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Compilation of UPSC relevant news from 1st April to 30th April 2026

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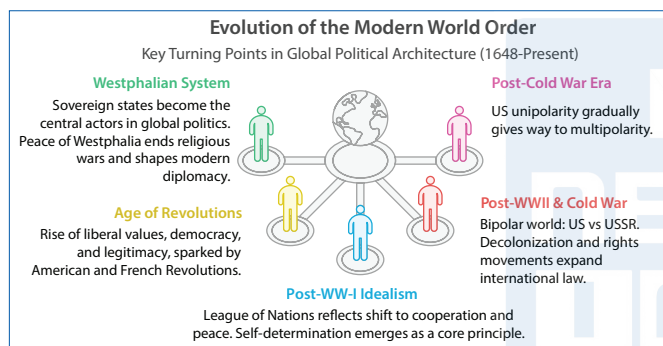
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EMERGING GLOBAL ORDER AND INDIA

The ongoing West Asian conflict has exposed deep structural weaknesses in the existing global order and has highlighted the possibility of India's role as an architect of a new world order.

Understanding the Emerging World Order

- ➔ A **world order** refers to the structure of power and authority that governs international relations and diplomacy.
- ➔ The current system is evolving due to the decline of post-war multilateral institutions, rise of **polycrisis** (multiple interconnected global crises such as wars, pandemics, and climate change), and increasing multipolarity.
- ➔ The emerging order emphasises **regional cooperation, strategic autonomy, and issue-based alliances**, rather than rigid blocs.
- ➔ The doctrine of **strategic self-help**, as articulated by India's External Affairs Minister, highlights the need for nations to ensure resilience in areas such as food, energy, and supply chains.



Changing Geopolitical Dynamics

The contemporary international system is defined by profound instability, marked by the erosion of established norms and the declining influence of multilateral institutions that have governed global affairs for decades.

Institutional and Normative Decline

- ➔ **Failure of Multilateralism:** Global institutions, specifically the **United Nations (UN)**, have shown an inability to halt escalating violence or enforce international legal standards during persistent conflicts.
- ➔ **Undermining of Sovereignty:** The foundational pillars of the **UN Charter**, i.e. state sovereignty and non-intervention have been significantly weakened by the military actions of major powers.
- ➔ **Strained Alliances:** Internal friction within the **North Atlantic Treaty Organization (NATO)** has exposed the practical limits of collective security frameworks when addressing modern crises.
- ➔ **Evolving Global Structure:** The world is shifting toward a multipolar but volatile order, where various powers compete for influence without the coordination of effective institutional oversight.

Economic and Environmental Fragmentation

- ➔ **Deglobalization:** Rising protectionism, trade wars, and geopolitical rivalries are driving global fragmentation. The weakening of the **World Trade Organization (WTO)** has hampered dispute resolution, directly impacting the trade interests of nations like India.
- ➔ **Stalled Climate Action:** Deep divisions persist between developed and developing nations regarding climate negotiations, specifically concerning financial responsibility and equitable burden-sharing.

Geopolitical Shifts and Regional Impact

- ➔ **Russia:** Russia has capitalized on global supply disruptions and diverted international attention to increase its energy revenues.
- ➔ **China:** China is actively accelerating **de-dollarization** by promoting energy transactions in the **Yuan** while maintaining a posture of diplomatic restraint.
- ➔ **Gulf Cooperation Council (GCC):** Countries like **Saudi Arabia** and the **United Arab Emirates** have faced direct security threats, revealing the fragility of relying on external security guarantees.

Implications for India

The ongoing global instability has forced India to navigate a landscape of strategic vulnerability and economic pressure, testing its diplomatic and fiscal resilience.

Geopolitical and Diplomatic Challenges

- ➔ **Strategic Balancing:** India faces the complex task of managing relationships with major powers like the **United States** and **China** while addressing intensifying regional tensions.
- ➔ **Diplomatic Ambiguity:** By adopting "strategic silence" regarding **U.S.-Israeli** strikes, India prioritized **realpolitik**; however, this creates an ambiguity that may weaken its credibility as a leading "voice of the **Global South**."
- ➔ **Limited Influence:** Although India showed short-term adaptability, the crisis highlighted its limited geopolitical leverage in directly shaping international outcomes.

