financial Inclusion** & under the slogan, *"**Mera Khata, Bhagya Vidhata**"* (My Account, Fortune Maker). On the day of the launch of the scheme, banks organised 77,892 camps around the country, and opened about 1.8 crore accounts.
- **Objective of the Scheme:** The primary objective of this scheme is to provide accessible banking services to all citizens, particularly the underprivileged sections of society. It sought to bring poor &

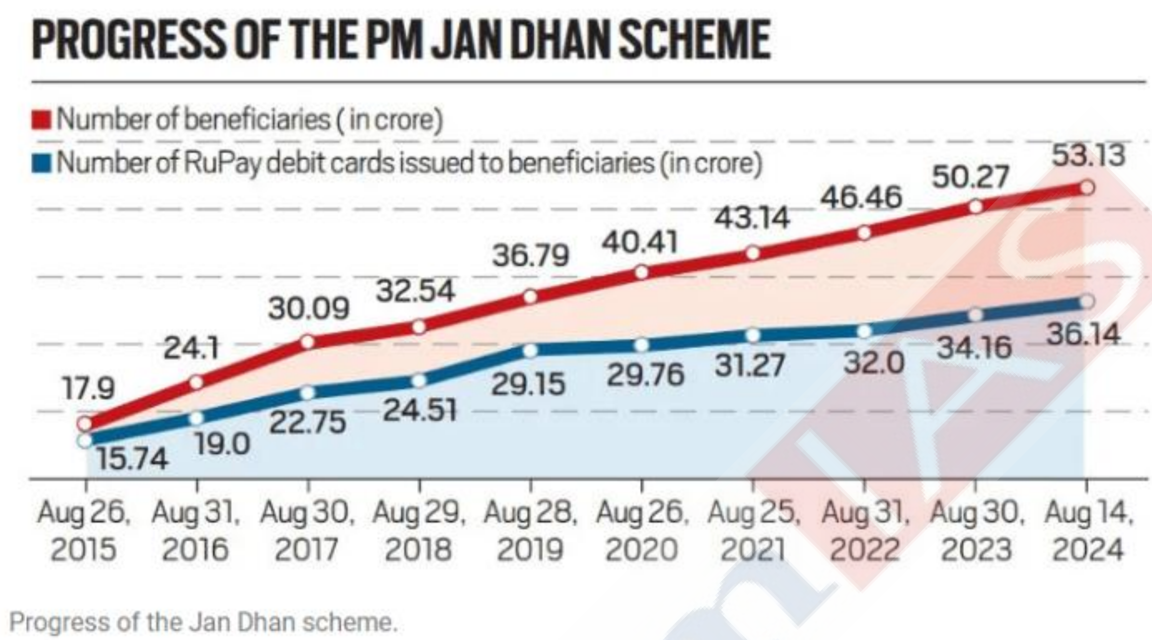
historically marginalised into the economic mainstream, enabling access to the formal banking system & ensuring they become stakeholders & beneficiaries of India's growth story.

Key Features of the scheme:

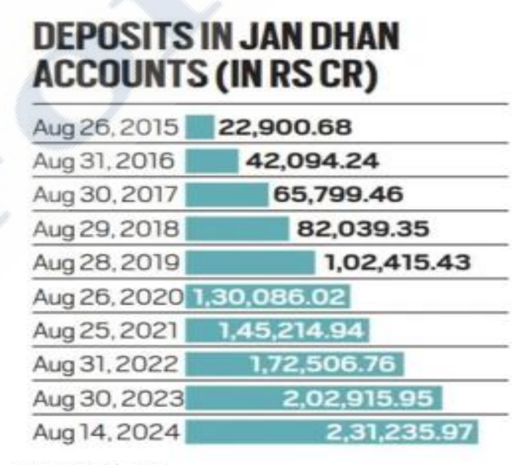
Account Accessibility	Pradhan Mantri Jan Dhan Yojana (PMJDY) aims to ensure that every household has at least one bank account.
Zero Balance Accounts	The accounts under PMJDY can be opened without the need for a minimum balance. This makes it easier for low-income individuals to access banking services. These accounts earn interest on deposits like a regular account.
Overdraft Facility	The account holders are eligible for an overdraft facility of up to Rs.10,000. It is specifically aimed at women account holders.
Accident Insurance Cover	Accident Insurance Cover of Rs.1 lakh is available with Ru Pay card issued to the PMJDY account holders. It has been enhanced to Rs. 2 lakh to new PMJDY accounts opened after 28.8.2018.
Direct Benefit Transfers	PMJDY accounts are also eligible for Direct Benefit Transfers (DBT), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY), Atal Pension Yojana (APY), and the Micro Units Development & Refinance Agency Bank (MUDRA) scheme.
Financial Literacy	The scheme focuses on promoting financial literacy among account holders.
Bank Mitras	The scheme employs Bank Mitras (bank representatives) to enhance accessibility of the scheme. These Bank Mitras provide branchless banking services across the country, especially in rural and remote areas.

What has been the progress of the Pradhan Mantri Jan Dhan Yojana (PMJDY)?

1. Large number of new bank accounts: As per the latest data, a staggering 53.1 crore accounts have been opened under the scheme. This includes 29.56 crore women beneficiaries account. The number of bank accounts opened in the PMJDY is more than the population of the European Union, and almost the same as the population of the United States.



Source- The Indian Express



Source- The Indian Express

1. **Bank accounts bank wise:** The largest share of PMJDY accounts is with public sector banks.
- Public Sector Banks- 41.42 crore accounts
- Regional Rural Banks- 9.89 crore accounts
- Private sector banks- 1.64 crore accounts
- Rural Cooperative Banks- 0.19 crore accounts

3. State wise analysis of accounts under PMJDY:

- Most of the accounts have been opened in Uttar Pradesh (9.45 crores) and the least has been opened in Lakshadweep (only 9,256 accounts).
- 15 states apart from UP have more than 1 crore PMJDY bank accounts– Bihar, West Bengal, Madhya Pradesh, Rajasthan, Maharashtra, Assam, Odisha, Karnataka, Jharkhand, Gujarat, Chhattisgarh, Tamil Nadu, Andhra Pradesh, Telangana, and Haryana.

What is the impact and achievement of Pradhan Mantri Jan Dhan Yojana?

1. **Banking to the unbanked:** The opening of staggering 53.1 crore bank accounts has promoted financial inclusion in the country. As per the World Bank's Findex database, 78% of Indian adults (population with 15 years or more of age) had a bank account in 2021 as compared to 53% in 2014. According to EPW (2024), India's account ownership marked a historical growth rate of 26% between 2014 & 2017 – which can be attributed to the world's largest financial inclusion drive. This growth rate is 4 times more than the global account growth rate & 3 times more than the developing countries account growth rate in the same period.

2. **Narrowing of the Rural-Urban Financial access Gap:** Out of the total bank accounts opened under the PMJDY, 67% have been opened in rural/semi-urban areas. This has helped in narrowing the gap in access to the formal banking system between rural and urban areas.

3. **Bridging the Gender Gap between financial access:** Out of the new accounts opened, roughly 56% of the new account holders are women. This has helped bridge the gender gap in access to financial services.

4. **Expansion of Commercial Bank Infrastructure:** The opening of more than half a billion bank accounts has fueled demand for banking services. This has encouraged commercial banks to expand their infrastructure in recent years. **For e.g.**

Financial Infrastructure	**2013**	**2023**	**%increase**
Scheduled commercial banks Branches	1,05,992	1,54,983	46%
Number of ATMs	1,66,894	2,16,914	30%

Number of Points of Sale (POS) machines	10.88 lakh	89.67 lakh	82%

1. **Promotion of Direct Benefit Transfer (DBT):** The Jan Dhan Yojana as an integral component of the JAM trinity (Jan Dhan, Aadhaar and mobile), has enabled the government to shift to a more efficient system for transferring benefits directly to beneficiaries. As per government data, the JAM trinity has helped in total cumulative transfers of Rs 38.5 lakh crore.
2. **Prevention of financial leakages:** The direct benefit transfer through the Jan Dhan accounts, has helped in prevention of financial leakages by weeding out ineligible or fake beneficiaries. **For e.g.** According to RBI report, the DBT through Jan Dhan account as resulted in a gain of Rs 3.48 lakh crore in the implementation of government schemes including MG-NREGS and PM-Kisan.
3. **Support to citizens in times of distress:** The JAM architecture has been used by the government to provide support to citizens during times of distress. **For e.g.** The transfer of Rs 500 to 20 crore women Jan Dhan account holders during the initial days of the pandemic.
4. **Promotion of Digital payments and Digital economy:** JAM framework forms an integral part of the Unified Payments Interface (UPI), which has transformed the payment systems in the country. This has eased and increased banking transactions in the economy, leading to significant economic gains. **For e.g.** Large share of low value transactions as part of the UPI, shows the ease of the ability of low income households, to engage in formal financial transactions in their daily lives.
5. **Significant positive externalities**: The impact of PMJDY has gone beyond just financial access, generating significant positive externalities. A 2022 study, **'Access to Banking, Savings & Consumption Smoothening in Rural India'**, found that access to banking improves consumption smoothening by alleviating savings constraints. A 2021 SBI Research report observed that higher PMJDY balances were associated with declines in crime rates, and that States with higher account penetration reported significant reductions in the consumption of intoxicants such as alcohol & tobacco.

What are the Challenges with the scheme?

The Pradhan Mantri Jan Dhan Yojana (PMJDY) has made significant strides in promoting financial inclusion in India since its launch in 2014. However, several challenges continue to impede its effectiveness.

1. **Account Dormancy and inactivity:** Despite the high number of accounts opened (over 53 crore by 2023), many accounts remain dormant and inactive. **For e.g.** According to a report, ~86.3% of PMJDY accounts are operational. This suggests that a significant portion of accounts opened remain dormant.
2. **Use as mule accounts:** There are concerns regarding the use of PMJDY accounts as mule accounts in fraudulent activities, such as money laundering or storage of black money. **For e.g.** Reports of large sums of money being deposited in dormant PMJDY accounts raised concerns about the misuse post-demonetization in 2016.

3. **Infrastructural Issues:** According to KPMG report, the inadequacy of physical and digital infrastructure, particularly in rural areas, has hindered the ability of account holders to perform transactions. **For e.g.** Lack of bank branches or functional ATM in villages of states like Bihar and Uttar Pradesh.

1. **Technological Barriers:** Poor internet connectivity and inadequate banking technology has affected the effective management of banking services for remote Jan Dhan account holders.

2. **Lack of Financial literacy:** The lack of financial literacy among beneficiaries is a critical barrier in the effective implementation of Pradhan Mantri Jan Dhan Yojana (PMJDY). **For e.g.** Unawareness about overdraft facilities and insurance cover provided for beneficiaries under PMJDY.
3. **Duplication of Accounts:** The opening of multiple Jan Dhan accounts under different schemes complicates data management and skews the understanding of the actual number of beneficiaries.
4. **Exclusion of Certain Populations:** Certain marginalized groups, including tribal populations and people living in extremely remote areas, remain excluded from the scheme due to social and geographical barriers. **For e.g.** Low Banking penetration in the tribal regions of Chhattisgarh and Jharkhand.
5. **Gender Disparity:** Women in some conservative rural areas are less likely to use PMJDY accounts independently due to social norms. This restricts their mobility and financial autonomy.

What Should be the Way Forward?

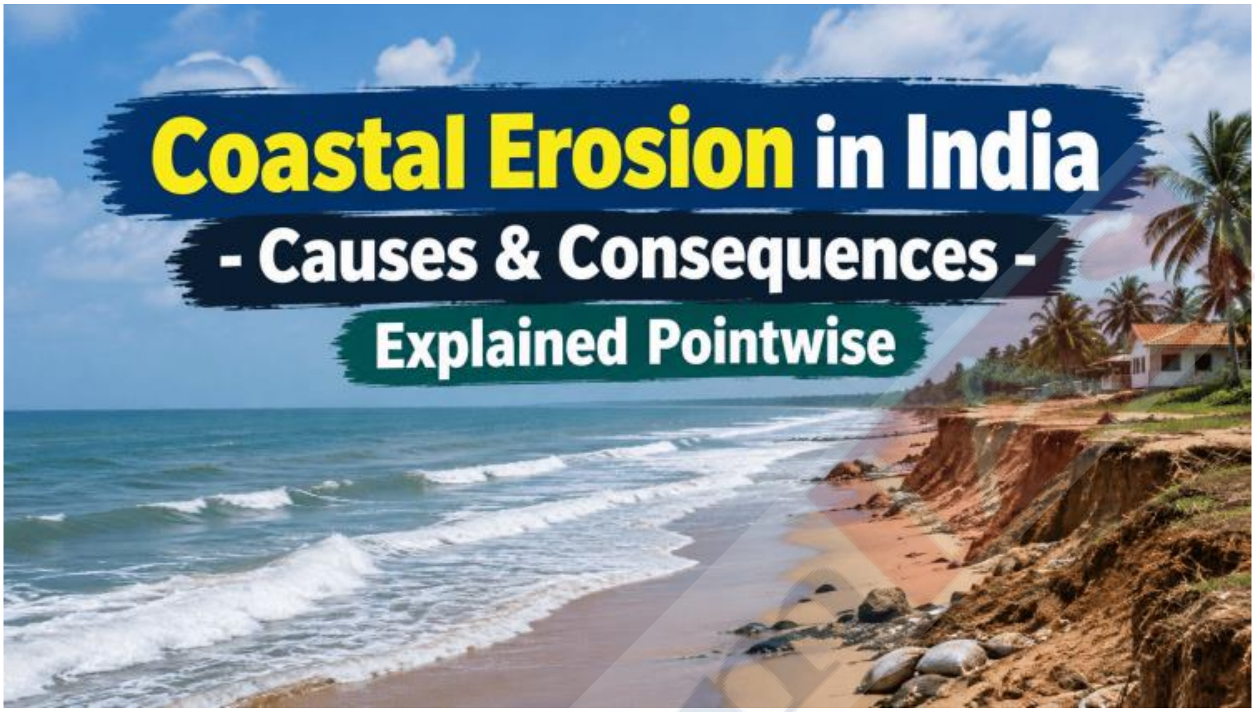
1. **Enhancement of Financial Literacy:** Implementation of widespread financial literacy campaigns, in partnership with local community leaders, NGOs, and educational institutions will promote financial literacy and better use of Jan Dhan Accounts.
2. **Encouragement of active use of accounts:** The active use of PMJDY accounts should be incentivized by linking them with various government schemes, subsidies, and benefits. **For e.g.** Introduction of schemes where account holders receive benefits like interest on savings, overdraft facilities, or cashback for digital transactions.
3. **Greater Integration of Financial Services:** The integration of financial services like microcredit, pension, insurance products with the Jan Dhan accounts will help in encouraging the active use of Jan Dhan accounts.
4. **Improvement of Banking Infrastructure:** Expansion of the banking network, particularly in underserved rural and remote areas, by setting up more branches, ATMs, and digital banking touchpoints. Encouragement of the use of Business Correspondents (BCs) and mobile banking units to reach remote areas, will further deepen the process of financial inclusion.
5. **Regular Monitoring and Feedback Mechanism:** Establishment of a system for regular monitoring and evaluation of the PMJDY's progress, and collection of feedback from beneficiaries to identify areas for improvement will ensure that the scheme adapts to changing needs.

Conclusion:

PMJDY has been a significant step towards financial inclusion that has democratized the access to payments & enabled millions to enter the digital economy. However, it should not be seen as a one-time achievement, rather, it should be used as a stepping-tone towards deepening the financial inclusion & unlocking the second-order effects that can truly transform the lives, livelihoods, and the pathways to shared prosperity.

Source: [The Hindu]
UPSC Syllabus- GS 3- Indian Economy (Financial Inclusion)

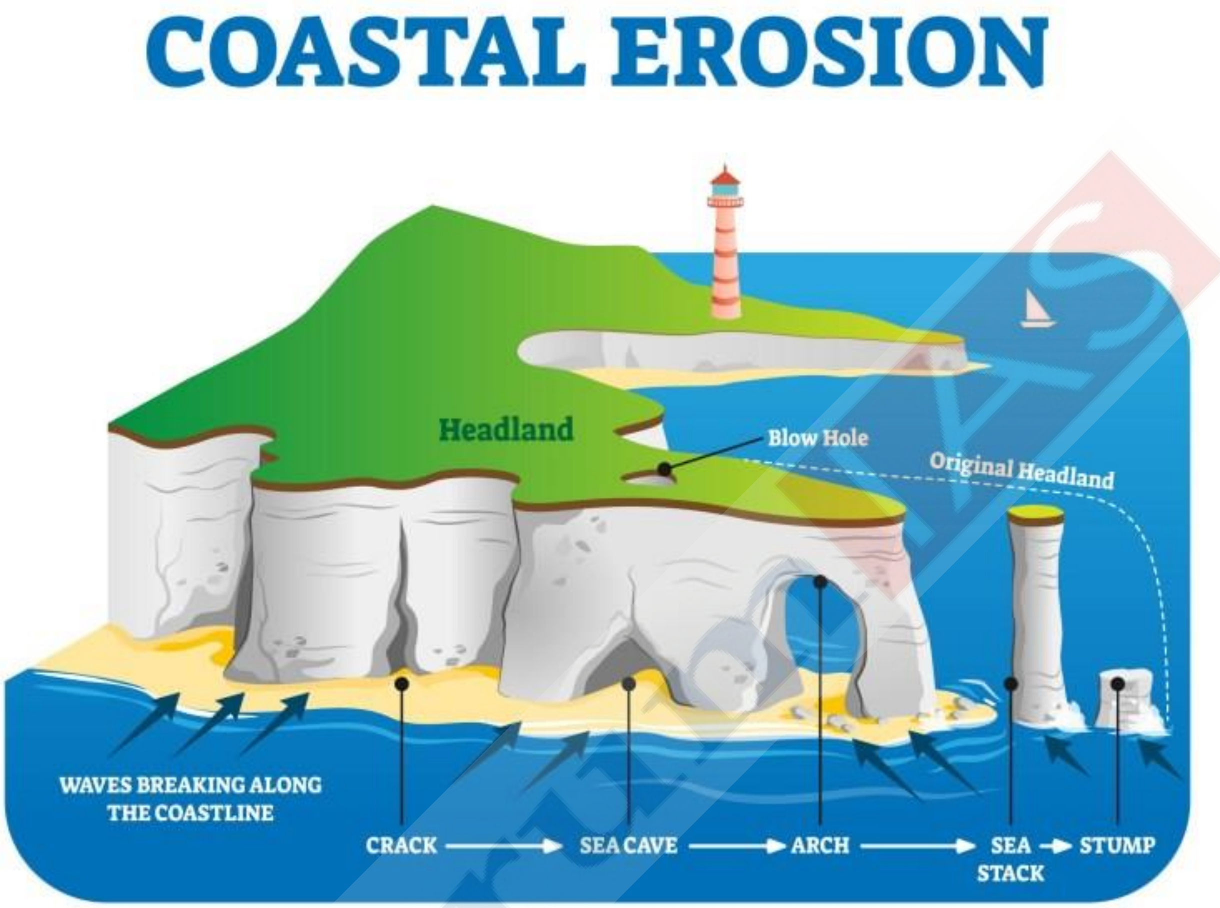
Coastal Erosion in India – Causes & Consequences – Explained Pointwise



Recently, in response to a question raised in the **Rajya Sabha**, the Union Minister for Ports, Shipping and Waterways stated that **about 28% of Odisha's 564-km coastline is experiencing erosion**, based on a study by the **National Centre for Coastal Research (NCCR)**. The NCCR monitors long-term shoreline changes along India's coastline.

What is coastal erosion?

- Coastal Erosion refers to the **loss of land, long-term removal of sediment and rocks along the coastline** due the **action of sea-waves, currents, tides and other impacts of storms**.
- It involves wearing away and redistributing solid elements of the shoreline as well as sediment. Erosion occurs when the material being removed, for deposition elsewhere, exceeds the rate of supply finally resulting in the **landward shifting of the shoreline**.
- **Key processes involved:**
    1. **Hydraulic action:** The force of waves striking the coast compresses air in cracks and crevices of rocks, weakening and eventually breaking them apart.
    2. **Abrasion (corrasion):** Waves carry sand, pebbles, and rock fragments that grind against cliffs and shorelines, wearing them down like sandpaper.
    3. **Attrition:** Rock fragments and sediments carried by waves collide with each other, breaking into smaller, smoother particles over time.
    4. **Corrosion (solution):** Chemical weathering where seawater dissolves soluble rock materials like limestone and chalk.
    5. **Longshore drift:** Waves approaching at an angle move sediment along the coast, redistributing material and altering shoreline shape.



What is the extent and spatial distribution of coastal erosion in India?

- India has a **7,517-km coastline**, including the mainland and islands. Coastal erosion is a major concern because of rising sea levels, cyclones, changing sediment flows and human interventions along the coast.
- According to the **National Centre for Coastal Research (NCCR)** assessment for **1990-2018**, about **6,907 km of India's mainland coastline** was analysed. The findings show:

Shoreline status	Share of mainland coastline
Eroding	33.6%
Accreting	26.9%

Stable	39.6%

- **Spatial Distribution:**

Eastern Coast	Easter coast has relatively **higher vulnerability**. Approximately **38%** of the shoreline is eroding. ○ **West Bengal:** particularly vulnerable, with about **60.5%** of its analysed coastline experiencing erosion. ○ **Odisha:** around **28.3%** was under erosion. ○ **Andhra Pradesh:** around **28.7%**. ○ **Tamil Nadu:** around **42.7%**. ○ **Puducherry:** about **56.2%**.
Western Coast	Western coast is **relatively stable**. Approximately **30%** of the shoreline is eroding, with more than 48% remaining stable due to rocky headlands and Deccan basalt configurations. ○ **Kerala** is among the most affected major coastal states, with approximately **46.4%** of its coastline showing erosion. ○ **Gujarat:** about **27.6%**. ○ **Maharashtra:** about **25.5%**. ○ **Karnataka:** about **23.7%**. ○ **Goa:** about **19.2%**.