Energy Security and Vulnerability

- ➔ **Dependency:** Approximately **40–50%** of India's crude oil imports transit the **Strait of Hormuz**, leaving the nation highly susceptible to maritime disruptions.
- ➔ **Supply Diversification:** The regional crisis necessitated a shift in trade, leading to increased dependence on **Russian** crude oil and higher imports of **Liquefied Natural Gas (LNG)** from the **United States**.

Economic and Fiscal Impact

- **Inflationary Pressures:** Rising global energy costs contributed to domestic inflation, negatively affecting household consumption and overall economic stability.
- **Fiscal Interventions:** To mitigate these shocks, the government implemented short-term measures, such as fuel tax cuts, to stabilize the broader economy.

India as a Stabilizing and Mediating Force

Voice of the Global South

- India actively champions the interests of developing countries by advocating for **equitable global governance and economic justice**.
- During its **Group of Twenty (G20) presidency**, India secured the inclusion of the **African Union**, amplifying the voice of over 1.4 billion people.
- India has pushed for restructuring of sovereign debt to address financial instability affecting more than 60 developing economies.

Digital Public Infrastructure as Soft Power

- India exports its **Digital Public Infrastructure** (DPI – open digital systems such as Aadhaar and Unified Payments Interface) as a non-exploitative alternative to Western and Chinese models.
- The **Unified Payments Interface (UPI)** has been linked with countries such as the United Arab Emirates, Nepal, and Namibia.
- Through **Vaccine Maitri** (global vaccine assistance initiative), India supplied over 300 million vaccine doses to more than 100 countries, strengthening its human-centric global leadership.

Strategic De-hyphenation

- India practices **strategic de-hyphenation** (maintaining relations with rival countries simultaneously) by engaging with Israel, Iran, and Saudi Arabia without aligning exclusively with any bloc.
- India elevated ties with Israel to a **Special Strategic Partnership** while simultaneously signing a **10-year agreement with Iran to develop the Chabahar Port**, ensuring balanced regional engagement.
- This positioning enables India to act as a **neutral back-channel mediator** in conflict situations.

Credible Mediation in Eurasian Conflict

- India has built trust with both Russia and Ukraine, enabling it to function as a **neutral intermediary in the Eurasian conflict**.
- India imported **USD 1.98 billion worth of crude oil from Russia in January 2026**, while supplying **15.5% of Ukraine's diesel imports in July 2025**, demonstrating balanced engagement.

- India's consistent message that **"this is not an era of war"** reinforces its peace-oriented diplomatic approach.

Net Security Provider in the Indo-Pacific

- India acts as a stabilising force in the **Indo-Pacific region**, ensuring **freedom of navigation** and **maritime security**.
- It participates in exercises such as **Malabar (with Quad partners)** to enhance interoperability.
- The Indian Navy has deployed warships in the **Arabian Sea and Gulf of Aden** to counter piracy and protect commercial shipping from emerging threats.

De-risking Global Supply Chains

- India is building resilient supply chains to counter the **weaponisation of trade and technology**.
- The **Production Linked Incentive (PLI)** has attracted major investments in sectors such as **semiconductors and pharmaceuticals**.
- Companies like Apple have shifted nearly **25% of global iPhone production to India**, reducing dependence on vulnerable manufacturing hubs.

Mediator in Climate Diplomacy

- India promotes climate justice through the principle of **common but differentiated responsibilities**, balancing development and environmental goals.
- The **International Solar Alliance (ISA)** includes over 100 countries, expanding renewable energy access.
- India supported the **Loss and Damage Fund**, helping secure global pledges exceeding USD 700 million for climate-vulnerable countries.
- India advocates a **"phase down" rather than "phase out" of coal**, ensuring a balanced energy transition for developing economies.

Catalyst for Multilateral Reform

- India advocates structural reforms in institutions such as the **United Nations Security Council (UNSC – primary global security body)** and the **World Trade Organization (WTO – global trade governance body)**.
- As part of the **Group of Four (G4 – India, Germany, Japan, Brazil)**, India seeks permanent membership in the UNSC to reflect current geopolitical realities.
- India has defended public stockholding at the WTO to protect food security and farmer livelihoods in developing countries.

Humanitarian First Responder

- India has demonstrated its humanitarian leadership through missions such as **Operation Dost** (earthquake relief in Türkiye and Syria, 2023) and **Operation Sadbhav** (humanitarian assistance in Southeast Asia, 2024).
- These initiatives highlight India's ability to provide **non-coercive assistance**, build trust, and stabilise regions during crises.

Constraints on India's Global Role

- Rising **transactionalism in global politics** pressures India to align with major powers such as the United States and European Union, limiting its neutral positioning.
- Persistent tensions with **China and Pakistan**, including border disputes and military deployments, constrain India's diplomatic bandwidth.
- India's diplomatic capacity remains limited, with a relatively small foreign service and **no presence in over 50 countries**, restricting sustained global engagement.
- Absence from permanent membership in the **UN Security Council** limits India's formal authority in enforcing global decisions.
- India faces a **"growth versus geopolitics"** dilemma, as its GDP per capita remains below USD 3,000, limiting resources for global power projection.
- High dependence on energy imports through volatile regions such as the **Strait of Hormuz** constrains India's neutrality in conflicts.
- According to **Stockholm International Peace Research Institute (SIPRI)**, India remains one of the world's largest arms importers, creating strategic dependence on foreign military technology.

Way Ahead

Strategic Measures for India

- **Diplomatic & Mediation Capacity:** India must expand its foreign service and formalize mediation frameworks, including **Track 1.5 diplomacy**, to enhance its role as a consistent global peace-builder.
- **Defense Self-Reliance:** Accelerating the **indigenization of defense production** is vital for maintaining strategic autonomy and reducing foreign dependence.
- **Proactive Outreach:** Establishing forward-deployed **HADR frameworks** and leading "multilateral" coalitions allows India to address regional crises and digital governance more efficiently than traditional institutions.
- **Norm Setting:** Actively shaping global rules for emerging technologies—such as **AI and space security**—is essential for preventing future conflicts.
- **Doctrinal Evolution:** Formalizing civilizational values like pluralism and coexistence into a modern diplomatic doctrine offers a stable alternative to traditional power politics.

Opportunities for Global Leadership

- **Global South Leadership:** Through the **Voice of Global South Summits**, India can drive a more equitable global governance structure.

- **Strategic Multialignment:** Balanced engagement with diverse blocs like **BRICS, SCO, QUAD, and G20** allows India to navigate competing power interests effectively.
- **Digital & Climate Diplomacy:** India's success in **Digital Public Infrastructure (DPI)** (e.g., UPI, ONDC) and leadership in the **International Solar Alliance** position it as a global model for innovation and environmental resilience.
- **Soft Power:** Leveraging cultural initiatives and the global diaspora continues to strengthen India's international appeal and civilizational influence.

Managing Global Agenda in Emerging World Order

- **Diversity:** Encouraging inclusion of multiple viewpoints and ideas.
- **Plurilateral Collaboration:** Promoting rotating leadership for balanced participation.
- **Flexible Groupings:** Allowing different groups to lead on key matters.
- **Global Complexities:** Understanding the interconnected nature of world issues.
- **Emerging Global Order:** Adapting strategies to changing international dynamics.
- **Separating Sensitive Issues:** Preventing disputes from escalating by delinking concerns.
- **Negotiation Platforms:** Reducing dominance through distributed forums.
- **Multiple Approaches:** Using diverse methods to address varied challenges.

Conclusion

- The current global crisis represents a defining moment, as weakening institutions have created a leadership vacuum in global governance.
- India's strategic autonomy, balanced diplomacy, and civilizational ethos provide a strong foundation for leadership in a multipolar world.
- However, passive diplomacy risks undermining credibility, and India must transition from a **balancing power to a shaping power** through proactive, principled, and capability-driven engagement.
- By addressing its constraints and leveraging emerging opportunities, India can play a central role in building a **stable, inclusive, and rules-based global order**.