- Thus, nearly **one-third (33.6%)** of India's mainland coastline experienced varying degrees of erosion during 1990-2018.

What are the major causes of coastal erosion in India?

Natural Causes	1. **Wave Action**: Strong waves continuously remove and transport beach sediments, particularly during monsoons and storms. 2. **Cyclones and Storm Surges**: The Bay of Bengal and Arabian Sea experience intense tropical cyclones. High-velocity winds and destructive storm waves attack areas well above the normal high-tide line, causing massive shoreline retreat in West Bengal, Odisha, and Tamil Nadu. 3. **Sea-Level Rise**: Rising sea levels along the Indian coast (estimated at ~1.7 mm/year on average, and higher in deltaic regions) submerge low-lying areas, particularly in the Sunderbans (West Bengal) and parts of Kerala. 4. **Tides and Longshore Currents**: Tidal movements and longshore currents redistribute sediments along the coastline, causing erosion in some locations and accretion in others. 5. **Changes in Sediment Supply**: Natural changes in river discharge and sediment transport can disturb the coastal sediment balance.

Anthropogenic Causes	1. **Construction of Ports, Harbours and Jetties**: Coastal structures interrupt natural longshore sediment movement, often causing accretion on one side and erosion on the other. 2. **Construction of Dams on Rivers**: Construction of dams on major peninsular and Himalayan rivers (e.g. Godavari, Krishna, Mahanadi, Ganga) trap up to 70–80% of riverine sediment that would naturally reach the sea, thus, reducing the sediment supply to beaches and deltas and increasing erosion. 3. **Beach Sand Mining**: Excessive extraction of sand removes an important source of coastal sediment and weakens the natural resilience of beaches especially in Kerala & Tamil Nadu. 4. **Dredging**: Dredging of ports, navigation channels and tidal inlets can remove sediments from the littoral zone and disturb the natural sediment budget. 5. **Unplanned Coastal Development**: Urbanisation, tourism infrastructure, roads and other construction can destroy dunes, mangroves and other natural barriers that protect the coastline. 6. **Destruction of coral reefs**: Reef degradation (Gulf of Mannar, Lakshadweep) removes natural wave-breaking barriers that would otherwise protect shorelines.

What are the major impacts of coastal erosion in India?

1. **Loss of Coastal Land**: Coastal erosion causes progressive retreat of the shoreline, resulting in the loss coastal land. It threatens low-lying settlements, particularly in densely populated coastal regions, while increasing the risks of inundation, displacement and loss of productive land. For e.g. the submersion of **Satabhaya village in Kendrapara (Odisha)** and the rapid shrinking of **Ghoramara, Mousuni, and Sagar Islands in the Indian Sundarbans (West Bengal)**.
2. **Loss of Livelihoods**: Coastal erosion threatens the livelihoods of fishing and farming communities by reducing access to beaches, fishing grounds and agricultural land. Damage to coastal infrastructure, aquaculture and tourism further affects incomes, while displacement forces communities to seek alternative sources of employment. For e.g. In Kerala, fishers lose direct access to the sea, forcing them to commute to distant, congested commercial harbors.
3. **Damage to Infrastructure**: Coastal erosion undermines roads, bridges, ports, railway lines, power infrastructure, houses and other public assets located near the shoreline. For e.g. National and State Highways (such as the East Coast Road in Tamil Nadu and sections of NH-66 in Kerala/Karnataka) face periodic collapse during monsoon swell waves and cyclones.
4. **Displacement of Coastal Communities**: Coastal erosion causes gradual loss of homes & agricultural land, forcing fishing and coastal communities to relocate. Such displacement can lead to loss of livelihoods, social networks, cultural identity and economic security, creating challenges of rehabilitation and resettlement.
5. **Salinity Intrusion**: Shoreline retreat and sea-level rise can facilitate the intrusion of seawater into groundwater and agricultural land, affecting drinking water and crop productivity. For e.g. Coastal populations in states like Tamil Nadu and Andhra Pradesh face acute shortages of potable drinking water, forcing local panchayats to rely on water tankers or expensive desalination.
6. **Loss of Coastal Ecosystems**: Coastal erosion damages mangroves, coral reefs, sand dunes, beaches and wetlands, leading to habitat loss and declining biodiversity. For e.g. coastal erosion flattens and

shrinks the mass-nesting beaches (*arribada*) of vulnerable **Olive Ridley turtles** at Rushikulya, Gahirmatha, and Devi river mouths in Odisha.

7. **Economic Losses**: Coastal erosion causes substantial economic losses by damaging houses, roads, ports, tourism infrastructure and agricultural land. NCSCM estimates that around **100 sq km of beach/coastal land has been lost**, while annual economic losses associated with erosion have been estimated at around **₹1,000 crore** in protection and mitigation-related costs.
8. **Impact on Tourism**: Coastal erosion leads to the loss and degradation of beaches, dunes and scenic landscapes, reducing the attractiveness of coastal destinations. It can damage tourism infrastructure, increase maintenance costs, and adversely affect local businesses and employment dependent on tourism.

What measures has the government taken to address coastal erosion in India?

1. **Shoreline Mapping and Monitoring**: The **National Centre for Coastal Research (NCCR)** monitors shoreline changes using satellite imagery, remote sensing and field surveys to generate the **Shoreline Change Atlas of India**. It has mapped vulnerable stretches and provides technical support to coastal States/UTs.
2. **Shoreline Management Plans**: NCCR assists States in preparing **Shoreline Management Plans (SMPs).** These plans identify high-, medium- and low-erosion zones and recommend site-specific protection measures rather than a uniform approach.
3. **Coastal Regulation Zone (CRZ) Notification, 2019**: The **CRZ framework** regulates development along vulnerable coastal stretches. It provides for **No Development Zones (NDZs)** in specified areas and seeks to protect ecologically sensitive areas such as mangroves and coral reefs.
4. **Demarcation of Hazard Lines**: The government has delineated a **hazard line** along India's coast, considering shoreline changes, flooding and sea-level rise. It is used for disaster management, land-use planning and adaptation measures.
5. **Disaster Risk Financing**: The 15th Finance Commission recommended **₹1,500 crore** under the **National Disaster Mitigation Fund (NDMF)** for structural and non-structural measures to mitigate coastal and river erosion. **₹1,000 Crore** allocated under the **National Disaster Response Fund (NDRF)** dedicated to the **resettlement and rehabilitation** of populations displaced by coastal and river erosion.
6. **Ecosystem-Based Adaptation (Soft Engineering)**:
    a. **MISHTI Scheme (2023-2028):** The Mangrove Initiative for Shoreline Habitats & Tangible Incomes targets the restoration and afforestation of ~540 sq. km of mangrove buffers across 11 coastal states and 2 UTs by converging MGNREGS, CAMPA funds, and local community stewardship.
    b. **Bio-Shield Plantations:** State forest departments systematically plant shelterbelts of *Casuarina equisetifolia*, *Pandanus*, and sand-binding creepers to stabilize coastal dunes and reduce wind-wave impact.

What should be the way forward?

1. **Adopt Integrated Coastal Zone Management (ICZM)**: ICZM promotes coordinated management of coastal resources by balancing economic development, environmental conservation and livelihood security. It integrates land-use planning, disaster risk reduction, ecosystem protection and community participation to ensure sustainable and climate-resilient development along India's vulnerable coastline.
2. **Prepare and implement Shoreline Management Plans**: Develop science-based, site-specific plans using shoreline-change data, sediment dynamics, hazard mapping and stakeholder inputs. These plans

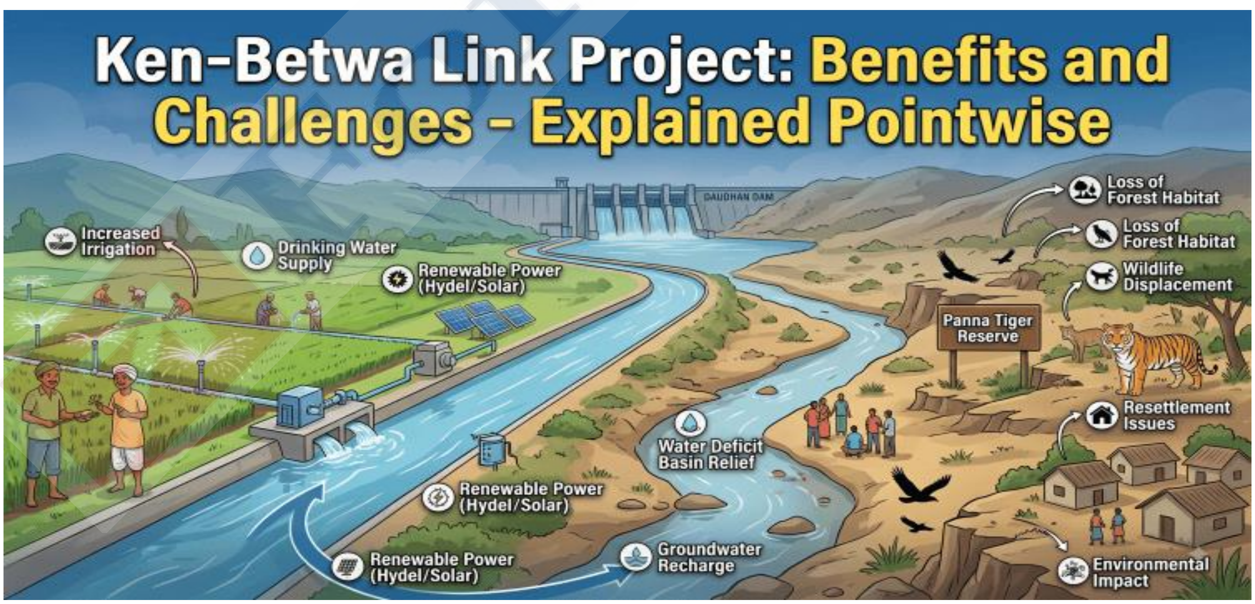
should guide suitable protection measures while balancing coastal development, ecosystem conservation and community livelihoods.

3. **Strengthen Coastal Regulation**: Strictly enforce Coastal Regulation Zone (CRZ) norms, prevent unplanned construction in vulnerable areas, regulate sand mining and coastal activities, and integrate hazard-line mapping into land-use planning to reduce long-term erosion risks.
4. **Improve Climate Resilience**: Integrate sea-level rise, cyclones, and storm surges into coastal planning, infrastructure design and disaster management. Also strengthen the early-warning systems, ecosystem-based adaptation and climate-resilient livelihoods.
5. **Prioritize Nature-Based Solutions (NbS)**: Restore mangroves, coral reefs, sand dunes, wetlands and coastal vegetation as natural barriers. For e.g. Expand mangrove and shelterbelt afforestation, particularly in the Sunderbans, Godavari-Krishna delta, and Kerala because mangroves are more cost-effective and self-sustaining than seawalls.
6. **Community-Centred Approach**: Involve coastal communities, particularly fishermen, in planning and decision-making, while providing livelihood support, disaster preparedness, insurance and rehabilitation assistance.

Conclusion: Coastal erosion in India is both an environmental and developmental challenge. We need to shift from reactive protection to integrated coastal management, combining nature-based solutions, resilient infrastructure, scientific planning and community participation, to build climate-resilient and sustainable coastal regions.

UPSC GS-3: Environment Read More: The Indian Express

Ken-Betwa Link Project: Benefits and Challenges – Explained Pointwise



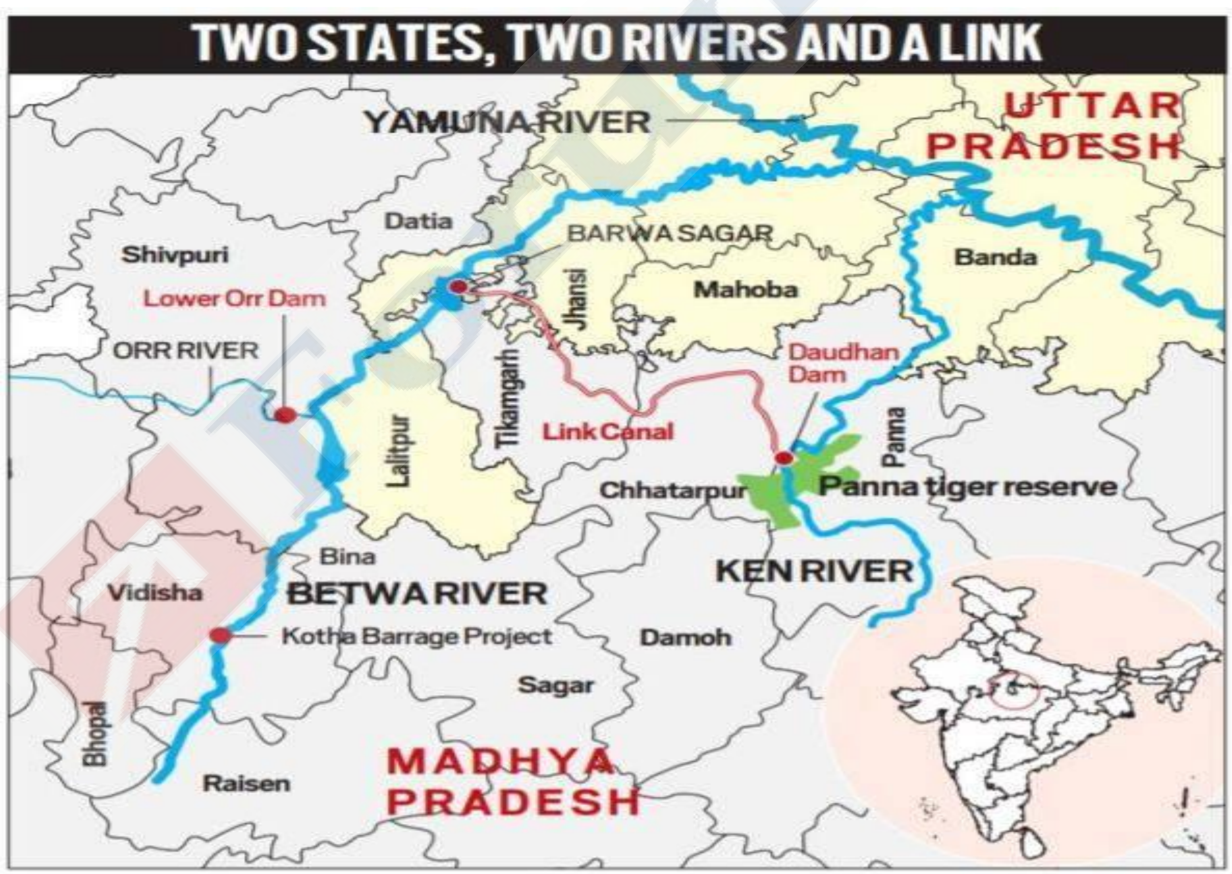
The Ken-Betwa Link Project is a 'flagship' project of the Government and 'it is critical for the water security and socio-economic development of Bundelkhand region'. The project was approved in December 2021 by the Union Government. The Ken-Betwa Link project is expected to cost INR 44,605 crore. While the project is expected to benefit the local population, however, the tribal communities in Madhya Pradesh's Panna and Chhatarpur districts have recently protested, citing displacement, inadequate compensation, livelihood losses and concerns over their cultural and forest rights. The protests, including **'Chita Andolan' and 'Jal Satyagraha'**, highlight the need to balance developmental objectives with **equitable rehabilitation & tribal rights.**

What is the Ken-Betwa Link Project?

- The Ken-Betwa Link Project (KBLP) is the first project under the **National Perspective Plan for interlinking of rivers**. Under this project, water from the Ken river will be transferred to the Betwa river. Both these rivers are tributaries of river Yamuna.

Read More: Interlinking of Rivers Project in India – Explained, Pointwise

- The Ken-Betwa Link project was conceptualised in the 1980s. However, the water-sharing agreement could not be reached between the States of Madhya Pradesh and Uttar Pradesh. The work on the project was originally slated to begin in 2015 but got delayed. The project got a fresh push in 2020-21, with the Union Government making a revised deal with the two states (Madhya Pradesh and Uttar Pradesh).



Source: Indian Express

- The Project has two phases.
    1. Under **Phase-I**, **Daudhan Dam** complex (along with Low and High Level Tunnels) and **Ken-Betwa Link Canal and Powerhouses** will be completed. The Daudhan Dam will be built on the Ken river within the Panna Tiger Reserve. The dam will generate 103 MW of hydroelectric power.
    2. Under **Phase-II**, there are 3 components. Under this, **Lower Orr dam, Bina Complex Project** and **Kotha Barrage** will be constructed.
- This project will benefit people across the districts of MP and UP i.e. Tikamgarh, Panna and Chhatarpur districts in MP and Jhansi, Banda, Lalitpur and Mahoba districts in UP.
- A Special Purpose Vehicle (SPV) called **Ken-Betwa Link Project Authority** (KBLPA) will be set up to implement the project.

What are the benefits of Ken-Betwa Link Project?

1. **Expansion of Irrigation**: The project is expected to provide irrigation to **10.62 lakh hectares** across Madhya Pradesh and Uttar Pradesh, reducing dependence on monsoons, improving agricultural productivity, enabling crop diversification and enhancing farmers' incomes.
2. **Drinking Water Security**: The project will provide about **194 MCM of drinking water annually to nearly 62 lakh people** in Madhya Pradesh and Uttar Pradesh, improving access to reliable water supplies in water-stressed Bundelkhand.
3. **Drought Mitigation**: The Ken-Betwa Link Project will provide assured water to drought-prone **Bundelkhand**, reducing dependence on erratic monsoons, improving irrigation, strengthening water security, supporting agriculture and livelihoods, and enhancing resilience against recurring droughts.
4. **Hydropower and Renewable Energy**: The project is expected to generate **103 MW of hydropower and 27 MW of solar power**, contributing to clean energy generation, reducing dependence on fossil fuels and supporting regional energy security.
5. **Agricultural Development**: Assured irrigation can increase cropping intensity, promote crop diversification, improve agricultural productivity and reduce dependence on erratic monsoons. This can enhance farm incomes, strengthen rural livelihoods and contribute to greater food security in Bundelkhand.
6. **Employment Generation**: The project is expected to create employment during construction and subsequently through expanded irrigation, agriculture, fisheries and allied activities, thereby strengthening rural livelihoods, stimulating local economies and improving income opportunities in Bundelkhand.
7. **Reduction in Distress Migration**: By providing assured irrigation, drinking water and livelihood opportunities, the Ken-Betwa Link Project can improve rural incomes and employment in Bundelkhand, thereby reducing distress migration caused by recurring droughts and water scarcity.
8. **Potential Model for River Interlinking**: As the first major river-linking project under implementation, the Ken-Betwa project can provide valuable lessons on inter-State cooperation, water-sharing mechanisms, environmental management, rehabilitation and the feasibility of future river interlinking projects.

What are the challenges associated with the Ken-Betwa Link Project?

Environmental	1. **Ecological Impact on Panna Tiger Reserve**: The proposed Daudhan reservoir would submerge about **9,000 hectares**, including **4,141 ha of the core** and **1,314 ha of the buffer** of Panna Tiger Reserve. This could fragment wildlife habitats and affect tiger, vulture and other wildlife populations. 2. **Loss of Forest Cover**: Large-scale diversion of forest land and tree felling could reduce biodiversity, carbon sequestration and ecosystem services. The project therefore creates a difficult balance between **water security and ecological conservation**. 3. **Impact on Riverine Ecosystems**: Alteration of the natural flow of the Ken River may affect downstream ecosystems, including the **Ken Gharial Sanctuary**. Changes in flow and sediment regimes can affect aquatic biodiversity. 4. **Hydrological Uncertainty**: The assumption that the Ken is a surplus basin while the Betwa is a deficit basin is questionable, raising concerns about the long-term availability of transferable water. Climate change could further increase uncertainty in river flows and rainfall patterns.
Political	1. **Inter-State and Water-Sharing Issues**: Although Madhya Pradesh and Uttar Pradesh have agreed on the project, future disputes over **water allocation, especially during drought years**, could emerge. 2. **Wildlife (Protection) Act, 1972:** Clearances faced legal challenges regarding Section 35(6), which restricts the destruction or diversion of wildlife habitats in National Parks unless deemed necessary for the "improvement and better management of wildlife".
Social	1. **Displacement and Rehabilitation**: The Daudhan reservoir is expected to affect **10 villages and around 1,913 families**, according to government estimates. Tribal families in Chhatarpur and Panna districts have protested against displacement. Ensuring fair compensation, timely rehabilitation and restoration of livelihoods remains a major challenge. 2. **Impact on Local Livelihoods**: Displacement and changes in forests, agricultural land and river ecosystems can affect communities dependent on farming, forests and other natural resources.
Economic	1. **Economic Viability**: The project involves an investment of roughly **₹45,000 crore.** Questions have been raised about whether the expected irrigation and economic benefits justify the substantial financial and ecological costs.