FOOD PROCESSING IN INDIA

India's food processing sector has emerged as a critical link between agriculture and industry, driving value addition, improving farmer incomes, and expanding export potential.

Food Processing Sector

- Food processing refers to transformation of raw agricultural materials into consumable products, ranging from simple cleaning to complex industrial manufacturing.
- **It operates at three levels:**
 - ♦ **Primary** processing involves cleaning, grading, and packaging of produce.
 - ♦ **Secondary** processing converts raw inputs into intermediate products such as flour.
 - ♦ **Tertiary** processing produces ready-to-eat or ready-to-cook food products.

Importance of the Sector

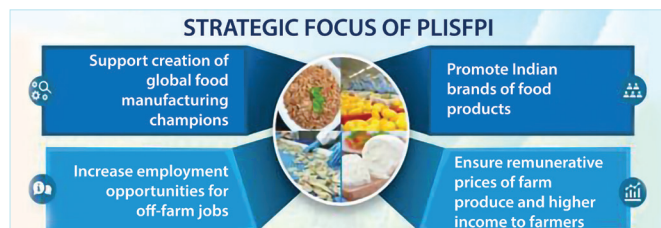
- Food processing enhances shelf life and improves food safety by reducing contamination risks.
- It supports nutrition and convenience, enabling availability of processed and ready-to-eat foods for urban populations.
- The sector strengthens farmer incomes and rural employment by creating demand for agricultural produce and generating jobs across the value chain.
- The sector contributes significantly to the economy, with Gross Value Added increasing from ₹1.34 lakh crore (2014–15) to ₹2.24 lakh crore (2023–24).
- It plays a key role in export growth, with processed food exports rising from 13.7% to 20.4% share in agricultural exports (2014–15 to 2024–25).

Drivers of Growth in Food Processing Sector

- India's **demographic dividend** and urbanisation are increasing demand for processed foods, with the market projected to grow from USD 263 billion to USD 470 billion by 2025.
- **Digital transformation** has enabled direct farmer-to-market linkages and expansion of e-commerce and food delivery platforms.
- **Supportive policies** such as 100% Foreign Direct Investment (FDI) and schemes like PLISFPI have boosted investment.
- Innovation in health-oriented and millet-based products and adoption of agri-tech solutions are improving product diversity and quality.

Production Linked Incentive Scheme for Food Processing Industry

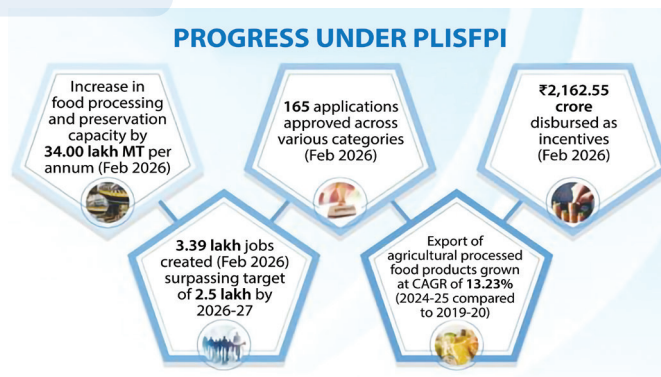
- The **PLISFPI** provides incentives based on incremental sales. It has been a major policy push to strengthen this ecosystem and position India as a global processing hub.



- The scheme aims to create global Indian food brands while increasing production and exports.
- **It is structured into three components:**
 - ♦ **Category I** focuses on large-scale manufacturing of key segments such as ready-to-eat foods, processed fruits and vegetables, marine products, and mozzarella cheese.
 - ♦ **Category II** promotes innovation among Micro, Small and Medium Enterprises (MSMEs), including organic and niche products.
 - ♦ **Category III** supports branding and marketing abroad, with reimbursement up to 50% of expenses subject to limits.
- A dedicated component for millet-based products promotes value addition and diversification.

Current State of the Food Processing Sector

- 165 applications have been approved across 274 project locations, indicating strong industry participation.