What should be the way forward?

1. **Ensure time-bound Rehabilitation & Resettlement:** Provide fair compensation, alternative land where appropriate, livelihood restoration and long-term support to all Project Affected Families. Move beyond monetary compensation to livelihood-based rehabilitation for displaced Gond and Kol tribal

families i.e. land-for-land where possible, skill training, and priority access to the very irrigation benefits the project promises.

2. **Strengthen ecological safeguards:** Strictly implement the Environmental Management Plan and the **Integrated Landscape Management Plan (ILMP)** for the Panna landscape, with continuous monitoring of tigers, gharials, vultures and other biodiversity.
3. **Adopt adaptive water management:** Continuously monitor rainfall, river flows, groundwater levels and climate variability, and dynamically adjust water allocation and releases to ensure equitable distribution, drought resilience and sustainable use of transferred water.
4. **Promote water-use efficiency**: Complement the project with micro-irrigation, watershed development, rainwater harvesting and groundwater recharge to reduce water wastage, improve irrigation efficiency, enhance drought resilience and ensure sustainable utilisation of transferred water. Pair large-scale transfers with the restoration of Bundelkhand's historic Chandela and Bundela era tanks, check dams, and local stepwells (*baolis*).
5. **Ensure inter-State cooperation**: Establish transparent mechanisms between Madhya Pradesh and Uttar Pradesh for equitable water sharing, data exchange, dispute resolution and coordinated reservoir management, particularly during droughts and periods of water scarcity.
6. **Use technology-based monitoring:** Deploy GIS, remote sensing, satellite imagery and real-time hydrological monitoring to assess water availability, track environmental impacts, monitor project implementation and enable timely corrective measures, ensuring efficient and sustainable management of the project.
7. **Greater Panna Landscape Council (GPLC):** Empower the GPLC and the Ken-Betwa Link Project Authority (KBLPA) with independent technical and ecological oversight to ensure compliance with clearance conditions.
8. **Create a model for future river-linking:** Lessons from KBLP should inform future projects regarding hydrological assessment, environmental clearance, inter-State consensus, rehabilitation and benefit-sharing. The government itself envisages the project as an important model for resolving inter-State water issues.

Conclusion: According to the Government, the Ken-Betwa project can address the issues related to water scarcity in the region. Irrigation and hydropower projects will contribute to prosperity of the region. However, there are legitimate environment & social concerns vis-a-vis benefits of the project. The Government should address these concerns and ensure that the adverse impacts on the local population and biodiversity are minimized.

UPSC GS-3: Environment
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Mines and Minerals (Development and Regulation) Amendment Bill, 2026 – Provisions, Significance & Concerns – Explained Pointwise

The **Mines and Minerals (Development and Regulation) Amendment Bill, 2026**, recently passed by Parliament, seeks to reform India's mineral governance by restricting unregulated State-level levies on mineral rights and mineral-bearing lands and creating a more predictable fiscal regime. However, its curbs on State levies raise concerns over fiscal federalism, State autonomy and revenue loss.

What are the key provisions of the Mines and Minerals (Development and Regulation) Amendment Bill, 2026?

1. **Restrictions on State Taxes and Cesses**: States will not be able to impose taxes, cesses or levies on mineral rights or mineral-bearing lands freely. Such levies can be imposed only subject to conditions or restrictions prescribed by the Central Government.
2. **Central regulation of mineral-bearing lands**: The Bill expands the regulatory framework under the MMDR Act to explicitly cover mineral-bearing lands, strengthening the Centre's role in mineral governance.
3. **Expanded Rule-Making Powers:** Section 13 is amended to empower the Central Government to frame rules specifying the precise conditions, limits, and parameters under which States may impose future mineral-related levies.

4. **Retrospective treatment of unpaid State levies**: Certain unpaid or unrecovered State levies relating to mineral rights/mineral-bearing lands from before the amendment are treated as invalid. However, amounts already collected are not to be refunded.
5. **Uniformity and fiscal predictability**: The Bill aims to reduce differences in mineral taxation among States and provide greater certainty about mining costs. The government argues that this will encourage investment, increase domestic mineral production and reduce import dependence.
6. **Retention of Minor Mineral Powers:** The regulatory and revenue authority of State Governments over minor minerals (such as sand, gravel, marble, and granite) remains intact and unaffected by these provisions.
7. **Focus on mineral security**: The reform is also linked to strengthening India's domestic mineral supply, particularly for industries dependent on minerals needed for energy transition, technology and strategic sectors.

What is the significance of the MMDR Amendment Bill, 2026?

1. **Unified National Market:** Minerals are geographically concentrated in a few states (such as Odisha, Jharkhand, and Chhattisgarh) but are essential nationwide. A standardized fiscal ceiling prevents price distortions and high interstate logistics costs, fostering a single domestic mineral market.
2. **Promotes investment in the mining sector**: Restricting unpredictable state-level taxes, cesses and levies can make the cost of mining more predictable. This may encourage domestic and foreign investment in the mining sector.
3. **Creates a more uniform taxation framework**: Different state-level levies can increase the cost of minerals and create disparities across states. The amendment seeks to prevent such fragmentation and establish greater uniformity in mineral taxation.
4. **Critical & Strategic Mineral Supply:** India's transition toward clean energy, advanced manufacturing, and defense depends on critical minerals (such as lithium, cobalt, nickel, and rare earths). Removing excessive state-level cess prevents domestic extraction from becoming commercially unviable compared to global imports.
5. **Reduces import dependence**: Higher domestic mineral production can reduce India's dependence on imported raw materials and strengthen Atmanirbhar Bharat.
6. **Improves ease of doing business**: A predictable fiscal regime reduces uncertainty regarding the long-term economics of mining projects, potentially improving the ease of doing business.
7. **Addresses the post-MADA judgment situation**: The amendment follows the Supreme Court's 2024 **Mineral Area Development Authority (MADA) v. SAIL judgment**, which recognised states' power to tax mineral rights while holding that royalty is not a tax. Thus, the Bill represents an important development in the Centre-State relationship over natural resources.

What are the major concerns associated with the MMDR Amendment Bill, 2026?

1. **Erosion of fiscal autonomy of States**: The Bill restricts States from imposing taxes, cesses or levies on mineral rights and mineral-bearing lands except within parameters prescribed by the Centre. This could reduce the taxing powers and financial autonomy of States, particularly mineral-rich States.
2. **Impact on State revenues**: States such as **Jharkhand and Odisha** depend significantly on mineral-related revenues. These States bear many of the environmental, social and infrastructural costs of mining. Restricting their ability to impose additional levies could affect their resources for infrastructure, welfare and development of mining-affected regions.
3. **Concerns over cooperative federalism**: Mineral taxation involves the constitutional distribution of powers between the Union and States. Greater central control may create Centre-State tensions and weaken the spirit of cooperative federalism.

4. **Retrospective invalidation of certain levies**: The Bill seeks to invalidate certain unpaid or unrecovered past state levies. This raises concerns about retrospective legislative intervention and the treatment of liabilities that had arisen under the earlier legal framework.
5. **Excessive centralisation**: The Centre would have substantial authority to prescribe the conditions and restrictions governing State mineral levies. This could shift mineral governance from a shared federal framework towards greater central control.
6. **Post-MADA judgment concerns**: The Supreme Court's 2024 Mineral Area Development Authority v. SAIL judgment recognised the States' power to tax mineral rights. The Bill's restrictions on this power therefore raise questions about the legislative response to a Constitution Bench judgment and the balance between judicial interpretation and legislative power.

What should be the way forward?

1. **Mineral Taxation Council on the GST Model:** Establish a joint Centre-State consultative forum or utilize the Inter-State Council (Article 263) to determine taxation bands, royalty revisions, and cess caps collaboratively, rather than relying on unilateral Central executive notifications under Section 13.
2. **Ensure a fair revenue-sharing mechanism**: If States lose some revenue-raising powers, there should be an appropriate mechanism to compensate or share the gains from increased mining activity. This is particularly important for mineral-rich States that bear the environmental and social costs of mining.
3. **Maintain fiscal predictability without excessive centralisation**: Uniformity in taxation is desirable, but the framework should avoid unnecessarily restricting legitimate State fiscal powers. Clearly defined and transparent criteria should govern any restrictions imposed by the Centre.
4. **Strengthen District Mineral Foundation (DMF)**: A greater share of mining-related benefits should reach local communities affected by mining through effective utilisation of DMF funds. This can ensure that mining-led growth translates into local development.
5. **Promote sustainable mining**: Faster clearances and greater investment should not come at the cost of forests, biodiversity, water resources and livelihoods. Strong environmental monitoring, mine-closure plans and ecological restoration should accompany mining reforms.
6. **Build consensus on federal concerns**: Given the constitutional and federal dimensions of mineral taxation, wider consultation with States, industry and affected communities would improve the legitimacy and durability of the reform. The issue is especially significant after the Supreme Court's 2024 MADA v. SAIL judgment recognising States' power to tax mineral rights.

Conclusion: The MMDR Amendment Bill, 2026 seeks to balance mining-led economic growth and mineral security with a more predictable fiscal regime. However, its success will depend on maintaining a balance between national uniformity and the fiscal autonomy of resource-rich States.

UPSC GS-2: Governance
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Surrogate Advertising – Explained Pointwise

Regulatory authorities recently issued show-cause notices to prominent celebrities for endorsing surrogate products like flavored cardamom that indirectly promote banned pan masala. This crackdown highlights intensifying legal scrutiny on celebrity accountability, misleading advertisements, and public health compliance in India.

What is surrogate advertising?

- **Surrogate advertising** refers to the indirect promotion of products whose direct advertising is prohibited or restricted, such as **alcohol and tobacco**.
- Companies advertise another product, such as **soda, music CDs, mineral water or lifestyle products,** using the same brand name, logo or imagery to maintain and promote the original brand.

Why is it used by certain companies?

1. **Bypassing Direct Advertising Bans:** Many jurisdictions prohibit direct TV, print, and digital advertising for "sin goods" like liquor, cigarettes, and betting platforms. Surrogate ads allow companies to maintain brand visibility without technically violating direct marketing laws.
2. **Building and Maintaining Brand Recall:** Even if sales cannot be directly driven through television or billboard ads, keeping the brand top-of-mind ensures consumer loyalty when buyers visit retail counters e.g. "Bagpiper" soda, "Royal Stag" music CDs.
3. **Reaching New and Younger Demographics:** Lifestyle-oriented surrogate campaigns (music festivals, sports sponsorships, casual snacks) introduce the brand identity to broader audiences who might not yet be direct consumers.
4. **Creating Brand Extensions:** It provides a legal avenue to sponsor high-profile events (such as cricket leagues, concerts, and award shows) under the guise of sodas, apparel, or music labels.

What are the major concerns associated with surrogate advertising in India?

1. **Circumvention of advertising bans:** Surrogate advertising enables companies to indirectly promote restricted products such as alcohol and tobacco. For e.g. liquor brands may advertise mineral water or music events using the same brand name and logo.
2. **Undermining Public Health Goals:** Direct ad bans on alcohol and tobacco products are meant to curtail addiction, non-communicable diseases, and oral cancers. Surrogate campaigns dilute these restrictions by keeping the underlying hazardous products socially visible and culturally normalized.
3. **Influence on children and youth:** Campaigns frequently sponsor prime-time sports broadcasts (like cricket leagues) and youth festivals under harmless labels (e.g. packaged water, music labels, or sports analysis portals). This exposes minors and young adults to brand identities tied directly to restricted substances.
4. **Endorsement Dilemmas:** High-profile actors, athletes, and influencers are regularly hired to promote surrogate extensions (such as silver-coated elaichi). This leverages public trust to glamorize product lines that are fundamentally tied to harmful substances or unregulated gambling.
5. **Normalizes and glamorizes substance use**: By associating liquor/tobacco brands with sports, music, and lifestyle content, these ads implicitly link drinking/smoking with success, masculinity, celebration, and social status.
6. **Social costs:** Surrogate advertising may indirectly increase alcohol and tobacco consumption, imposing wider social costs such as addiction, road accidents, domestic violence, liver diseases and cancers, while increasing healthcare expenditure and reducing overall economic productivity.
7. **Ethical concerns:** Surrogate advertising exploits legal loopholes to indirectly promote harmful products, prioritising profits over public welfare. For e.g. alcohol brands promoting soda, music CDs or packaged water may encourage brand recall and indirectly influence consumption.

What are the existing legal and regulatory mechanisms to control surrogate advertising in India?

1. **Consumer Protection Act, 2019 & CCPA Guidelines (2022)**:
   a. Under Section 18 of the Consumer Protection Act, the **Central Consumer Protection Authority (CCPA)** notified the Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements (2022).
   b. Section 6 explicitly bans surrogate or indirect advertising across all media (TV, print, digital, social media) for restricted products.
   c. The CCPA can impose penalties up to ₹10 lakh for initial violations and up to ₹50 lakh for subsequent offenses on manufacturers, advertisers, and endorsers, alongside banning non-compliant celebrity endorsers for up to 3 years.
2. **Cigarettes and Other Tobacco Products Act (COTPA), 2003**:
   a. Section 5 prohibits all forms of direct and indirect advertising of tobacco products.
   b. Under the COTPA Rules (Rule 2), promoting any non-tobacco product using the same brand name, logo, or trademark as a tobacco product is legally classified as an indirect/surrogate advertisement and is prohibited.
3. **Cable Television Networks (Regulation) Act, 1995 & Rules, 1994**: Advertising Code explicitly prohibits broadcast advertisements promoting cigarettes, tobacco products, alcohol, or other intoxicants.
4. **Food Safety and Standards (Advertising and Claims) Regulations, 2018**: Enforced by FSSAI, these regulations prevent misleading claims and the indirect promotion of restricted dietary/intoxicant goods under food categories.

5. **Ministry of Information & Broadcasting (MIB) Advisories on Betting**: MIB has issued strict advisories under the IT (Intermediary Guidelines and Digital Media Ethics Code) Rules instructing TV channels, OTT platforms, and digital publishers to refrain from hosting surrogate ads for illegal offshore betting platforms (such as disguised "sports news" portals).
6. **Advertising Standards Council of India (ASCI) Code**: ASCI is a self-regulatory body that issues specific guidelines for surrogate advertising. ASCI enforces criteria to distinguish genuine brand extensions from surrogate marketing via its **Brand Extension Guidelines.** The brand extension (e.g. packaged water, soda, snacks) must be produced in commercial quantities and show genuine sales/distribution relative to the ad spend.

What measures should be taken to effectively regulate surrogate advertising in India?

1. **Give statutory backing to ASCI guidelines**: Convert ASCI's self-regulatory code into a legally enforceable framework (similar to how SEBI regulations have legal force), with real penal consequences, such as fines, ad bans, license suspension, rather than mere reprimands.
2. **Strengthen legal provisions:** Clearly define surrogate advertising in law and explicitly prohibit indirect promotion of prohibited products. Establish uniform standards across television, print, digital media and social media, with stringent penalties for violations.
3. **Ensure stricter enforcement:** Regulatory authorities should impose substantial penalties on companies, advertisers and media platforms violating surrogate advertising norms. Swift investigation, removal of misleading advertisements and consistent prosecution can create stronger deterrence and improve compliance.
4. **Adopt a broader definition:** Regulations should cover indirect brand promotion through events, sponsorships, influencer marketing, social media campaigns and digital content, preventing companies from circumventing restrictions by promoting prohibited products under seemingly legitimate brand extensions.
5. **Strengthen monitoring:** Regulatory agencies should use AI, data analytics and digital surveillance to identify surrogate advertisements across television, print, social media and influencer platforms, ensuring timely detection, removal and action against violators.
6. **Increase public awareness:** Public awareness campaigns should educate consumers about surrogate advertising, its deceptive nature and associated health risks. Media literacy programmes can help people identify indirect promotion of prohibited products and make informed consumption choices.
7. **Promote responsible advertising:** Encourage companies and advertising agencies to follow ethical standards, avoid misleading brand extensions, and ensure transparency in promotional content. Industry self-regulation, ethical guidelines and responsible celebrity endorsements can further strengthen consumer protection.
8. **Stricter Celebrity & Endorser Accountability**: Strictly enforce the Consumer Protection Act provisions regarding multi-year bans and compounding fines for celebrities and social media influencers who knowingly promote surrogate products or mirror gambling websites.

UPSC GS-2: Governance
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Manual Scavenging – Reasons & Solutions – Explained Pointwise

The Ministry of Social Justice has recently proposed expanding the scope of the **NAMASTE Scheme** from towns and cities to rural areas as well. Under the proposal, the scheme would also cover **drain cleaners and workers engaged in sewage treatment plants (STPs) and faecal sludge treatment plants (FSTPs)**.

Throughout history, the society has undergone profound changes in power dynamics and political ideals that have transformed individual lives as well as the idea of the collective. But the modernizing forces have been biased against the marginalized sections including Dalits. This is testified by the continued existence of manual scavenging despite the same being prohibited by a Statutory Act and Supreme Court order. Keeping this in mind, a plethora of steps are desired to make India completely free from manual scavenging.

What is the meaning of manual scavenging?

- It is defined as 'the removal of human excrement from public streets and dry latrines, cleaning septic tanks, gutters and sewers'.
- Manual scavengers usually use hand tools such as buckets, brooms and shovels. The workers have to move the excreta, using brooms and tin plates, into baskets, which they carry to disposal locations sometimes several kilometers away.
- The International Labour Organization (ILO) distinguishes three forms of manual scavenging: **(a)** Removal of human excrement from public streets and dry latrines, **(b)** Cleaning septic tanks, and **(c)** Cleaning gutters and sewers.

What is the extent of manual scavenging in India?

- Although the practice was banned under the Prohibition of Employment of Manual Scavengers Act, 2013, the inhumane exercise continues.
- According to the Government:
  - >57,000 workers were engaged in hazardous cleaning nationwide but only 16,791 PPE kits were supplied.
  - Less than 14,000 had received health cards & only 837 safety workshops had been conducted in 4,800 ULBs.
  - **97% of manual scavengers are Dalits**. The breakdown of numbers reveals that 42,594 manual scavengers belong to Scheduled Castes, 421 belong to Scheduled Tribes and 431 belong to Other Backward Classes. However the **number may be grossly underreported**.
- The Socio-Economic Caste Census of 2011 had identified 1,80,657 manual scavengers (does not include urban India) with highest number of them in rural Maharashtra.
- The **Safai Karmachari Andolan** (SKA) estimates the number of manual scavengers to be around 1.2 million.

Read More: Manual scavenging has gone underground in India: WHO

What is the need to eliminate manual scavenging?

1. **Dehumanizing Activity:** Article 21 of the Constitution guarantees 'Right to Life' with dignity. The practice of manual scavenging lowers an individual's self esteem in society and is considered as a dehumanizing activity.
2. **Emboldens the concept of purity & pollution**: Caste structure continues to reinforce inequality as a basic value based on the concept of purity and pollution. The allocation of labor is one of its prime manifestations. As per the notion, the alleged lower class must engage in inhuman occupations like manual scavenging.
3. **Social Stigma and Exclusion:** Those engaged in manual scavenging face extreme social stigma, untouchability, and ostracization. This affects not only the workers but also their families, impacting their access to education, housing, and other basic necessities, trapping them in intergenerational poverty and marginalization.
4. **Severe Health Hazards and Fatalities:**
   - **Exposure to Toxic Gases:** Workers are exposed to highly toxic and noxious gases like hydrogen sulfide (H_2S), methane (CH_4), carbon monoxide (CO), and sulfur dioxide (SO_2) in confined spaces like sewers. These gases can cause immediate asphyxiation, unconsciousness, and death.
   - **Pathogen Exposure:** Direct contact with human waste exposes them to a multitude of dangerous pathogens, bacteria, viruses, and parasites, leading to severe infections, skin diseases, respiratory illnesses, eye infections, gastrointestinal disorders, and long-term chronic health issues.
   - **Lack of Safety Gear:** Most manual scavengers work without proper protective gear, further exacerbating their vulnerability to these hazards. Fatalities due to asphyxiation or poisoning in sewers are tragically common. According to the *Safai Karamchari Andolan*, at least 472 people have died cleaning human excreta during the last five years.
5. **International Commitments**: India is party to UN declaration on Human rights, **Occupational Safety and Health Convention** etc., which prohibit continuance of practices like manual scavenging.

What steps have been taken towards elimination of manual scavenging?

1. **Prohibition of the Employment of Manual Scavengers Act 2013**: The law intends to eliminate insanitary latrines and prohibits employment as manual scavengers. It also prohibits hazardous manual cleaning of sewer and septic tanks.
2. **Prevention of SC/ST Atrocities Act, 1989**: It became an integrated guard for sanitation workers as more than 90% people employed as manual scavengers belonged to the Scheduled Caste. This became an important landmark to free manual scavengers from designated traditional occupations.
3. **Self-Employment Scheme for Rehabilitation of Manual Scavengers (SRMS)**: The scheme launched by the Ministry of Social Justice and Empowerment aims to rehabilitate manual scavengers and their dependents in alternative occupations, in a time bound manner.
4. **National Action for Mechanized Sanitation Ecosystem (NAMASTE) Scheme:**
    - NAMASTE is a Central Sector Scheme designed to eliminate hazardous manual cleaning of sewers and septic tanks, ensure occupational safety and dignity, and provide social security and rehabilitation support to sanitation workers.
    - Launched by the **Ministry of Social Justice and Empowerment (MoSJE)** in collaboration with the **Ministry of Housing and Urban Affairs (MoHUA)** the scheme aims to **eradicate manual scavenging** and promote **mechanized cleaning of sewers and septic tanks**, ensuring the safety, dignity, and well-being of sanitation workers.
5. **Supreme Court order, 2014:** It made it mandatory for the Government to identify all those who died in sewage work since 1993 and provide Rs. 10 lakh each as compensation to their families.
6. **National Commission for Safai Karmacharis (NCSK):** It is a statutory body established under the National Commission for Safai Karamcharis Act 1993. The main aim of the commission is to promote and safeguard the rights of the Safai Karamcharis.
7. **National Safai Karamchari Finance and Development Corporation (NSKFDC)**: It is building capacity at the local government level, providing mechanized desludging trucks and financial assistance to sanitation workers.
8. **Swachh Bharat Mission**: It led to the construction of toilets with on-site sanitation systems like septic tanks and pits.
9. **Atal Mission for Rejuvenation and Urban Transformation (AMRUT)**: It has led to the development of infrastructure such as sewerage networks, sewerage treatment plants across 500 cities.

Why is the practice still prevalent?

1. **Government Apathy**: Both the Central and State Governments are notorious for hiding the problem. Many **contradictions** are found in government data itself. In a reply to a question in Parliament, the government said that there is no report of people currently engaged in manual scavenging and no death has been reported due to the practice in five years. However, in a reply to another question, the Ministry of Social Justice and Empowerment recognised 66,692 manual scavengers.
2. **Social Prejudice**: Even when manual scavengers get an education and a degree, the burden of caste is heavy. Ambedkar had observed that *"in India, a man is not a scavenger because of his work. He is a scavenger because of his birth irrespective of the question whether he does scavenging or not"*.
3. **Misrepresentation using Contractors**: According to some well-researched media reports, the Indian Railways, the army, and urban municipalities remain the biggest bodies that still have workers engaged in manual scavenging. They either find ways to outsource such work to contractors so as not to be held directly accountable or liable or simply misrepresent such workers as 'sweepers'.

4. **Half hearted Rehabilitation**: The Government scheme provides for one-time cash assistance of Rs 40,000, skill development training, and capital subsidy for self-employed projects. But the lack of a reliable database makes these efforts futile.
5. **Poor implementation of laws**: There have been next to no serious legal proceedings against people and organisations accused of engaging workers for manual scavenging.
6. **Existence of insanitary latrines**: According to the 2011 Census, there are more than 26 Lakh insanitary latrines in the country. The existence of insanitary latrines creates a demand for manual scavenging and keeps sustaining the practice.

What should be the way forward?

1. **Strict Implementation of Existing Laws:** The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, must be strictly enforced. This includes prosecuting those who employ manual scavengers, not just the workers themselves.
2. **Identification and Survey:** Conduct regular, comprehensive, and accurate surveys to identify all individuals currently engaged in or vulnerable to manual scavenging.
3. **Accountability of Municipalities and Contractors:** Hold urban local bodies, government departments, and private contractors directly accountable for employing manual scavengers or for conditions that necessitate manual scavenging. Penalties should be severe enough to act as a deterrent.
4. **Mandatory Mechanization:** Make it mandatory for all sanitation work, especially sewer and septic tank cleaning, to be mechanized. This includes procuring and deploying sufficient numbers of modern suction and jetting machines, robotic cleaners, and other appropriate technologies.
5. **Financial Assistance and Skill Development:** Provide adequate financial assistance for immediate relief and offer skill development training programs (e.g., driving, plumbing, electrical work, computer skills, tailoring) that enable those engaged in manual scavenging to transition to dignified alternative livelihoods.
6. **Technological solutions:** The government should look for **technological solutions** to reduce the prevalence of manual scavenging e.g. a bandicoot robot can be used. It goes inside the manhole and mimics all the actions of a human scavenger. Tamil Nadu has launched a pilot project that includes sewer robots to clean over 5000 manholes.
7. **Public Awareness Campaigns:** Launch sustained, high-impact public awareness campaigns to sensitize society about the inhumane nature of manual scavenging and its link to caste discrimination. These campaigns should challenge prejudices and promote dignity of labor. Collaboration with public spirited individuals like Bezwada Wilson and organizations like *Safai Karmachari Andolan* (SKA) is desired. It would help in better formulation and implementation of policies for the manual scavengers. Their strength can also be **leveraged for bringing an attitudinal change** in society.

Read More: NHRC recommends measures against manual scavenging

Conclusion:

Manual scavenging is regarded as inhuman and a violation of the basic human rights. This practice is prevalent and needs collaborative efforts of government, civil society and every individual to end it.

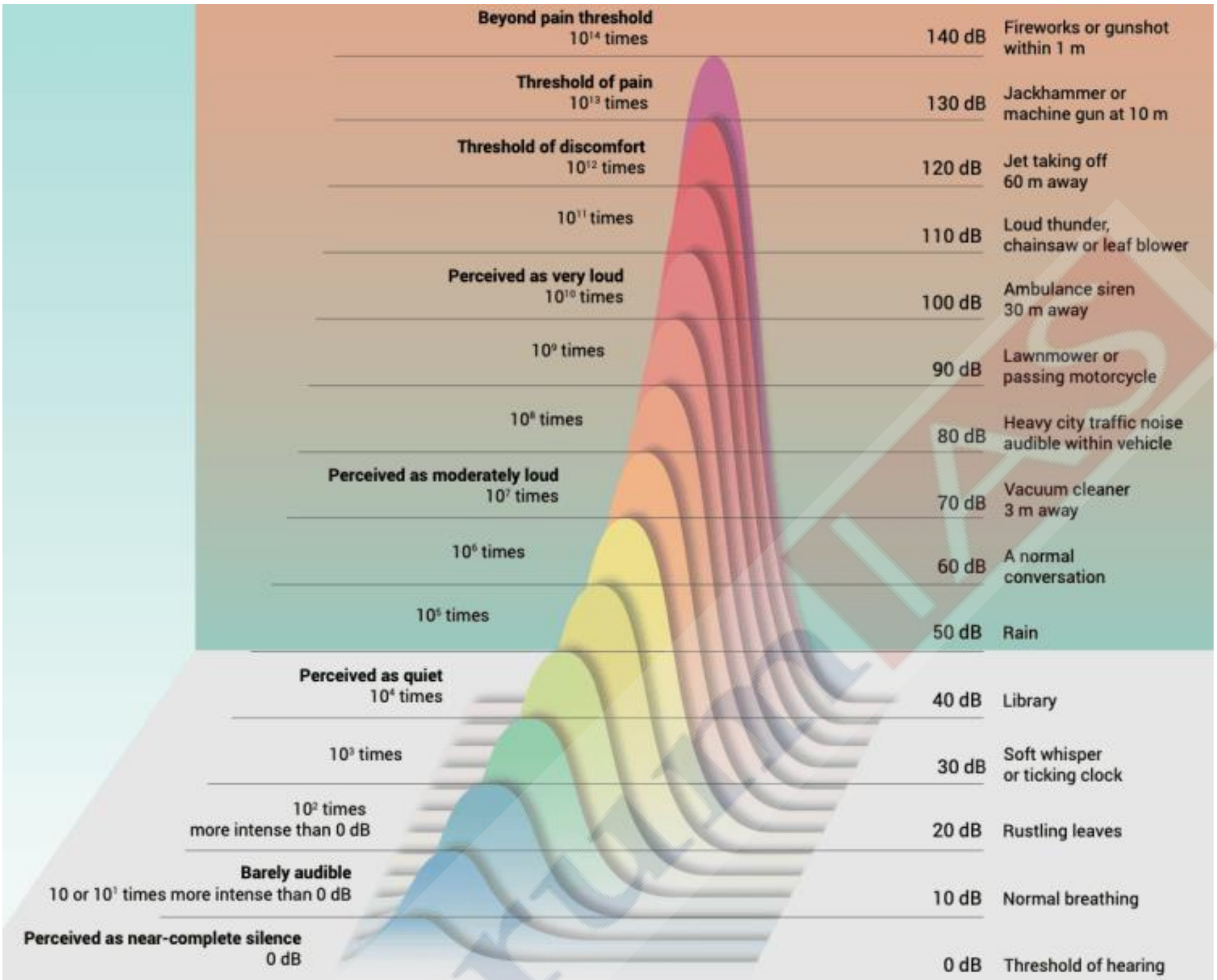
Read More: The Hindu
UPSC GS-2: Social Justice

Noise Pollution – Causes, Effects & Remedies – Explained Pointwise

Noise pollution, an often-neglected environmental and public health concern, has gained renewed attention following the recent Patna High Court verdict directing strict regulation of DJs, loudspeakers and pressure horns. The ruling highlights the urgent need to balance social celebrations and individual freedoms with citizens' right to a peaceful and healthy environment.

What is Noise Pollution?

- Unwanted sounds are classified as noise. When noises are too loud and persist too long, they become noise pollution. **Noise pollution** is generally defined as **regular exposure to elevated sound levels** that may lead to **adverse effects in humans or other living organisms**.
- **Decibels** (dB) are the units of measure for indicating the intensity or loudness of a sound. It is a unit for expressing the relative intensity of sound on a logarithmic scale. Since it is a logarithmic scale, even small difference in decibel level indicates orders-of-magnitude difference in intensity of sound e.g., a 60-dB, or 6-bel, sound, such as normal speech, is six powers of 10 (i.e., 10^6, or 1,000,000) times more intense than a barely detectable sound, such as a faint whisper, of 1 dB.



Source: UNEP Frontiers, 2022

- According to the **World Health Organization**, sound levels less than **70 dB** are not damaging to living organisms, regardless of how long or consistent the exposure is. Exposure for more than **8 hours** to constant noise beyond **85 dB** may be hazardous.

Summary of recommended noise exposure limit (World Health Organisation - 1980)

Environment	Recommended Maximum level	Effects
Indoor / Domestic Night	35dB	Increased awakening at higher levels
Indoor / Domestic Day	45dB	Speech communication deteriorates at higher levels
Community / Urban Night	45dB	Difficulty in falling asleep at higher level
Community / Urban Day	55dB	Annoyance increases at higher levels
Industrial / Occupational	75dB	Predictable risk of hearing impairment at higher levels

Source: WHO, Vikaspedia

What are the major causes of noise pollution?

1. **Transportation**: A large number of vehicles on roads, airplanes flying over houses, underground trains etc. produce heavy noise. Rapid growth in two-wheelers, cars, and commercial trucks creates continuous road traffic noise. According to the Frontiers Report, across the European Union, at least 20% of citizens are currently exposed to road traffic noise levels that are considered harmful to health.
2. **Industrial Activities**: Many industries use big machines like compressors, generators, exhaust fans, grinding mills etc., which produce a large amount of noise. The 114 dB measurement in Moradabad was an average of measurements reported from a factory in an industrial zone.
3. **Construction Activities:** Construction of roads, metro networks, buildings, and other infrastructure involves heavy machinery and equipment. Rapid urban redevelopment, metro rail construction, and flyover building involving pile drivers, pneumatic drills, heavy earthmovers, and concrete mixers operating in close proximity to residential zones.
4. **Social Events**: Noise is at its peak in most of the social events like marriage, parties, pub, disco or place of worship etc. People normally flout rules set by the local administration and create nuisance in the area. Extensive use during festivals (like Diwali) and celebrations, generating peak impulsive noise well beyond 120 dB.
5. **Poor Urban Planning:** Inadequate zoning and the absence of effective buffer zones often result in noise-generating activities being located near residential areas.
6. **Diesel Generators (DG Sets):** Frequent use of uncanopied or poorly maintained backup power generators in commercial markets, housing societies, and small businesses during power fluctuations.

Why are the major harmful impacts of noise pollution?

1. **Noise-Induced Hearing Loss (NIHL):** Prolonged exposure to sound above 85 dB damages the delicate hair cells within the cochlea, which cannot regenerate. Experts believe that regular exposure to over 85 dB for an 8-hour day or longer can cause permanent hearing damage.
2. **Sleeping Disorders:** Loud noise can hamper sleeping patterns and may lead to irritation and uncomfortable situations. Even when noise does not fully awaken a person, ambient sounds above 40-45 dB fragment REM and deep slow-wave sleep, leading to daytime fatigue, impaired immune function, and mood disorders.

3. **Chronic Health Problems**: Noise pollution is a risk factor for the development of cardiovascular and metabolic disorders such as elevated blood pressure, arterial hypertension, coronary heart disease and diabetes. A conservative estimate indicates that long-term exposure to environmental noise contributes to 48,000 new cases of ischemic heart disease and causes 12,000 premature deaths annually in Europe.
4. **Productivity Loss**: High levels of noise causes extreme discomfort to workers that adversely impacts their mind and reduces their productivity. This in turn enhances cost of production.
5. **Ecological & Wildlife Impacts**:
   - Traffic and other urban noises disturb and endanger the survival of other species. For instance, acoustic signals are used in a variety of communication contexts by animals like territory defense, warning of danger, locating or attracting a mate, and caring for offspring. However these functions are severely hindered by noise pollution.
   - Many species **tend to adapt** to the pollution by **altering their behaviour** e.g., modifying their signals by **switching their vocal frequency** or **altering their vocalization timing**. However, these adaptations can have unintended consequences (like altered vocalization patterns may be considered less attractive by potential mating partner, therefore affecting reproductive success). These consequences might eliminate them from their habitats, with possible significant ecological implications.
   - Low-frequency shipping noise and naval sonar disrupt echolocation and long-distance vocalizations in marine mammals (cetaceans), often leading to mass strandings and altered migration routes.

What steps have been taken to tackle noise pollution?

1. **Central Pollution Control Board (CPCB):** It is mandated to track noise levels, set standards as well as ensure, via the State units, that sources of excessive noise are controlled. The agency has a monitoring system (**National Ambient Noise Monitoring Network (NANMN)**) where sensors are installed in major cities and few cities have the facility to track noise levels in real time.
2. **Noise Pollution (Control and Regulation) Rules, 2000:** Enacted under the **Environment (Protection) Act, 1986**. The rules define ambient noise levels for various areas like residential, industrial or commercial places during the day and night time.

Note: According to the Rule 3(5) of The Noise Pollution (Regulation and Control) Rules, 2000, an area comprising **not less than 100 metres** around Hospitals, Educational Institutions and Courts may be declared (*by the State Government*) as silence area/zone. There are restrictions on certain activities in the **Silence Zones** like blowing of horns, bursting of sound-emitting fire crackers or use of sound-emitting construction equipment during night time among others.

3. **Air (Prevention and Control of Pollution) Act, 1981:** Noise was explicitly incorporated into the definition of "air pollutant" via a 1987 amendment.
4. **Restriction on Sound Systems:** A nationwide ban on loudspeakers and public address systems between 10:00 PM and 6:00 AM (with strictly limited exemptions for designated cultural events).
5. **NGT Noise Mapping Mandate:** The National Green Tribunal directed CPCB and SPCBs to map acoustic hotspots, mandate sound limiters on sound amplifiers, and equip police departments with calibrated sound level meters.

6. **Source Reduction in Machinery:** Mandatory acoustic enclosures/canopies for commercial Diesel Generator (DG) sets and industrial machinery.
7. **Green Belts ("Green Mufflers"):** Planting multi-tier dense tree buffers (e.g., Neem, Ashoka, Tamarind) along arterial roads, railways, and industrial perimeters, which can attenuate ambient sound by 10-15 dB.

What are the concerns in tackling noise pollution?

1. **Narrow meaning of Sound**: Policy makers think of sound only in terms of discomfort, such as transport and industrial noise, rather than investigating how to promote sounds that provide comfort. Natural sounds such as flowing water, birdsong, the wind in the trees etc. are soothing sounds that should be promoted.
2. **Jurisdictional Fragmentation & Lack of Ownership:** Enforcement is split between local police, municipal corporations, transport departments, and State Pollution Control Boards (SPCBs). Police often treat noise as a low-priority public nuisance rather than a serious environmental pollutant.
3. **Corruption**: Prevalence of corruption is a key reason due to which industries and commercial establishments keep on disrespecting environmental norms. They prefer paying a bribe rather than investing huge amounts of money on sound reduction technologies.
4. **Low Penal Deterrence:** Penalties and fines historically remained too low to serve as an effective deterrent, leading to widespread non-compliance until heavier graded fines were pushed by tribunal interventions.
5. **Non-Conforming Mixed Land Use:** Rapid, haphazard urbanization means small-scale fabrication units, auto repair shops, banquet halls, and commercial markets directly border residential areas, rendering strict zoning enforcement impractical.
6. **High Urban Density & Road Congestion:** Dense arterial roads run within meters of high-rise residential complexes. High vehicle density, stop-and-go traffic, and bottlenecked intersections amplify ambient engine and tire noise.
7. **Cultural Normalization of High-Decibel Events:** Loudspeakers, high-output DJ systems, and firecrackers are deeply entwined with religious festivals, weddings, and political rallies. Enforcement during these events often faces public resistance or political sensitivity.
8. **Habitual Honking Culture:** Honking is treated as an involuntary driving habit rather than an emergency warning signal, aggravated by a lack of lane discipline and widespread illegal aftermarket modifications (pressure horns).

What are the ways to reduce the Noise Pollution?

1. **Soundscape Approach:** The focus should be on adopting novel approaches towards noise pollution. For instance, the UNEP Frontiers 2022 recommends adopting a **soundscape approach**. Under this, experts try to look at the issue of urban acoustic environments more holistically, taking a listener-centered perspective. Soundscape planning aims to deliver pleasant acoustic environments that enhance appreciation of places by people.
2. **Green Cover:** Focus should also be placed on **enhancing green cover.** Vegetation in urban environments can absorb acoustic energy, diffuse noise and reduce street amplification. Apart from this, they help in amplifying natural sounds by attracting urban wildlife. This includes measures like tree belts and 'green roofs'.
3. **Pathway interventions:** Pathway interventions are engineering solutions that **obstruct the path of noise** from source to receiver by creating a barrier. Both traditional and innovative materials, made from recycled materials such as plastic and car tyres, have proved effective. For instance, Fiberglass

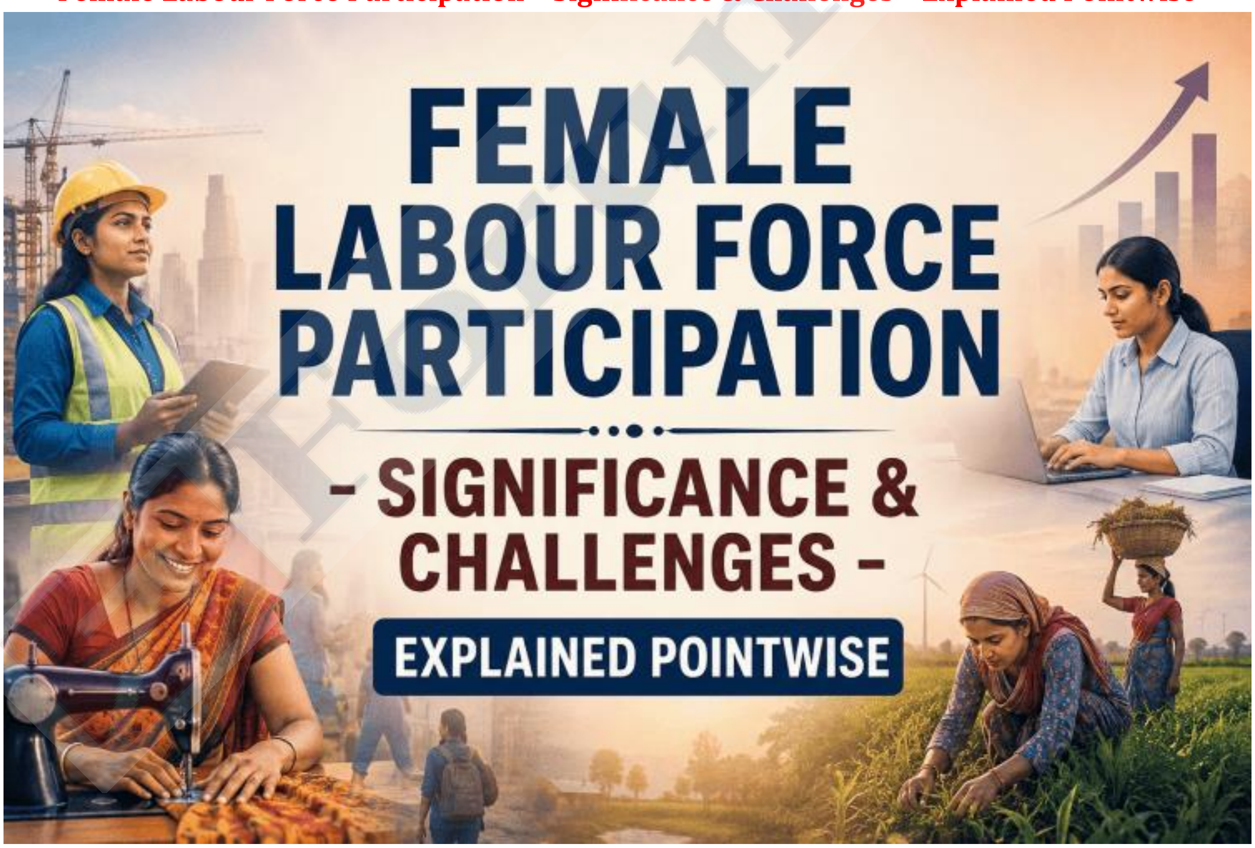
from decommissioned wind turbine blades in Denmark have shown a barrier effect reduction of traffic noise levels by 6-7 dB.