- ♦ Out of 165 approved applications, 69 are MSMEs, showing strong inclusion of small enterprises. MSMEs have received targeted incentives, supporting innovation and decentralised growth.
- Investments of about ₹9,207 crore have been mobilised, with ₹2,162.55 crore incentives disbursed.
- Processing capacity has increased by 34 lakh metric tonnes per annum, strengthening infrastructure.
- Employment generation has reached 3.39 lakh jobs, exceeding the target of 2.5 lakh.

INDIA'S FOOD PROCESSING INDUSTRY STATISTICS

7.33 BILLION EQUITY

01

USD 7.33 billion FDI equity inflow in the last one decade in food processing sector



AGRI-EXPORT

02

Processed food accounts for 20.4% (USD 10.09 billion in 2024-25) of India's Agri-exports, up from 13.7% (USD 4.96 billion in 2014-15)



MAJOR CONTRIBUTION

03

Indian food processing sector contributes 7.93% of GVA in Manufacturing in 2023-24



LARGEST PRODUCER

04

India is largest producer of milk, onions and pulses, Second largest producer of rice, wheat, sugarcane, tea, fruits & vegetables and eggs



100% PERMITTED

05

100% FDI permitted in Food Processing, Retail trading including e-commerce



- Processed food exports grew at a Compound Annual Growth Rate of 13.23%, with cumulative exports of ₹89,053 crore (2021-2025).
- Adoption of technology-driven supply chains using artificial intelligence, blockchain, and Internet of Things.

Challenges faced by the Sector

- The sector faces a **fragmented supply chain**, with over 86% of farmers being small and marginal, limiting scale and efficiency.
- **Infrastructure deficits**, especially in cold storage, lead to 25-30% post-harvest losses, costing about ₹92,651 crore annually.
- A **complex regulatory framework** involving multiple agencies increases compliance burden and uncertainty.
- There is a **skill gap**, with only 3% of the workforce formally trained.
- **Limited access to finance**, particularly for MSMEs, restricts investment in technology and expansion.
- Issues related to **quality standards and export compliance** result in rejection of products in global markets.
- Environmental concerns such as **plastic packaging and sustainability challenges** are increasing regulatory pressure.
- **Price volatility in agricultural commodities** creates uncertainty in production and pricing.
- Financial reforms such as sector-specific credit schemes and credit guarantees.
- Strengthening quality standardisation and global compliance will enhance export competitiveness.
- Regulatory simplification through a single-window clearance system.
- Promoting sustainable processing and eco-friendly packaging.
- Increasing investment in research and development.

Conclusion

- The food processing sector acts as a vital link between agriculture and industry, significantly increasing value addition and farmer incomes.
- The sector's Gross Value Added reached **₹2.24 lakh crore** in 2023-24, reflecting its critical role in India's industrial growth.
- Processed food now accounts for over **20%** of agricultural exports, driven by global demand and improved quality standards.
- Schemes like **PLISFPI** have mobilized **₹9,207 crore** in investment, fostering both large-scale manufacturing and MSME innovation.
- Reducing the **₹92,651 crore** annual post-harvest loss requires urgent investment in cold storage and integrated food clusters.
- **Technological Shift:** Adopting **AI and blockchain** for supply chain transparency will enhance global competitiveness and ensure food safety.
- With over **3.39 lakh jobs** created, the sector remains a primary driver for rural employment and skill development.
- Future growth depends on eco-friendly packaging and simplified regulatory clearances to meet international environmental norms.

Government Initiatives

- Key schemes include Pradhan Mantri Kisan Sampada Yojana and Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme.
- A ₹2,000 crore **Special Food Processing Fund** has been created with **NABARD** to support investment.