4. **Expansion of Real-Time Micro-Grids:** Expand CPCB's National Ambient Noise Monitoring Network (NANMN) to tier-2/tier-3 cities and establish micro-monitoring stations at sensitive urban hotspots.
5. **Single-Window Nodal Agency:** Establish dedicated Environmental Enforcement Cells within municipal bodies to eliminate the jurisdictional vacuum between local police, transport authorities, and SPCBs.
6. **Empowering Field Enforcement:** Ensure strict implementation of noise standards and impose effective penalties for repeated violations. Equip traffic police and beat constables with calibrated Type-1/Type-2 digital sound level meters and train them to collect legally robust acoustic evidence for swift penalization.

Conclusion: Noise pollution is a major environmental problem and is cited as a crucial factor causing risk to health across all age and social groups. Its magnitude and extent is more visible in urban regions, hence a greater focus should be given to them keeping in mind the SDG 11 that calls for creating sustainable cities and communities.

UPSC GS-3: Environment
Read More: The Hindu

Female Labour Force Participation – Significance & Challenges – Explained Pointwise



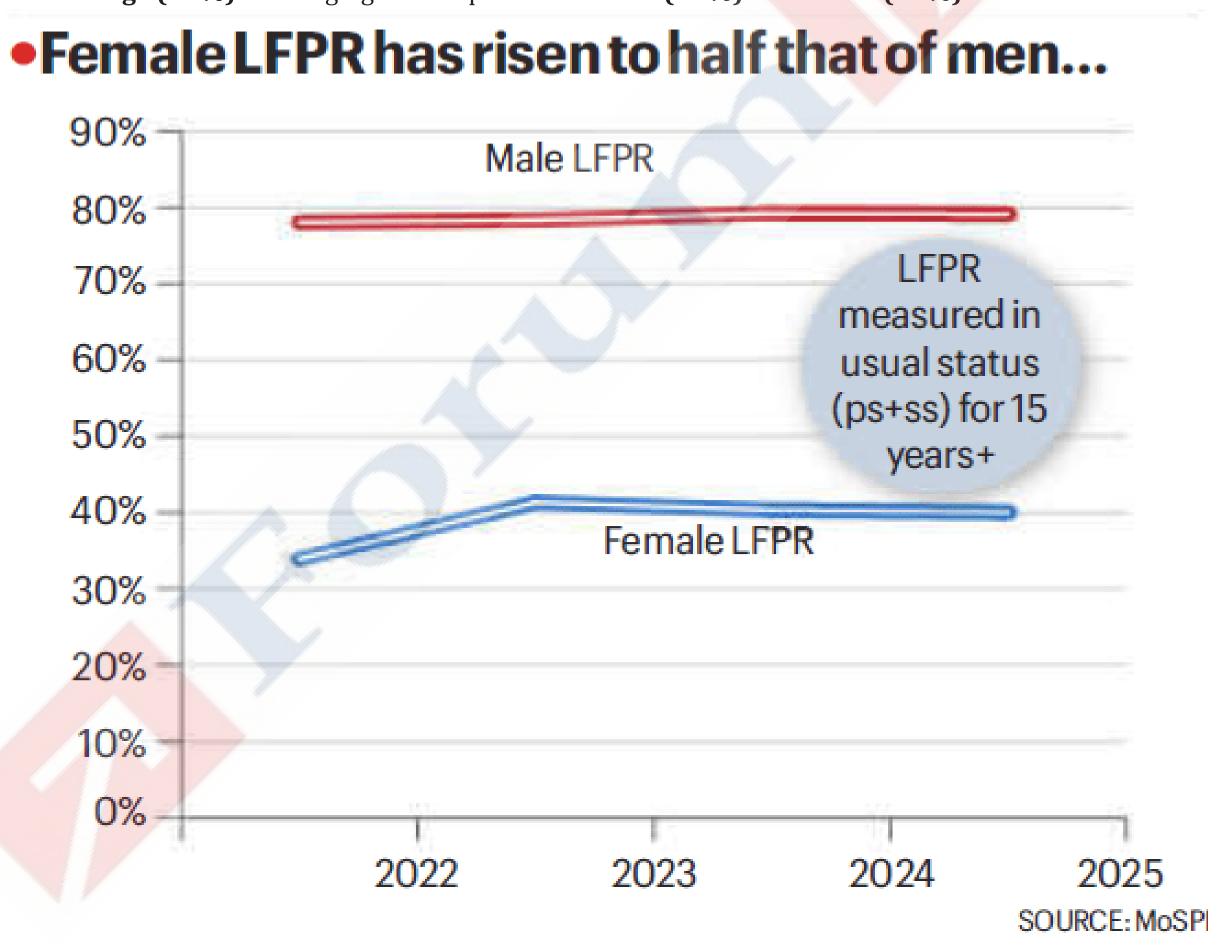
India's Low Female Labour Force Participation rate is a big threat to India's Demographic Dividend. India still has not cracked the code of getting women to work in time. Any further delay in improving the female labour force participation in productive sector, will be detrimental to India's dream of becoming a developed nation by 2047.

What is Female Labour Force Participation Rate (FLFPR)?

- Female Labour Force Participation Rate is a ratio of the number of women who are part of the labour force to the number of women in the working age (greater than 15 years of age).
- A woman is considered to be a part of the labour force if she is either employed or actively looking for work.

FLFPR trend in India:

1. According to the PLFS 2025, the Female Labour Force Participation Rate (FLFPR) is consistently increasing in India. The FLFPR has risen from 30% in 2019-20 to **40%** in 2025. The increase was more pronounced in rural areas, where the FLFPR increased from 33% to 45.9%, as compared to urban areas where it increased from 23.3% to 27.7%. However, it is still remains well below the **global average (49%)** & emerging market peers like **Brazil (53%)** & **Vietnam (69%)**.



Source: MoSPI

2. **State-wise Trend**:

Chart 3: Baseline (2019-20 LFPR) and AAAP relation for rural FLFPR

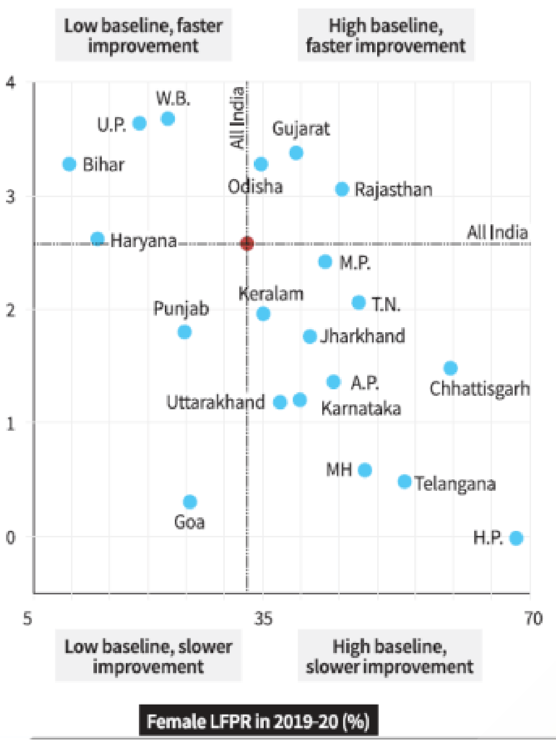
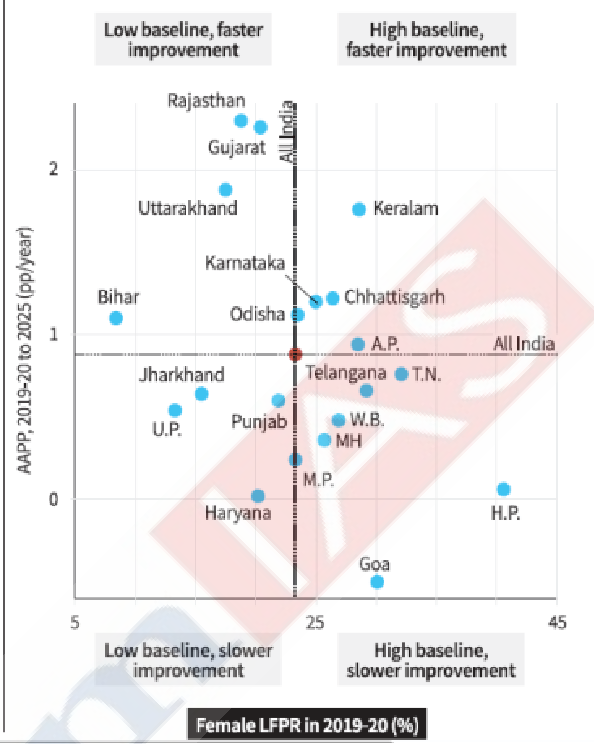
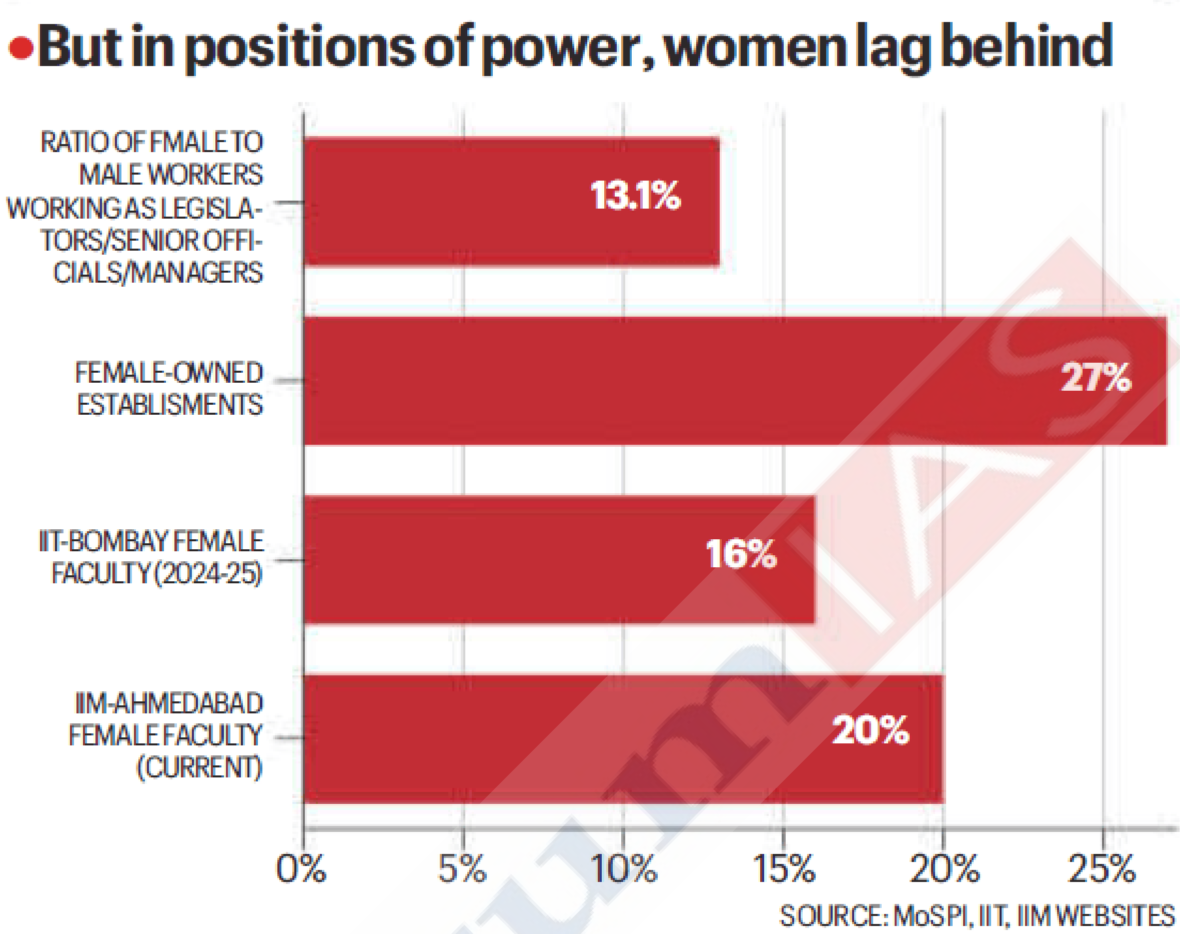


Chart 4: Baseline (2019-20 LFPR) and AAAP relation for urban FLFPR



Source: The Hindu

3. **Glass Ceiling:**
    - While the FLFPR is rising, their presence in senior positions in various spheres is much lower.
    - Female representation is low in business decision making as well. According to MoSPI's Annual Survey of Unincorporated Sector Enterprises, the share of female-owned proprietary establishments stood at **27%** in 2025.
    - According to PLFS, for every 100 males working as legislators, senior officials, and managers in 2025, there are **only 13 females** in similar high positions.
    - While nearly all of India's leading firms have a woman as a director on their boards, **77%** had only 1-2 women as directors.
    - Only **7%** of BSE200 & **5%** of NSE500 board chairpersons are women. Without achieving a critical mass (30% according to research), their presence at top risks being symbolic rather than substantive in India's corporate governance landscape.



Source: Indian Express

4. The simple average of the FLFPR of the five southern Indian states (Tamil Nadu, Karnataka, Telangana, Andhra Pradesh, Kerala) is 13% lower than the five northern states of Himachal Pradesh, Rajasthan, Chhattisgarh, Madhya Pradesh and Jharkhand. This defies the conventional belief that southern states, with high literacy and women empowerment indices, will have high FLFPR.
5. There are **only four states** (Assam, Bihar, Haryana and Delhi) with an FLFPR of **less than 25%.** Delhi has the lowest at 14.8%.
6. According to the World Bank, Indian women's participation in the formal economy is among the lowest in the world. Only some parts of the Arab world perform worse than India in terms of FLFPR.

What are the reasons for low Female Labour Force Participation rate in India?

1. **Unpaid care and domestic work:** Women bear a disproportionate burden of childcare, household chores and eldercare, leaving limited time for paid employment. A survey cited by the Economic Survey found that about **55% of women** outside paid work cited household and childcare duties as barriers.
2. **Time Poverty**: Indian women spend an average of **363 minutes per day** on unpaid domestic work, compared to just **123 minutes** for men. This "time poverty" is the single largest barrier to formal employment.
3. **Patriarchal social norms:** Traditional perceptions often consider men as primary earners and women as homemakers, discouraging women's participation in paid employment.

4. **High Degree of Informalisation:** According to a 2018 study by the International Labour Organisation (ILO), more than 95% of India's working women are informal workers. The absence of social security net in the informal sector discourages women from participating in the labour force.
5. **Gender Pay Gap and Glass ceiling:** According to the Economic Survey 2018, India has one of the largest gender gap in median earnings of full-time employees. Such discriminatory practices at workplace adversely affects FLFPR.
6. **Pink Jobs:** The societal notions about **'gendered occupations'** limit the role of women to specific job profiles like nursing, teaching, gynaecologist etc. There are tangible and intangible barriers to entry of women in multiple professions like heavy engineering, law enforcement, armed forces etc.
7. **Increase in Household Income (U-Shaped Curve):** As male household incomes rise in growing economic classes, families often prioritize social status over a second income, resulting in women voluntarily exiting the workforce.
8. **Safety Concerns:** High incidents of violence against women at workplace as well as in public places discourages women to work in the night like their male counterparts. Further, instances of sexual harassment at workplace induces women to opt out of labour force.
9. **Educated Unemployment:** Women are going for higher education, as seen in Gross Enrolment Ratio (GER) of secondary education. The lack of availability of jobs that match the high female education levels also contributes to the low FLFPR.
10. **Legally sanctioned restrictions:** Many States continue to restrict women's participation in hazardous jobs in factories and commercial establishments for e.g. women are not allowed to work on stone-cutting machines, shop floor of boilers, etc.
11. **Political Vacuum:** The current Lok Sabha has only 14.4% women, despite women constituting around 50% of Indian population. The lack of gender perspectives inhibits formulation of a comprehensive policy that encourages women participation in economic activities.

What is the significance of enhancing Female Labour Force Participation?

1. **Economic Boost:** Estimates by the International Monetary Fund (IMF) suggest that achieving gender parity in the workforce could boost India's Gross Domestic Product (GDP) by up to 27%. Furthermore, expanding FLFPR is vital for India to maintain a high annual GDP growth trajectory as it aims for *Viksit Bharat* (developed nation status).
2. **Poverty Reduction:** Women's earnings improve household income diversification, reduce poverty, and would also help in breaking the intergenerational poverty cycles. It helps to tackle the phenomenon of feminisation of poverty, which is a result of highly informalised work performed by women.
3. **Improvement in Social Indicators:** Encouraging more women to enter the formal workforce will improve indicators like Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR).
4. **Self Confidence and Dignity:** Financial independence increases a woman's agency, bargaining power within the family, and voice in critical decisions such as family planning and financial investments.
5. **Demographic Dividend Utilisation:** With a young population, India needs all hands to capitalize on its demographic dividend. Excluding women undermines productivity gains and risks a demographic burden instead. With India's population growth slowing, women's participation is vital to sustaining the labor supply required for the "Make in India" and services-led growth models.
6. **The "Multiplier Effect":** Studies consistently show that women invest a larger portion of their income (up to 90%) into their children's education, nutrition, and healthcare compared to men. This helps lift families out of poverty and creates a healthier, better-educated future workforce.

7. **Social Norms Shift**: Rising FLFP challenges patriarchal norms, normalizes working women, and encourages policy changes like better childcare, safe transport, and workplace flexibility, creating a virtuous cycle.
8. **Returns on Female Educational Attainment:** India has achieved significant parity in secondary and tertiary education enrollments. Higher FLFPR ensures that public and private investments in women's education translate into direct economic output rather than underutilized talent.
9. **Fiscal & Demographic Balance**: It expands the tax base, reduces dependency ratios, and supports social security systems. It also addresses labor shortages in sectors like manufacturing and care economy.
10. **Global Commitments:** Improving FLFPR is related to achievements of SDG 1 (No Poverty), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth) and SDG 10 (Reduced inequalities).

What steps have been taken by the Government to enhance Female Labour Force Participation?

Mission Shakti	**Mission Shakti** is the flagship initiative designed to support women throughout their life cycle. It is divided into two sub-schemes: 1. **Sambal (Safety & Security):** Includes **One Stop Centres (OSC)** for legal and medical aid, the **181 Women Helpline**, and **Nari Adalats** (women's collectives) to facilitate gender justice. 2. **Samarthya (Empowerment):** Focuses on economic independence: a. **Sakhi Niwas (Working Women Hostels):** Provides safe, affordable, and conveniently located accommodation for women moving to urban nodes for work. b. **Palna (Anganwadi-cum-Crèche):** A national crèche scheme that provides childcare facilities in or near workplaces (including Anganwadis) to reduce the "double burden" on working mothers.
Skill Development	● **PM Kaushal Vikas Yojana (PMKVY):** Nearly 45% of the candidates trained under this national skill development program are women. ● **30% reservation for women** in all Industrial Training Institutes (ITIs). ● **NAVYA** initiative is a pilot program to equip adolescent girls with vocational training in non-traditional job roles. ● **Swavalambini** program aims to cultivate an entrepreneurial mindset among female students in higher education. ● **Women Entrepreneurship Platform (WEP):** A NITI Aayog initiative that acts as a one-stop portal for women to access mentorship, funding, and networking.

Economic & Entrepreneurship Incentives	• **Lakhpati Didi Scheme:** Aimed at empowering 3 crore (30 million) rural women to earn an annual income of at least **₹1 Lakh** through micro-enterprises and skill training. • **Drone Didi:** A specialized initiative to train 15,000 SHG women as drone pilots for agricultural purposes (pesticide spraying, crop monitoring), integrating women into high-tech rural jobs. • **Pradhan Mantri MUDRA Yojana (PMMY):** These schemes provide collateral-free micro-loans up to ₹10 lakh. Notably, over **68%** of Mudra loan beneficiaries are women, helping them start or scale small businesses. • **Stand up India**: The scheme facilitates bank loans for setting up a new enterprise in manufacturing, services, agri-allied activities, or the trading sector by SC/ST/Women entrepreneurs. It provides bank loans between Rs10 lakh and up to Rs1 crore. • **Women Entrepreneurship Platform (WEP):** A NITI Aayog initiative offering incubation, mentorship, funding support, and network access for tech and non-tech women-led startups.
Safety & Dignity at Work	• **Sexual Harassment of Women at Workplace Act, 2013 (POSH):** The Act was enacted to protect women from sexual harassment at their place of work. The Act ensures mandatory internal complaints committees across formal workplaces to create safe work environments. • **SHe-Box Portal**: 'SHe-Box' portal provides a centralized online system to file complaints related to workplace sexual harassment.
New Labour Codes	• **Code on Wages (2019)**: Equal pay for equal work; no gender discrimination in recruitment or wages. • **Code on Occupational Safety, Health and Working Conditions (OSH) 2020:** Women are now legally permitted to work night shifts and in all sectors (including underground mining and heavy machinery), provided their consent is given and the employer ensures safety and transportation. • **Maternity Benefits:** The Maternity Benefit Act (amended) provides 26 weeks of paid leave and mandates crèche facilities for establishments with 50+ employees. It proposed an option to work from home after this period, on mutual agreement with the employer.
Anganwadi centres under the ICDS	They provide maternal and child nutritional security, a clean and safe environment, and early childhood education. Thus, they facilitate the ability of women to re-enter work post-childbirth.

National Food Security Act (NFSA), 2013	Apart from providing affordable food, it entitles pregnant and lactating mothers to a cash transfer of at least **Rs 6,000**. This is done to break the compulsion for early returning to work.

What should be the Way Forward?

1. **Strengthening the "Care Economy":** The single largest barrier to female participation remains "time poverty" due to the disproportionate burden of unpaid domestic work. The care economy can be addressed by following:
    a. **Child Care Subsidies:** Child-care subsidies should be provided to free up mothers' time to enter the labour force, which would have significant implications in increasing female employment.
    b. **Universal Childcare:** Scaling the **Palna** scheme beyond Anganwadis into urban industrial clusters and IT hubs.
    c. **Elder-Care Infrastructure:** As India's demographic shifts, elder care is becoming a new domestic burden. Developing a regulated professional caregiving industry can simultaneously reduce women's domestic load and create new jobs.
    d. **Normalizing Paternity Leave:** Moving toward "Gender Neutral Parental Leave" to shift the societal expectation that caregiving is solely a female responsibility.
2. **Expand National Crèche Infrastructure:** Institutionalize public-private partnerships to scale quality child-care centers near job hubs and rural Anganwadis, reducing the disproportionate burden of unpaid care work on women.
3. **Removal of the legally sanctioned legislation:** States should review legislations like the Factory Act, Shops and Establishment Act etc. and liberalise the restrictions on women. The best practices from well performing States can be adopted across all States for e.g. Andhra Pradesh and Telangana are the only two states that allow women to work in all processes in all establishments.
4. **Creation of Self Help Groups:** The focus should be on creation of more Self Help Groups. They are of immense reliance and drastically enhance women participation as seen in case of Kudumbashree model of Kerala.
5. **Formalizing the Gig Economy:** Leveraging the **e-Shram** portal (which now has over 54% female registration) to provide social security and health benefits to women in the gig and platform economy (e.g., beauty services, digital tutoring).
6. **Safety Infrastructure:** Implement women-centric policing and improve lighting in public spaces to reduce dependency on costly private transport (the 'Pink Tax').
7. **Returnships:** Create "returnship" programmes specifically for women re-entering the workforce after a career break due to caregiving.
8. **Strengthen women's entrepreneurship:** Move beyond access to credit towards market linkages, technology, mentoring, business formalisation and procurement opportunities for women-led enterprises.
9. **Change Social Norms:** Challenge traditional gender roles that confine women to unpaid domestic and caregiving work. Promote shared household responsibilities, encourage women's employment through community awareness, engage men and local institutions, and create supportive social environments that recognise women's economic contribution.

Conclusion: There is a need to take multiple steps to augment the female labour force participation in India in order to realise the numerous social and economic benefits that accrue from greater presence of women in the workforce. It can help India move from women-centric development to women-led development.

Read More: The Hindu
UPSC Syllabus- GS 3 Inclusive Growth, GS 1 Women empowerment, GS 2 Vulnerable sections of the society

India-Russia Relations – Significance and Challenges – Explained Pointwise

Ahead of the two upcoming meetings between Prime Minister Narendra Modi and Russian President Vladimir Putin, India's External Affairs Minister met President Putin to discuss key areas of bilateral cooperation, including energy, fertilisers, nuclear power, and high technology. The visit highlights the strategic importance of India-Russia relations and India's commitment to further strengthening the partnership. In this article, we will analyse the significance of India-Russia relations, the challenges this relation faces and the way forward for further strengthening of the relation.

What is the history of India-Russia Relations?

Russia has been a longstanding and time-tested partner for India. Development of India-Russia relations has been a key pillar of India's foreign policy. It is pertinent to look at the historical development of India-Russia relations.

India and Russia (formerly the Soviet Union) have had a longstanding and strategic relationship since the establishment of formal diplomatic ties in April 1947, just months before India's independence. The relationship has evolved over the decades, with periods of both cooperation and tension.

Early Years (1947-1955)	● India established diplomatic relations with the **Soviet Union (USSR)** in **1947**, soon after gaining independence. ● Initial relations between the newly Independent India and Soviet Union were negligible due to ideological differences. ● Soviet Union under Stalin viewed India's independence movement with suspicion. However, this began to change in the 1950s, with key visits by Indian PM Nehru to Moscow in 1955 and Soviet leader Khrushchev to India later that year. ● The steel plants at **Bhilai** and **Bokaro** were direct outcomes of these visits.
Cold War Era (1955-1991)	● India and the Soviet Union developed a strong strategic, military, economic and diplomatic relationship during the Cold War. ● The Soviet Union became a major supplier of arms and military equipment to India, strengthening its defense capabilities. It played a crucial role in various conflicts, including the **1962 Sino-Indian War** and the **1971 Indo-Pak War**. ● The **Treaty of Peace, Friendship and Cooperation** signed in **1971** was a key milestone in India-Russia relations. It included a security provision for mutual consultations in the event of a threat to either country.
Post-Cold War (1991-2000)	● Post Cold War and the dissolution of the Soviet Union in **1991**, India-Russia relations weakened due to economic challenges and the changing global landscape. ● The **Treaty of Friendship and Cooperation** signed in **1993** attempted to revive ties between India and Russia. However, the cooperation in most areas declined.
Phase of Strategic Partnership	● Signing of the '**Declaration on the India-Russia Strategic Partnership**' in **2000** elevated the India-Russia ties to a new level. This strategic partnership has enhanced cooperation in political, security, defense, trade, economy, science, technology and culture. ● High-level engagements like the **annual India-Russia Summit** have further strengthened the relationship.

What are the areas of Cooperation between India and Russia?

1. **Geopolitical Cooperation:** India and Russia have close geopolitical cooperation:
    a. Engagement of India and Russia in regional forums like BRICS, SCO and the G20.
    b. India refrained from adverse voting in the UN, and disregarded Western threats of sanctions on its energy imports from Russia.
    c. India and Russia champion the establishment of a multi-polar world order.
    d. Strong condemnation of terrorism in all its forms and all terrorist "safe havens" by both the Countries.

2. **Defense Cooperation:**
    a. **Military Hardware and Technology Transfers:** Russia is a major defense equipment supplier to India:
        - Licensed production of T-90 tanks and Su-30 MKI aircraft in India.
        - Agreements for the supply of S-400 Triumf mobile surface-to-air missile systems, MiG-29K aircraft, Kamov-31 helicopters, and upgrade of MiG-29 aircraft.
        - Joint development and production of military platforms like the BrahMos supersonic cruise missile.
        - Establishment of Indo-Russia Rifles Private Limited (IRRPL) to produce AK-203 rifles in India under "Make in India".
    b. **Joint Military Exercises:** Tri-service military exercise 'INDRA', Avia Indra joint air force exercise.
    c. **Institutionalized Mechanisms for Defense Collaboration:** Establishment of India-Russia Inter-Governmental Commission on Military Technical Cooperation (IRIGC-MTC) at the apex level; and 2+2 Dialogue mechanism involving the Defense and Foreign Ministers in 2021.
3. **Economic Cooperation:** India and Russia share close economic relations. These are explained below:
    a. **Trade and Investment:** The bilateral trade between India and Russia stands at around $65 billion. India's imports of Russian crude at discount has surged in after the invasion of Ukraine led to the oil sanctions by the U.S. and Europe.
    b. **Cooperation in the Russian Far East:** India provides financial and personnel assistance to develop the resource-rich but sparsely populated Russian Far East region bordering China. A 5-year program of cooperation in the Far East for 2021-2025 is being finalized between NITI Aayog and Russia's Ministry for Development of the Far East.
    c. **Close Business Cooperation:** India and Russia have both institutionalised CEO's Forum. Indian companies invest in Russia, especially in natural resources such as coal, fertilizers, hydrocarbons, minerals, rare earth metals.
    d. **Banking and Financial Links:** India and Russia have explored on deepening banking and financial links such as ruble-rupee trade; and collaboration between financial institutions like SBI and VTB Bank.
4. **Scientific and Research Cooperation:** Since the cold war era, Russia has been a major scientific and research partner of India.
    a. **Civil nuclear energy Cooperation:** India and Russia jointly developed Kudankulam Nuclear Power Plant (KKNPP). India and Russia have jointly signed agreements on the construction of 12 nuclear power plants in India during the coming decades.
    b. **Space relations:** Russia and India have signed an agreement to train Indian astronauts for India's first manned space mission (Gaganyaan). C-DAC and GLONASS have signed the agreement for cooperation in technologies based on satellite navigation.
    c. **Health:** India approved Russian Vaccine Sputnik V under emergency use authorization.
5. **Diaspora and Cultural Relations:** India and Russia have a deep diaspora and cultural relation. The following are the areas of engagement between India and Russia.
    a. **Respect for languages and Culture:** Hindi, and other languages such as Tamil, Marathi, Gujarati, Bengali, Urdu, Sanskrit and Pali are taught in Russian Institutions. Organizations like the Indian Cultural Centre in Moscow and the Indian Students' Association promote Indian culture and heritage in Russia.
    b. **Indian Diaspora:** The Indian diaspora in Russia is estimated to be around 30,000-40,000, which consists of mostly professionals, students and businesspeople.

c. **Extension of line of Credit for Russian Far East:** India has extended $1 billion as a line of credit for the development of the Russian Far East.

What is the significance of India-Russia Relations?

1. **Geopolitical:** Deepened strategic partnership with India holds a lot of geopolitical importance for India.
    a. **Russian support on critical Issues:** Russia supports India's demand for permanent seat in the UNSC. It has also supported India's stand on the Kashmir Issue.
    b. **Counterbalancing Chinese Aggression:** Russia can help in defusing rising tensions with China.
2. **Defence and Security Cooperation:**
    a. Russia still remains a critical defense supplier for India with 60-70% of India's defense equipment estimated to be of Russian and Soviet origin. Though India has diversified its defense imports from countries like US, France, it still cannot alienate Russia especially in the face of Chinese aggression at the border.
    b. S-400 and other advanced systems bolster India's air defense capability, even at the cost of friction with the US under CAATSA.
    c. Unlike many Western partners who often place strict end-user constraints, Russia has historically shared sensitive defense technologies, including nuclear submarine leasing, supersonic cruise missile systems (BrahMos), and licensed indigenous manufacturing capabilities.
3. **Economic and Connectivity Opportunities:**
    a. Projects such as the **International North–South Transport Corridor (INSTC)** and the **Chennai-Vladivostok Eastern Maritime Corridor** can improve India's connectivity with **Russia, Central Asia and Europe.** Greater connectivity can diversify India's trade routes and strengthen economic engagement with Eurasia.
    b. Cooperation in quantum computing, semiconductors, and rare earths offers India alternative technology and critical-mineral supply chains, reducing dependence on China for rare earth elements specifically.
4. **Energy Security:**
    a. Russia is an important source of **crude oil and other energy resources** for India.
    b. Indian investments in Russian oil and gas projects help diversify India's energy supplies.
    c. Cooperation in **civil nuclear energy**, particularly the **Kudankulam Nuclear Power Plant**, further strengthens India's long-term energy security.
5. **Strategic Balancing:**
    a. Smooth India-Russia relations offers India a better bargaining chip in negotiations with the western powers. It also offers India to strategically balance and align with the powers according to its national interest. **For e.g.** PM Modi's visit is taking place when leaders of the 32 nations in the North Atlantic Treaty Organisation (NATO) gather in Washington DC to celebrate 75 years of the anti-Russia military alliance.
    b. Close India-Russia relations provides New Delhi the opportunity to offset the Chinese advantage in Eurasia.

What are the Challenges in the relation?

1. **Deepening of India-US relations:** The India-US relations is rapidly deepening especially in the defense sector, which is exemplified in the India-US nuclear deal in 2008, US emerging as the top arms

supplier to India by overtaking Russia and India-US Foundational agreements such LEMOA, COMCASA, BECA. Due to these developments, Russia changed their decades-old policy and start supplying China with weapon systems like Sukhoi 35 and the S-400 missile defence system.

2. **Russia's growing dependence on China:** Moscow and Beijing have forged the closest possible ties in their history. This has generated fears that Russia will become a subordinate partner given the growing economic, demographic and technological asymmetry between them. This could jeopardize Moscow's neutrality on Sino-Indian tensions.
3. **Russia's increased engagement with Pakistan:** Russia has been increasing its economic and defence cooperation with Pakistan, like conduction of bilateral exercise Friendship. The RCP axis (Russia, China, Pakistan) will be detrimental to India's national interest.
4. **Trade Imbalances:** Even though the bilateral trade between the two nations has increased in the face of crude oil imports, there is considerable trade imbalances between India and Russia. Of the total trade of $65 billion, India's exports constitute less than $5 billion.
5. **Defense Delays:** There have been considerable delays in the delivery of military spares and big-ticket weapon systems like the S-400 Triumf surface-to-air missile systems, to India due to the Ukraine War.
6. **Connectivity Project Implementation Gaps**: INSTC and the Chennai-Vladivostok Maritime Corridor remain long-term infrastructure ambitions with significant implementation challenges which involve multiple transit countries (e.g. Iran for INSTC), sanctions exposure, and financing hurdles – limiting their near-term impact on trade diversification.
7. **Ukraine Crisis:** The continuing Russia-Ukraine war has put India into a diplomatic tightspot. India has been facing significant criticism for not condemning the invasion and continuing energy and economic cooperation with Moscow.

What Should be the Way Forward?

1. **Neutral Player in the resolution of Ukraine Crisis:** India must continue to maintain its positioning as a neutral player that could be a mediator between the two sides in the resolution of the Ukraine Crisis. India must continue to appeal to both sides to 'abide by the international rules and conventions'.
2. **Conclude the India-EAEU FTA**: Prioritize finalizing the Free Trade Agreement with the Eurasian Economic Union to move beyond an energy-dominated trade basket and unlock the 300+ identified export products. The FTA will help in reducing the tariff and non-tariff barriers & expanding the access to Central Asian and Russian markets.
3. **Addressing defense supply chain shocks:** India and Russia must explore setting up joint venture partnerships to address the shortage of critical defense spare parts.
4. **More diplomatic and financial investments:** India and Russia must invest more diplomatic and financial resources to finish the pending works for the International North-South Transport Corridor. Both sides should expedite discussions on the Free Trade Agreement with the Eurasian Union for better trade and commerce.
5. **Enhanced focus on Eurasia:** India and Russia have to explore their opportunities in the Eurasian region. India can study the possibility of expanding Russia's idea of 'extensive Eurasian partnership' involving the EAEU (Eurasian Economic Union) and China, India, Pakistan, and Iran.
6. **Unequivocal message to the Western countries:** India must send unequivocal message to the West that Russia occupies a pivotal place in India's strategic calculations. It must be conveyed that the West needs India just as much as India needs the West.

Conclusion: India should modernise and diversify its long-standing partnership with Russia by strengthening economic and technological cooperation while preserving strategic autonomy. A balanced, pragmatic and future-oriented approach can help India-Russia relations remain resilient amid changing geopolitical realities.

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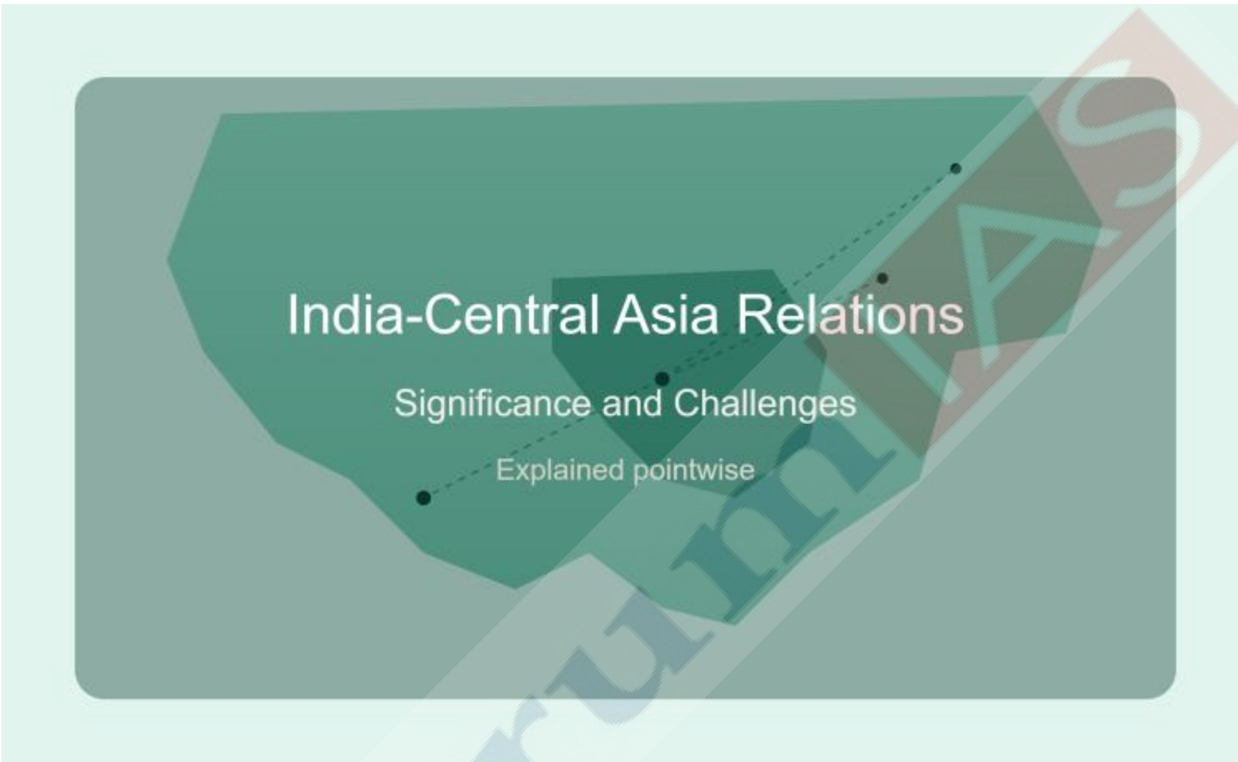
UPSC Syllabus- GS 2 International Relations- India's Relation with Developed Countries

India-Central Asia Relations – Significance & Challenges – Explained Pointwise



Prime Minister Narendra Modi is set to visit Central Asia this week for a bilateral visit to Uzbekistan and to attend the SCO Summit in Kyrgyzstan. As global geopolitics undergoes significant shifts, Central Asia is gaining strategic importance for India. The region is balancing ties with Russia, China and the US, while India seeks to leverage its historical, cultural and security linkages to advance its economic and strategic interests.

Central Asia Region:

Central Asia

- **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:
    1. **Kazakhstan** — Astana – World's largest landlocked country
    2. **Kyrgyzstan** — Bishkek – Mountainous land dominated by the Tian Shan mountain range
    3. **Tajikistan** — Dushanbe – High-altitude terrain home to the Pamir Mountains
    4. **Turkmenistan** — Ashgabat – Dominated by the Karakum Desert
    5. **Uzbekistan** — Tashkent – Most populous country in the region
- **Climate:** Predominantly continental and semi-arid to arid, featuring hot summers and severe, cold winters.
- **Energy resources:** Kazakhstan, Turkmenistan and Uzbekistan possess significant oil and natural-gas resources.
- **Water resources:** The **Amu Darya and Syr Darya** are crucial transboundary rivers.

How have India-Central Asia relations evolved?

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	● **2012**: India launched its **"Connect Central Asia" Policy** in 2012, marking a more proactive approach towards the region. ● **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:** The establishment of the **India-Central Asia Dialogue (2019)** led to the inaugural **India-Central Asia Summit** in 2022. The five Central Asian presidents participated, and the **Delhi Declaration** provided a roadmap for cooperation in trade, connectivity, development partnership, security, culture and technology. ● **2025**: The **4th India-Central Asia Dialogue** in 2025 reflected the broadening agenda: greater trade and investment, digital payments, banking connectivity, INSTC, Chabahar, pharmaceuticals, IT, agriculture, energy, textiles, capacity building and cooperation on Afghanistan and counter-terrorism.

What is the 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.

What initiatives has India undertaken to strengthen its relations with the Central Asian countries?

1. **Connect Central Asia Policy (2012)**: India launched the policy to strengthen political, economic, cultural and strategic ties with the five Central Asian republics. It focuses on connectivity, energy cooperation, trade, capacity building, education, technology and people-to-people contacts.
2. **India-Central Asia Dialogue (2019):** A Foreign Ministers-level institutional mechanism was established to promote cooperation in political, economic, security, cultural and development-related spheres.
3. **India-Central Asia Summit (2022):** India institutionalised a leaders-level summit mechanism, along with regular meetings of Foreign Ministers, Trade Ministers, Culture Ministers and National Security Council Secretaries to set long-term cooperation priorities across trade, security, and technology.
4. **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:** India has invested in developing the Shahid Beheshti Terminal at Chabahar Port in Iran, providing a sea-to-land transit link to bypass Pakistan and connect directly with Central Asian markets.
    - **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:** India remains involved in discussions around the **TAPI Gas Pipeline** (Turkmenistan-Afghanistan-Pakistan-India) and joint exploration efforts in the Caspian Sea basin.
5. **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.
    - **Development partnership:** India has offered a **$1-billion Line of Credit** for priority projects in connectivity, energy, IT, healthcare, education and agriculture, besides High Impact Community Development Projects.
    - **India-Central Asia Business Council (ICABC):** Established in 2020 to strengthen business-to-business linkages, investment and trade, particularly involving SMEs.
    - **Digital Public Infrastructure:** India has offered assistance in developing **Digital Public Infrastructure (DPI)** based on India Stack and agreed to establish an **India-Central Asia Digital Partnership Forum**.
    - **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.
6. **Defence and Security Cooperation:**
    - **Strategic Partnership Agreements (SPA):** Signed with Kazakhstan, Tajikistan, and Uzbekistan to deepen defence and trade ties.