Way Forward

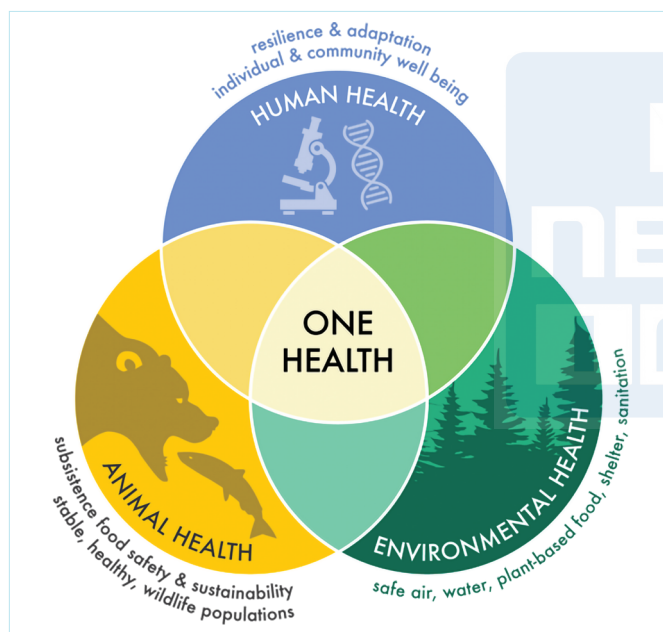
- Developing integrated food processing clusters near production centres.

ONE HEALTH APPROACH

On World Health Day (7 April 2026), experts emphasised that strengthening pandemic preparedness and ensuring equitable healthcare access requires a science-based and collaborative One Health framework.

What is the One Health Approach

- One Health is an **integrated and unifying approach** that aims to sustainably balance and optimise the health of people, animals, plants, and ecosystems.
- It recognises that the health of **humans, domestic and wild animals, and the environment are interconnected and interdependent**, requiring coordinated responses.
- The approach operates at **community, national, regional, and global levels**, relying on collaboration, shared governance, and interdisciplinary coordination.
- It enables **comprehensive disease control, early detection, and stronger global health security systems**.



Evolution of the One Health Concept

- The concept gained global prominence during the **Severe Acute Respiratory Syndrome (SARS) outbreak of 2003–04**, which highlighted animal–human disease transmission.
- It was further reinforced during the spread of **Avian Influenza (H5N1)**, which demonstrated cross-species disease risks.
- The **Manhattan Principles** (guidelines linking human, animal, and ecosystem health) formally recognised the interdependence of these domains and their implications for global health, economies, and food security.
- Scientific evidence has established that **nearly 75% of emerging infectious diseases are zoonotic**, and that **anthropogenic factors such as land-use change, urbanisation, and global trade** are key drivers of disease emergence.

Rationale for One Health Approach

- The rising incidence of **zoonotic diseases** (*diseases transmitted from animals to humans*) and **antimicrobial resistance** has highlighted the urgent need for a coordinated One Health approach linking human, animal, and environmental health systems.
- A significant proportion of emerging diseases originate in animals, and **increasing human encroachment into wildlife habitats** has intensified the risk of spillover infections.
- **Climate change** is altering ecosystems, vector distribution, and disease transmission patterns, while extreme weather events are increasing stress on already fragile health systems.
- The widespread and indiscriminate use of antibiotics in **humans, livestock, and agriculture** is accelerating antimicrobial resistance.
- Increased globalisation and mobility of people and goods have enabled **rapid cross-border spread of diseases**.

Global Initiatives Supporting One Health

- The **Quadrupartite Collaboration** (partnership of **WHO, FAO, UNEP, and WOAH**) provides leadership and coordination for implementing the One Health approach globally.
- The **One Health Joint Plan of Action (2022)** aims to strengthen surveillance systems, early warning mechanisms, and coordinated responses to zoonotic diseases and antimicrobial resistance.
- The **World Health Organization Pandemic Agreement** seeks to ensure equitable access to vaccines, diagnostics, and therapeutics, along with improved pathogen data sharing.
- Global platforms such as the **International One Health Summit** and the **Global Forum of WHO Collaborating Centres** promote scientific collaboration and knowledge sharing.

Need for One Health Approach in India

- India has **2.4% of the world's land area but nearly 8% of global biodiversity**, leading to high human–animal interaction and increased zoonotic risks.
- Outbreaks such as **Nipah virus, Avian Influenza (H5N1), and Rabies** indicate that nearly **60–70% of emerging infectious diseases** in India are animal-borne. India has one of the **largest livestock populations in the world**, which often act as a bridge between wildlife and human infections.
- The overuse of antibiotics in healthcare and agriculture contributes to **antimicrobial resistance**, creating drug-resistant “superbugs.”
- Climate change, deforestation, and land-use changes are expanding the spread of **vector-borne diseases such as Dengue and Malaria**, while also bringing forest diseases like **Kyasanur Forest Disease (KFD)** into human settlements.