- **Joint Military Exercises:** India conducts regular bilateral exercises focused on counter-terrorism and mountain warfare, including **KAZIND** (Kazakhstan), **DUSTLIK** (Uzbekistan), and **KHANJAR** (Kyrgyzstan).
- **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.

7. **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.
8. **Cultural Diplomacy:**
    - **Youth Exchange Programs:** India hosted the **3rd 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.

What are the challenges facing India-Central Asia relations?

1. **Geography and Connectivity:** India has no direct land border with Central Asia and depends on third countries for access. Transit through Iran's Chabahar port is subject to geopolitical disruptions, US sanction regimes on Iran, and regional instability. The International North-South Transport Corridor (INSTC) faces operational bottlenecks due to missing rail links, fragmented customs processes, and banking limitations tied to sanctions on Iran and Russia.
2. **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.
3. **Chinese Dominance:** China has emerged as Central Asia's major economic and infrastructure partner. China's Belt and Road Initiative (BRI) and CPEC investments in Central Asia are faster and larger, overshadowing India's presence.
4. **Afghanistan instability:** Political instability, terrorism and humanitarian concerns in Afghanistan create security risks and complicate India's connectivity with the region.
5. **Russia-Ukraine conflict:** The conflict has disrupted established trade and connectivity routes and complicated the geopolitical balance in Central Asia, where Russia remains an important security partner.
6. **Stalled Energy Infrastructure:** Trans-regional projects designed to supply energy to South Asia, such as the TAPI (Turkmenistan-Afghanistan-Pakistan-India) gas pipeline, remain largely stalled due to security issues and geopolitical friction along the transit route.
7. **Low Private Sector Awareness:** Indian private companies often view Central Asia as a high-risk market due to unfamiliar legal/bureaucratic environments, language barriers (Russian/Turkic dominant), and opaque regulatory frameworks.
8. **Limited People-to-People Links:** Compared with India's relations with some other regions, cultural, educational, tourism and business exchanges with Central Asia remain relatively underdeveloped.

9. **Financial and Banking Gaps:** Lack of direct banking channels hampers trade, remittances, and currency conversion. Joint financial working groups are still in early stages.

What should be the way forward?

1. **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. Institutionalize Chabahar Port within the broader INSTC architecture, encouraging Central Asian states to utilize dedicated Indian terminal facilities (like the Shahid Beheshti Terminal) for their maritime trade.
2. **Institutionalize Summit Diplomacy**: Regularize the **India-Central Asia Summit** at fixed intervals (not ad hoc) to maintain momentum and ensure follow-through on commitments. Strengthen NSA-level and Foreign Ministers' Dialogue mechanisms for continuous security and connectivity coordination. Expand diplomatic footprint by opening more embassies, consulates, and cultural centers to match engagement depth with China/Russia.
3. **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.
4. **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).
5. **Negotiate a Preferential Trade Agreement (PTA):** Fast-track PTA negotiations with the **Eurasian Economic Union (EAEU)** and targeted bilateral trade deals with key partners like Kazakhstan and Uzbekistan to lower tariff bottlenecks.
6. **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.
7. **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.
8. **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.
9. **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.
10. **Adopt a balanced geopolitical approach:** India should maintain constructive relations with **Russia, China, Iran and Central Asian republics** while safeguarding its own strategic autonomy and regional interests.

Conclusion: India must move beyond a predominantly security-oriented engagement towards a **comprehensive partnership based on connectivity, commerce, energy, technology and human capital** to establish itself as a reliable long-term partner for Central Asia.

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UPSC Syllabus- GS 2: International Relations

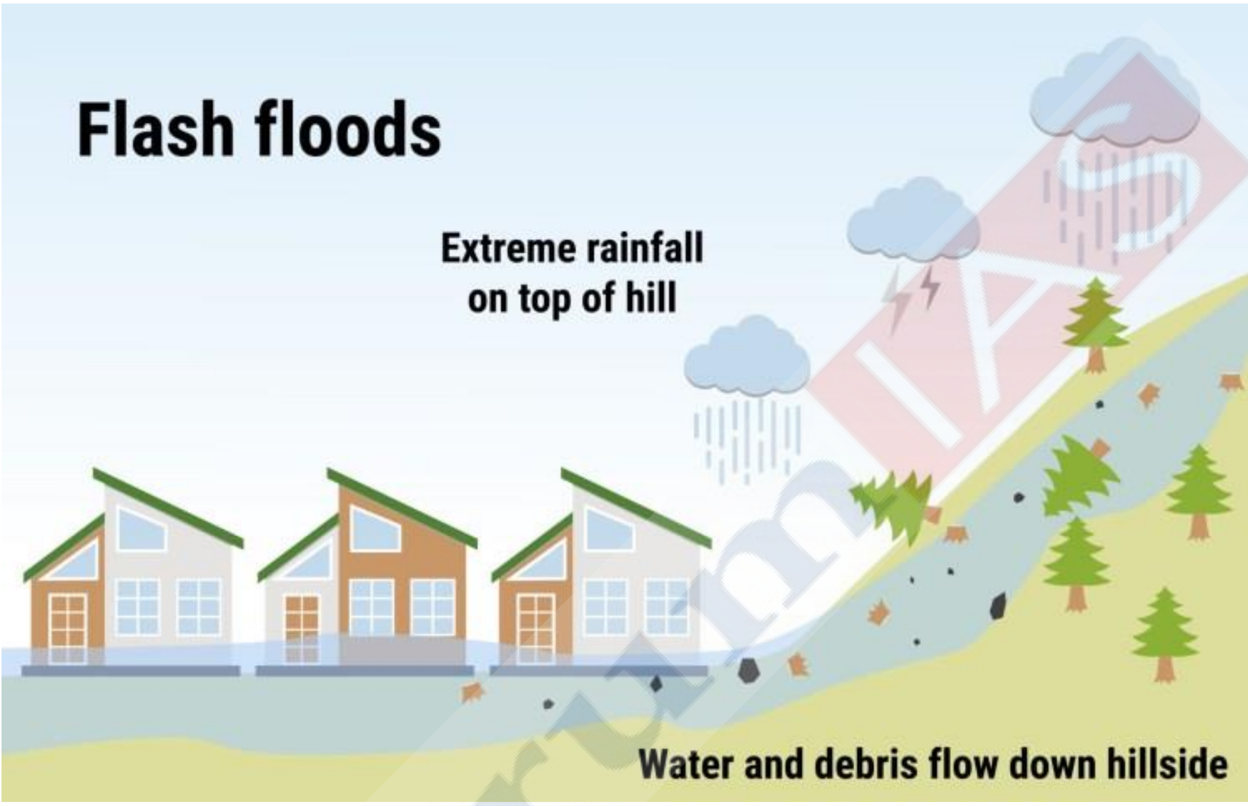
Flash Floods – Causes, Consequences & Mitigation Measures – Explained Pointwise

The devastating flash floods in Nepal, triggered by an ice-rock avalanche likely from a glacier collapse, highlight the urgent need for action. Over 160 lives were lost, with more than 800 missing, and transboundary rivers like the Trishuli (Gandak) threaten downstream regions in India. The disaster underscores the need for cross-border early warning networks, nature-based solutions, and climate-resilient infrastructure to mitigate future Himalayan flood risks.

What is Flash Flood?

- According to IMD, flash floods are sudden and rapid floods that occur typically within minutes or a few hours of intense localized rainfall over a short duration or other intense water accumulation events.
- Unlike standard river flooding that develops over days, flash floods give little to no advance warning and pack tremendous destructive power.
- Key characteristics of flash floods:
    1. **Rapid onset**: Water levels rise very quickly, often with little to no warning
    2. **Short duration**: Unlike riverine floods that develop over days, flash floods peak and recede fast
    3. **High velocity**: The water moves with great force and speed, making them particularly destructive and dangerous.
    4. **Localized**: Often confined to a specific area, such as a valley, urban drainage system, or dry riverbed.

- Flash floods are a significant and growing threat in Indian subcontinent, particularly in the Himalayan region and parts of central and western India. While traditionally associated with the heavy monsoon season, recent studies and events suggest that their frequency and intensity are increasing, partly due to climate change and human-induced factors.



What are high risk zones in India?

The Himalayan Mountain Belt (Extreme Risk)	Steep terrain, fragile slopes, and sudden, high-intensity cloudbursts make the Himalayan region the most prone to rapid, destructive flash flooding and Glacial Lake Outburst Floods (GLOFs). • **North-Western Himalayas:** Jammu & Kashmir (Jhelum Basin), Himachal Pradesh (Beas, Sutlej, and Ravi Basins), and Uttarakhand (Alaknanda and Bhagirathi Basins) e.g. 2013 Kedarnath disaster, 2021 Chamoli disaster. • **North-Eastern Himalayas:** Sikkim, Arunachal Pradesh, and North Bengal e.g. 2023 Teesta flash flood.
River Basins and Coastal Slopes (High Risk)	• **Western Ghats & Konkan Coast:** High-altitude slopes in Maharashtra, Goa, Coastal Karnataka, and Kerala e.g. Idukki, Wayanad, Malappuram – 2018 floods, 2024 Wayanad landslide-flash flood.

	• **Central & Peninsular River Basins:** Upper and middle catchments of the Narmada, Tapi, Mahanadi, Krishna, and Godavari rivers across Madhya Pradesh, Gujarat, Odisha, and Maharashtra.
Urban Centres	Densely populated metro areas face severe **urban flash floods** due to loss of natural soil absorption, encroached natural drainage channels, and outdated storm-water drains during sudden cloudbursts. • **Major Urban Hotspots:** Mumbai, Chennai, Bengaluru, Delhi-NCR, Hyderabad, and Pune.

How flash floods are different from normal floods?

	Normal Floods	**Flash Floods**
Speed & Duration	Normal floods are a much slower, more gradual process. They can take **days or even weeks** to develop and can last for extended periods.	Flash floods are incredibly fast, occurring within a very short period, typically **less than six hours** after the causative event. They build up and dissipate quickly.
Causes	Normal floods are generally caused by **prolonged, widespread rainfall** over a large area, or by snowmelt over a long period.	The primary cause is **intense, heavy rainfall** in a short amount of time, such as from a slow-moving thunderstorm or a cloudburst. Other triggers include dam or levee failures, sudden glacier melt (GLOFs), or debris jams. The ground simply cannot absorb the immense volume of water quickly enough.
Area of impact	Normal floods typically affect a much **larger geographic area**, following the course of a river system. The flooding is widespread and can inundate entire floodplains, farmlands, and multiple towns.	Flash floods are often **localized** and can affect small-scale areas like urban streets, dry creek beds (washes), or mountain canyons.

Risk & Warning	Normal floods come with much **more lead time**, allowing authorities to issue warnings and for residents to prepare or evacuate safely. While property damage can be extensive, the risk to human life is generally lower than with a flash flood. The water in a normal flood rises gradually and is often slow-moving.	Flash floods are considered the **most dangerous type of flood** because of the little-to-no warning time. This leaves people with very little time to evacuate, leading to a higher number of fatalities. The water in a flash flood is a fast-moving, destructive **torrent**. It can carry a significant amount of debris.

What are its causes?

NATURAL CAUSES	1. **Cloudbursts:** This is the most common and devastating cause, especially in the Himalayan states. A cloudburst is an extreme rainfall event where a large amount of rain (over 100 mm) falls over a small area in a very short time, typically less than an hour. The steep slopes of the Himalayas cause this water to rush downhill with immense force, triggering flash floods and landslides. 2. **Intense Monsoon Rains:** The Indian monsoon, which delivers most of the country's rainfall between June and September (80% of annual rainfall in just 3 months), is a major trigger. Intense, short-duration rainfall events can overwhelm the capacity of rivers and drainage systems, leading to rapid flooding. 3. **Geological Fragility:** The Himalayas are young, tectonically active mountains with fragile geology. Heavy rain and seismic activity can easily destabilize slopes, leading to landslides and debris flows that can block river channels. When these natural dams fail, they release a sudden surge of water, causing a flash flood downstream. 4. **Topography:** Areas with steep terrain, such as canyons and mountains, are highly susceptible to flash floods. Gravity pulls the water downhill at a high velocity, and it can gather in low-lying areas, turning a small creek into a raging river in minutes. 5. **Glacial Lake Outburst Floods (GLOFs)**: A GLOF is a sudden and fast-flowing flood that happens when the **dam (usually made of ice or moraines)** holding back a **glacial lake** suddenly fails – causing huge amounts of water to rush downstream. 6. **Wildfires:** Recently burned areas are at high risk. The fire-scorched soil becomes hydrophobic (water-repellent), preventing it from absorbing rain and leading to rapid runoff. 7. **Saturated or Parched Soil:** Soil that is already soaked from previous rains cannot absorb more water. Conversely, extremely dry, hard-baked soil acts like concrete, causing rain to run straight off the surface.

ANTHROPOGENIC CAUSES	1. **Deforestation:** The cutting down of trees reduces the soil's ability to absorb water, increasing surface runoff and the risk of flash floods. 2. **Unplanned Development:** Unchecked construction, particularly in hazard-prone areas like riverbeds and floodplains, has increased vulnerability and amplified the damage from flash floods. 3. **Urbanization and Concrete Surfaces:** In cities, concrete and asphalt surfaces prevent water from soaking into the ground. This creates a high amount of runoff that can quickly overwhelm storm drains and cause streets to flood. 4. **Poor Drainage:** In urban areas, a lack of proper and maintained drainage systems, combined with a high percentage of impermeable surfaces like concrete, leads to rapid water accumulation and urban flash floods. 5. **Dam Failure:** The sudden and catastrophic failure of a man-made dam or a natural ice or debris dam can release a massive amount of water in a very short time, causing a destructive flash flood downstream.

What are its consequences?

1. **Loss of Life:** Flash floods are among the deadliest natural disasters. The sheer force of the water can easily sweep away people, vehicles, and even entire buildings. The lack of warning and the speed of the water leave little chance for escape, especially for the elderly, children, and those with disabilities e.g. Kedarnath 2013: ~6,000 deaths; Chamoli 2021: ~200 deaths.
2. **Destruction of Infrastructure & Property:** Flash floods can completely destroy homes, commercial buildings, and critical infrastructure like bridges, railway tracks, power lines & telecommunication networks e.g. Chamoli 2021 destroyed the Rishiganga and damaged Tapovan-Vishnugad hydel projects.
3. **Agricultural Damage:** They can devastate agricultural lands, washing away fertile topsoil, destroying crops, and killing livestock. This can lead to food shortages and severe financial losses for farmers, impacting the entire local and regional economy.
4. **Erosion and Landslides:** The powerful flow of a flash flood can cause severe soil and bank erosion, carving out new channels and destabilizing hillsides, which can lead to more landslides and debris flows.
5. **Habitat Destruction:** The sudden and violent change in water flow can destroy natural habitats, uprooting trees, and killing plant and animal life. Aquatic life is killed off by the sudden surge of sediment, which clogs fish gills, and by the abrupt change in water temperature and oxygen levels.
6. **Water Supply Contamination:** Floodwaters inundate sewage treatment plants and overwhelm septic systems. Raw sewage mixes with the floodwater, contaminating drinking water wells and municipal supplies. This often leads to outbreaks of waterborne diseases.

What are the various initiatives taken to address the issue of flash floods?

1. **Flash Flood Guidance System (FFGS):** The IMD has implemented the South Asia Flash Flood Guidance System (SASIAFFGS) in collaboration with other South Asian countries. This system provides real-time guidance and threats 6 to 24 hours in advance down to a 4km x 4km watershed resolution across India, Nepal, Bhutan, Bangladesh, and Sri Lanka.

2. **InSAR Landslide & Flood Monitoring:** Advanced satellite monitoring (like InSAR) tracks ground movement and water accumulation along high-risk routes, such as the Himalayan Char Dham highway network.
3. **GLOF Early Warning Systems**: India is deploying pilot early-warning systems at high-risk glacial lakes (e.g. South Lhonak and Shako Cho in Sikkim) in collaboration with Swiss experts, following the 2023 Sikkim GLOF disaster. There are 56 at-risk glacial lakes identified in India.
4. **AI-Driven Forecasting:** IMD have integrated AI and machine learning models into their systems to provide 7-day advance predictions and more accurate flood simulations. This is part of a larger "Mission Mausam" initiative to modernize weather forecasting.
5. **Multi-Hazard Systems:** Ministry of Earth Sciences has developed a comprehensive Multi-Hazard Early Warning System (MHEWS). It integrates observational networks and a GIS-based Decision Support System (DSS) to monitor hazards like cyclones and heavy rainfall.
6. **Sachet App**: NDMA's multi-hazard early warning mobile application (launched 2023), available in 12 Indian languages, disseminating real-time disaster alerts including flash flood warnings.
7. **C-FLOOD (Unified Inundation Forecasting System)**: Launched by the Jal Shakti Ministry in 2025. It is a web-based platform providing 2-day advance inundation forecasts up to village level, integrating flood modeling outputs from national and regional agencies as a decision-support tool for disaster management authorities. Currently covers Mahanadi, Godavari, and Tapi basins, with plans to expand.

What should be the way forward?

1. **Strengthen Early Warning Systems and Real-Time Monitoring:** Expand the use of Doppler radars, satellite imagery, and artificial intelligence for accurate, real-time prediction and tracking of flash floods.
2. **Expand C-FLOOD nationwide**: Scale the Unified Inundation Forecasting System beyond Mahanadi, Godavari, and Tapi to cover all major river basins, especially flash-flood-prone Himalayan catchments.
3. **Strict enforcement of hill-state building codes**: Strict enforcement of hill-state building codes can prevent construction in hazard-prone zones, regulate slope cutting, ensure structural safety, and minimise disruption of natural drainage, thereby reducing flash-flood risks and losses.
4. **Afforestation and Watershed Management:** In the Himalayas and other hilly regions, large-scale afforestation and soil conservation projects help the ground absorb more water, which reduces surface runoff and the risk of landslides.
5. **Improved Drainage Systems:** In urban areas, improving and expanding drainage networks is crucial to handle intense rainfall. This includes clearing and prohibiting encroachments on natural storm-water drains (*nallahs*), wetlands, and floodplains. Incorporate permeable asphalt, rain gardens, and bioswales into urban bylaws to allow rain to sink into the ground rather than running off concrete.
6. **Community-Based Disaster Management:** The National Disaster Management Authority (NDMA) and State Disaster Response Force (SDRF) work with communities to train volunteers in search and rescue operations, first aid, and basic emergency response.
7. **Mock Drills:** Conducting regular mock drills helps communities practice evacuation procedures and ensures that residents and first responders are prepared to act quickly when an event occurs.

Conclusion:

With rapidly increasing intensity & frequency of flash flood events across the country, India needs to immediately adopt mitigation & adaptation measures to prevent further loss of lives & property. Authorities need to identify new potential flash flood hotspots & take measures like building climate-resilient infrastructure to limit the limit of extreme weather events.

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Shared Himalayan Disaster Management – Need & Way Forward – Explained Pointwise

The recent flash floods in Nepal highlight how Himalayan disasters can rapidly cross borders, affecting downstream communities and infrastructure. Such events underline the need for joint early-warning systems, real-time data sharing, coordinated rescue operations and basin-level disaster management among Himalayan countries.

Why are Himalayan disasters becoming more frequent and intense?

The increasing frequency and destructive intensity of disasters in the Himalayas such as landslides, flash floods, debris flows, and Glacial Lake Outburst Floods (GLOFs), are happening because of convergence of factors like **geology**, **accelerating climate change**, and **unregulated anthropogenic pressure**.

Geological Fragility	1. **Young, Tectonically Active Fold Mountains:** The Himalayas were formed by the ongoing collision of the Indian Plate driving northward into the Eurasian Plate at roughly 4-5 cm per year. This active tectonics creates high seismic stress, severe faulting, and inherently fragile, fractured rock formations prone to mass wasting. 2. **Extreme Topography:** Steep slopes and narrow river gorges amplify the velocity and kinetic energy of water, rock, and ice rushing downslope. 3. **Weak, unconsolidated rock strata**: Much of the terrain consists of loose sedimentary and metamorphic rock highly susceptible to erosion and slope failure.
Climate-Driven Amplification	1. **Glacier Retreat and Glacial Lake Formation:** As glaciers melt rapidly, they leave behind unstable terrain and create new glacial lakes, often dammed by weak moraines. For e.g. in the Eastern Himalayas, South Lhonak Lake expanded by **45.5%** between 2016 and 2023. This massive increase in water volume significantly raises the risk of catastrophic Glacial Lake Outburst Floods (GLOFs). 2. **Rising Temperatures & Permafrost Melting:** Increasing temperatures are melting high-altitude permafrost, which helps keep mountain slopes stable. Its melting weakens rocks and can trigger sudden rockfalls, landslides and avalanches, even without earthquakes. 3. **Shift from Snow to Rain at Higher Altitudes:** Rising temperatures are pushing the snowline higher, causing more precipitation to fall as rain instead of snow. This increases surface runoff, soil erosion and landslides, especially on unstable glacial slopes. 4. **More Intense Rainfall:** The region is experiencing a shift in precipitation patterns with a reduction in the number of rainy days but a significant increase in the intensity of extreme rainfall events. This leads to more powerful cloudbursts and flash floods.
Anthropogenic Factors	1. **Slope Destabilization from Linear Infrastructure:** Construction of highways and railway tunnels involves cutting hills, which can weaken slopes, disturb underground water flow, and cause erosion. Poor muck disposal and inadequate retaining structures can further increase the risk of **landslides**. For e.g. in Uttarakhand, a notable increase in landslides has been observed following road expansion projects under the Char Dham Pariyojana. 2. **Hydropower in High-Risk Areas:** Building dams, barrages and tunnels in narrow Himalayan valleys increases the risk of **flash floods, landslides and dam-related disasters**, putting infrastructure and local communities at risk. 3. **Unplanned Urbanization & Land Subsidence:** Towns like Joshimath show the risks of unplanned construction in ecologically fragile areas. Building on old landslide zones, poor drainage and excessive water infiltration can cause land subsidence and structural damage.

What are the major challenges in managing disasters in the Himalayan region?

1. **Extreme Inaccessibility of High-Altitude Zones**: Many disaster triggers, such as high-altitude ice-rock avalanches, originate in remote areas that are practically impossible for humans to reach or equip with extensive monitoring infrastructure. For e.g. the 2026 mudslide at the **Gyirong Port** was triggered by a glacier collapse high in Nepal, far from any ground-based observation.
2. **Limited Cross-Border Collaboration**: The Himalayas are a transnational region, but disasters don't respect borders. A lack of formal, operational frameworks for sharing critical data and warnings between countries is a major weakness. The 2026 disaster at Gyirong Port starkly illustrated this: while Nepal's hydrological agency sent over 6,00,000 warning texts, the information was not effectively coordinated with downstream communities in China, and vital information about upstream hazards was not shared.
3. **Ineffective Early Warning Systems**: Existing early warning systems often fail to provide adequate notice. The extreme speed of high-altitude events, like the 50 meters per second debris flow at Gyirong Port, can give a community as little as 20 minutes to react. Many systems are based on historical data and are not designed for the "unimaginable" events now occurring due to climate change.
4. **Underestimation of Systemic Risk**: There is a persistent failure to recognize how different risks interconnect. The region's fragile geology, steep slopes, and extreme weather mean that a single event, such as an avalanche, can trigger a cascade of disasters such as landslides, dam failures, and massive floods that have catastrophic impacts.
5. **Fragmented Responsibility and Governance**: Responsibility for disaster management is often scattered across multiple agencies and levels of government, leading to poor coordination, bureaucratic delays, and a lack of clear accountability. For e.g. field execution requires coordination among an array of agencies such as NDMA, SDMAs, Border Roads Organisation, Central Water Commission, Geological Survey of India, Armed Forces, and local district administrations – which can lead to delayed clearance protocols during sudden events.

Why do Himalayan disasters require cooperation among neighbouring countries?

1. **Transboundary Nature of Himalayan River Systems**: Major river systems (the Indus, Ganga, and Brahmaputra/Yarlung Tsangpo) originate in the Tibetan Plateau and high Himalayas before flowing across multiple national territories. A high-altitude slope failure, rock-ice avalanche, or Glacial Lake Outburst Flood (GLOF) originating in the Tibetan Plateau or upper Nepal rapidly transforms into debris flow or flash flood across lower riparian valleys in India or Bangladesh.
2. **Shared Glacial and Cryosphere Systems**: Many potentially dangerous glacial lakes lie in Tibet (China) or Nepal but pose GLOF risk to downstream Indian states (Sikkim, Himachal Pradesh, Uttarakhand). India cannot install monitoring sensors or conduct surveys on glaciers/lakes located in neighboring sovereign territory, creating information blind spots. On the other hand, China has historically been reluctant to share full hydrological data, especially during periods of bilateral tension, restricting India's early warning capacity.
3. **Common Seismic and Geological System**: The Himalayan seismic belt runs continuously through Pakistan, India, Nepal, Bhutan, and China. Large earthquakes (such as the 2015 Nepal earthquake) generate regional ground motion, liquefaction, and secondary hazards like widespread co-seismic landslides that disrupt cross-border transport corridors, river channels, and trade routes. Coordinated regional seismological networks are necessary to map fault-slip deficits, and accurately assess the "seismic gap" across national borders.
4. **Western Disturbances & Monsoon Systems:** Synoptic weather systems that cause extreme precipitation events such as Western Disturbances interacting with the Indian Summer Monsoon, traverse thousands of kilometers across Central Asia, Pakistan, India, China, and Nepal. Tracking and

forecasting these convective storms requires unified radar networks and open atmospheric data sharing.

5. **Limitations of Bilateral MoUs:** While bilateral agreements exist for seasonal hydrological data sharing (such as between India and China for the Brahmaputra and Sutlej, or India and Nepal for shared tributaries), they often cover only specific monsoon windows, lack sub-hourly real-time automated telemetry during crisis events, and are vulnerable to diplomatic friction.

What are the existing mechanisms for cooperation among Himalayan countries to manage and reduce the impact of transboundary disasters?

1. **ICIMOD (International Centre for Integrated Mountain Development)**: A regional knowledge platform involving Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. It promotes shared research on the Hindu Kush Himalaya, but has no binding enforcement power.
2. **The SAARC Agreement on Rapid Response to Natural Disasters (2011)**: This legally binding regional framework describes principles, standard operating procedures, and standby arrangements for emergency response assistance among SAARC member states. However, its focus has been largely on **response** (post-disaster), rather than the **prevention and early warning** that are critical for proactive risk reduction.
3. **India-China Expert-Level Mechanism (ELM):** Established in 2006, under which China shares hydrological data (water levels, discharge, and rainfall) for key upstream stations on the Yarlung Tsangpo/Brahmaputra and Sutlej rivers during the high-monsoon season to aid downstream flood forecasting in India. However, during bilateral standoffs, data exchanges can be delayed, suspended, or selectively throttled (e.g. the suspension of India–China data sharing following the 2017 Doklam standoff).
4. **India-Nepal Joint Committees:** Joint frameworks, such as the Joint Committee on Water Resources (JCWR) and Joint Committee on Inundation and Flood Management (JCIFM), facilitate exchange on flood control infrastructure (e.g., Koshi and Gandak barrages) and transmission of upstream water levels.
5. **India-Bangladesh Joint Rivers Commission (JRC):** Operates protocols for sharing water-level, rainfall, and discharge data across 54 transboundary rivers (notably the Teesta, Ganga, and Brahmaputra) to support Bangladesh's Flood Forecasting and Warning Centre (FFWC).
6. **India-Bhutan Joint Expert Teams:** Focus on river management and flood forecasting, especially for transboundary rivers flowing into the Brahmaputra valley (e.g., Manas, Sankosh, and Wangchu).

What should be the way forward for developing an effective regional framework for shared Himalayan disaster management?

1. **Establish a Himalayan Disaster Management Framework**: Create a dedicated regional organisation for the Himalayas, inspired by models like the Alpine Convention and ICPR (International Commission for the Protection of the Rhine), to coordinate disaster management, environmental protection and risk reduction across the Hindu Kush Himalaya region. Formulate a binding charter that treats hydro-meteorological, seismic, and glacial hazard data as public humanitarian goods rather than classified strategic assets.
2. **Strengthen Real-Time Data Sharing**: Establish near-real-time exchange of hydrological data (river levels, discharge) and cryosphere data (lake conditions, ice-dam formation, avalanches) between upstream and downstream nations. Replace rigid "monsoon-only" data-sharing calendars with 365-day, automated telemetry agreements to capture winter ice-rock avalanches, unseasonal post-monsoon cyclonic surges, and pre-monsoon convective cloudbursts.

3. **Develop a Regional Early-Warning System**: Develop a common early-warning system using satellites, weather radars, river sensors and glacier monitoring to provide timely alerts about floods, GLOFs, landslides and cloudbursts, enabling faster evacuation and coordinated disaster response.
4. **Joint Monitoring of Glaciers and Glacial Lakes**: Himalayan countries should jointly monitor glacier retreat, glacial lake expansion and GLOF risks using satellites, remote sensing and ground-based sensors, enabling timely warnings and coordinated preventive action.
5. **Promote Basin-Level Cooperation**: Himalayan rivers cross national borders, making joint river-basin management essential. Countries should share hydrological data, coordinate dam operations, improve flood forecasting, and jointly manage floods, GLOFs and other water-related disasters.
6. **Conduct Joint Disaster Response Exercises**: Conduct routine trilateral and regional simulation drills among civil protection forces (such as India's NDRF, Nepal's Disaster Management Division, and counterparts in Bhutan and Bangladesh) focusing on high-altitude debris-flow extraction, rope rescue, and hazardous material containment.
7. **Leverage Existing Platforms**: Formalize and strengthen the role of existing regional bodies like the International Centre for Integrated Mountain Development (ICIMOD). The newly launched Hindu Kush Himalayan Disaster Risk Reduction (DRR) Hub, with its secretariat at ICIMOD, is a key institutional vehicle for fostering this collaboration.

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Hard Power & Soft Power – Significance & Challenges – Explained Pointwise

In his 80th Independence Day address on 15 August 2026, Prime Minister Narendra Modi introduced the concept of **'Sapt Dhara' (seven streams of strength)** as a strategic framework to accelerate India's journey towards **Viksit Bharat by 2047**. One of these seven streams is **India's Soft Power**, highlighting the importance of culture, heritage, tourism and the creative economy in enhancing India's global influence. In this context, let us understand the concepts of **Hard Power and Soft Power**, and their significance in advancing national interests.

What are Hard Power and Soft Power?

- Hard Power and Soft Power are foundational concepts in international relations, used to describe the different ways nations exert influence over others to achieve their foreign policy objectives. They represent contrasting ways a nation achieves its strategic goals on the global stage.
- These concepts were popularized by political scientist **Joseph Nye** in the late 1980s. He defined power as "the ability to influence the behavior of others to get the outcomes you want."
- Soft power and hard power are public diplomacy tools that communicate the nation's competitive identity and advantage to the world.

Hard Power:

- Hard power is the use of coercive means – primarily military force, economic sanctions, or direct threats — to influence or control the behavior of other countries.
- Hard power is linked with the possession of certain tangible resources, including population, territory, natural resources, economic and military strength, among others.
- Hard power is time-effective and generating hard power requires much less time as its resources are tangible.
- **Key Tools of Hard Power:**
    1. **Military Force (The Stick):** The threat or actual use of violence, intervention, or overwhelming military capability e.g. Deploying troops to a border; imposing a naval blockade; invasion.
    2. **Economic Sanctions (The Stick):** Restricting trade, freezing assets, or imposing financial penalties to cause economic pain e.g. Cutting off access to global financial systems (SWIFT); tariffs; banning exports of critical technology.
    3. **Economic Aid (The Carrot):** Offering large monetary incentives, loans, or favorable trade deals conditional on a country adopting certain policies e.g. The U.S. **Marshall Plan** post-WWII, which provided reconstruction funds to European nations contingent on economic and political alignment.
- **Examples:**
    1. The United States using its Navy to keep shipping lanes open in the Strait of Hormuz.
    2. Financial sanctions imposed by Western nations on Russia following its invasion of Ukraine to choke off revenues and trade.
    3. China's assertion of its territorial claims in East and South China Seas.
    4. China threatening tariffs on Australian goods to influence Australian foreign policy.
- **Importance of Hard Power:**
    1. **Absolute Defense of Sovereignty and Territorial Integrity**: The primary responsibility of any nation-state is protecting its borders, resources, and citizens from external aggression. Hard power provides the physical capability to deter invasions, defend airspace, and secure maritime borders.
    2. **Deterrence Against Aggression:** The visible strength of a nation's armed forces or economy can prevent aggression or hostile actions by adversaries, protecting sovereignty and allies through deterrent capability.

3. **Crisis Response:** Hard power enables a nation to respond to immediate threats or crises, such as terrorism, invasions, or nuclear proliferation, when negotiation or persuasion fails.
4. **Enforcement of International Law and Freedom of Navigation:** Global trade and international stability depend on open supply chains and secure sea lines of communication (SLOCs). Navies and military alliances are required to combat piracy, protect trade routes (such as the Strait of Malacca or the Red Sea), and maintain open access to international waters.
5. **Strengthens Bargaining Position:** Economic and military strength gives states weight at the negotiating table. A militarily/economically weak state has limited ability to resist pressure.
6. **Shielding Soft Power**: Soft power cannot survive without the protection of hard power. Historical precedent demonstrates that soft power assets, like thriving economies or open societies, are quickly dismantled when faced with unchecked military aggression.

- **Limitations of Hard Power:**
    1. **Breeds Resentment:** Use of force or sanctions often creates deep-seated resentment and backlash, fueling nationalism or radicalism and sometimes prolonging conflicts e.g. anti-American sentiment after the Iraq War.
    2. **Damages Relationships:** Frequent reliance on coercion can strain alliances, isolate states diplomatically, and encourage counter-alliances among rivals.
    3. **High Economic and Human Costs:** Military interventions or large-scale sanctions are expensive, can lead to casualties, infrastructure destruction, humanitarian crises, and years of economic burden.
    4. **Economic interdependence limits coercive options**: Deep trade and supply chain interdependence make full-scale economic coercion (sanctions) costly to the sanctioning state itself, not just the target.
    5. **Limited Effectiveness for Complex Problems:** Hard power alone cannot solve transnational or long-term challenges (e.g. terrorism, climate change, global pandemics) which require cooperation and shared solutions.
    6. **Opportunity cost**: Resources spent on hard power capability building could otherwise fund soft power assets (education, culture, diplomacy) with more durable long-term returns.
    7. **Legal and Ethical Issues:** Military and economic coercion can violate international law (e.g. UN Charter norms), cause civilian harm, or contravene human rights, damaging legitimacy and leading to global condemnation.

Soft Power:

- Soft power is the ability to shape the preferences and actions of others through attraction and persuasion, rather than coercion. It works through cultural appeal, diplomatic engagement, ideals, and positive international reputation.
- Soft power is persuasive power deriving from attraction and emulation and grounded on intangible resources like tourism, culture, and heritage.
- It is the ability to get what you want through attraction rather than coercion, as used in hard power.
- The importance and relevance of soft power is growing as more of humanity becomes connected. This dramatically enhanced presence everywhere on the globe has the potential to generate a surge of global opinion.

- Soft power is useful in complex situations and helps a nation to achieve difficult outcomes. For e.g. India received a nuclear waiver in 2008 despite not being a member of NSG because of its history of non-alignment and strong political ideals.
- **Key Tools of Soft Power:**
  1. **Culture and Arts:** The global appeal and dissemination of a country's popular culture, intellectual property, and values e.g. The global appeal of Hollywood, K-Pop, Bollywood, American universities, or international restaurant chains.
  2. **Political Values:** The attraction of a nation's political ideals, such as democracy, human rights, the rule of law, and civil liberties e.g. A country becoming a model for democratic transitions in its region.
  3. **Foreign Policy:** The moral authority and perceived legitimacy of a nation's actions on the world stage e.g. Providing humanitarian aid during a disaster; spearheading global health initiatives; mediating peace talks.
  4. **Public Diplomacy:** Directly communicating with foreign publics through exchanges, broadcasting, and social media e.g. Educational exchange programs like the Fulbright scholarship; state-funded news agencies.
  5. **Disaster Diplomacy & Humanitarian Assistance:** Sending immediate emergency relief, vaccines, or search-and-rescue teams to nations in crisis e.g. **Operation Dost:** India deploying search-and-rescue teams and field hospitals to Turkey following severe earthquakes.
- **Examples of Soft Power:**
  1. **Incredible India Campaign:** It is an international tourism campaign initiated by the government to promote India as a popular tourist destination using India's heritage like images of the Himalayas, the Taj Mahal, yoga and multiplicity of colorful religious and cultural traditions etc.
  2. **International Day of Yoga:** Prime Minister Modi's effort to have the United Nations declare the International Day of Yoga on June 21 each year is a major step in the right direction.
  3. **K-Culture**: South Korea's global influence skyrocketed through "K-culture" – K-pop (BTS), K-dramas (*Squid Game*), and Korean beauty products. These make people around the world love South Korea, making them more likely to support Korean brands, invest in Korea, and view Korean foreign policy favorably.
- **Importance of Soft Power:**
  1. **Cost-Effective Influence**: Unlike maintaining military installations or sustaining economic sanctions, soft power leverages existing assets, such as culture, education, tech innovation, and values, to achieve diplomatic goals at a fraction of the cost.
  2. **Long-term Influence:** Soft power builds relationships and global influence that endure beyond immediate crises. It creates networks of friendship, trust, and cooperation that are less likely to be undermined by shifts in government or policy.
  3. **Fills gaps where hard power is constrained**: For countries like India with resource constraints vis-à-vis China, soft power offers an alternative avenue of influence, especially in the immediate neighborhood (Nepal, Bhutan, Sri Lanka, Bangladesh).
  4. **Builds Moral Leadership and Legitimacy:** By projecting values like democracy, human rights, scientific achievement, or cultural richness, states can inspire voluntary alignment and standard-setting e.g. US influence in the postwar period; India's use of yoga and Gandhi as global icons.

5. **Enables Multilateral Cooperation:** Soft power facilitates multilateralism, coalition-building, international aid, and climate or peace initiatives by creating positive-sum dynamics, rather than zero-sum rivalries.
6. **Supports Economic and Security Interests:** A positive international image and relationships built on attraction can indirectly support a nation's economic and security interests by opening markets, ensuring stable alliances, and shaping agendas e.g. Japan's global reputation for quality and reliability; EU's standards-setting power.
7. **Strengthens Diaspora and People-to-People Ties**: India's ~32 million-strong diaspora acts as informal cultural ambassadors and economic bridge. It helps in attracting remittances, investment, and lobbying influence in host countries like the US.

- **Limitations of Soft Power:**
  1. **Ineffective Against Coercion:** Soft power alone is often insufficient in emergencies or conflicts where hard security, coercion, or immediate compliance are required e.g. deterrence of aggression.
  2. **Vulnerability to Credibility Crises:** Perceived hypocrisy, such as promoting democracy while violating it domestically or abroad, can erode soft power quickly. Reputational damage is hard to repair.
  3. **Cultural or Value Misalignments:** Cultural exports or values that seem attractive in one society may be irrelevant, misunderstood, or seen as imperialistic in another, limiting the universality of soft power.
  4. **Slow Impact:** Soft power operates gradually, often over years or decades, whereas global challenges (wars, pandemics, terror) may demand immediate response.
  5. **Difficult to Measure and Control:** Soft power relies heavily on non-state actors, such as private media, universities, tech platforms, and civil society. Governments cannot easily control these assets, and private actions can quickly undermine official state diplomacy.
  6. **Asymmetric Vulnerability:** Open, democratic societies generate strong soft power through free press and cultural freedom, but this openness makes them vulnerable to foreign disinformation campaigns, cyber influence, and political manipulation by authoritarian states.

Features	**Hard Power**	**Soft Power**
Meaning	Ability to influence others through **coercion or incentives.**	Ability to influence others through **attraction and persuasion.**
Nature	Coercive	Persuasive
Major instruments	Military force, sanctions, economic pressure, financial incentives	Culture, values, diplomacy, education, media and international cooperation
Timeframe	Short-term, Immediate Results	Long-term, Sustainable Influence

Cost	Extremely expensive	Relatively cheap
Risk	High risk of resentment, backlash, and costly retaliation.	Low risk; builds mutual understanding and legitimacy.
Ideal Use	Crisis, conflict, national security	Long-term influence, global leadership
Examples	Balakot strike, nuclear deterrence, Operation Sindoor	Yoga diplomacy, Bollywood, ICCR, diaspora, G20 "Vasudhaiva Kutumbakam"

However, hard power and soft power are not mutually exclusive; rather, they are complementary. This has given rise to the concept of **Smart Power**, which refers to the strategic combination of hard and soft power to effectively advance national interests.

The Rise of Smart Power:

In modern international relations, few nations rely exclusively on one form of power. Instead, the concept of Smart Power has emerged. The concept was popularised by **Joseph Nye**, who argued that countries should combine coercive capabilities with the power of attraction rather than relying exclusively on either approach.

- Smart power is defined as the capacity of an actor to combine elements of hard power and soft power in ways that are mutually reinforcing such that the actor's purposes are advanced effectively and efficiently.
- Smart power draws from both hard and soft power resources. It is an approach that underscores the necessity of a strong military, but also invests heavily in alliances, partnerships, and institutions.
- Smart Power uses hard power to create a secure environment where soft power can flourish, and uses soft power to make hard power look legitimate.
- Examples:
    - **India's Neighborhood First policy**: Combines hard security cooperation (defense pacts, counter-terrorism coordination) with soft power tools (Buddhist circuit diplomacy, lines of credit, disaster relief).
    - **HADR (Humanitarian Assistance and Disaster Relief) missions**: Use military/naval assets (hard power infrastructure) to deliver goodwill and soft power simultaneously (e.g. Operation Rahat, Vande Bharat Mission, COVID vaccine diplomacy).

Smart Power = Hard Power + Soft Power + Strategic Use

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