National One Health Mission

- Approved in 2022 by the Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC) as a cross-ministerial project. Implemented by the National Institute for One Health in Nagpur and executed by the ICMR.
- **It operates via a two-tier system:** an Executive Committee for policy and a Scientific Steering Committee.
- Builds a system to monitor and control zoonotic diseases, Antimicrobial Resistance (AMR), and emerging threats.
- **Collaboration:** Unites over 13 departments, including health, agriculture, and environment, for coordinated bio-security.
- Uses AI-enabled pathogen detection, vaccine R&D, and a National Wildlife Health Policy to track disease spillover.
- **Strategic Shift:** Transitions India from reactive healthcare to a preventive, integrated bio-security architecture.

Focus Areas under One Health

- Addressing zoonotic diseases such as **Nipah, Avian Influenza, and COVID-19-related risks** through integrated surveillance and response. Ensuring **food safety and controlling antimicrobial resistance** across human and animal health systems.
- Studying the impact of **climate change on disease spread**, including vector-borne and environmental diseases.
- Strengthening **laboratory capacity, data integration platforms, and real-time surveillance systems** for effective decision-making.

Challenges in Operationalising One Health

- Human, animal, and environmental health systems function without proper coordination.
- There is a shortage of trained professionals such as **epidemiologists, zoonotic disease experts, and data scientists**.

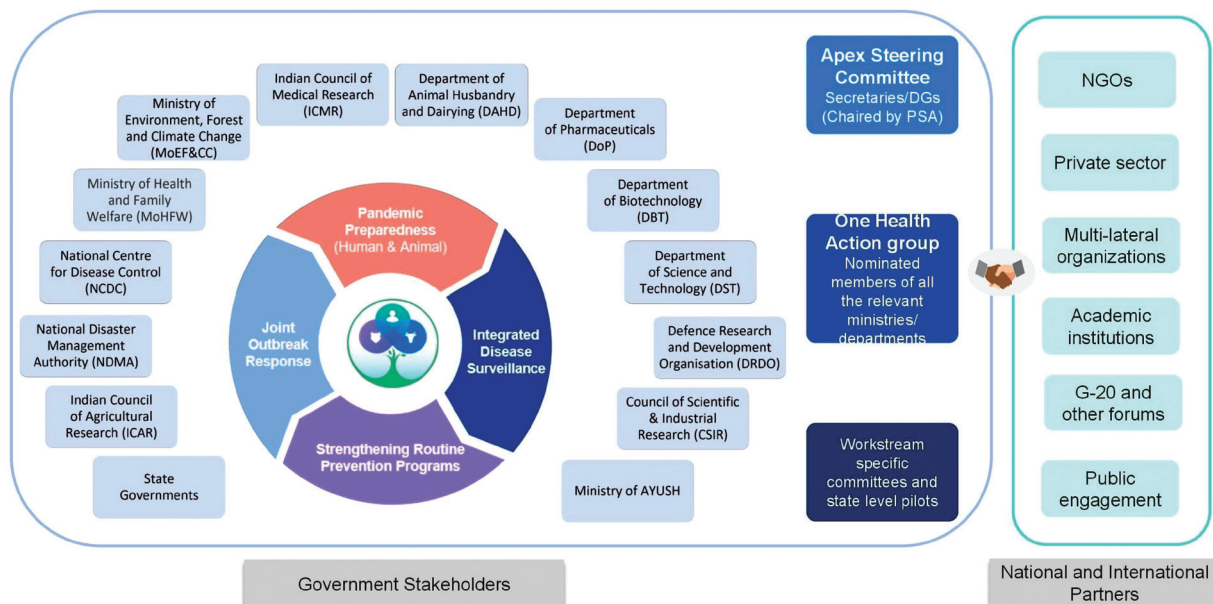
- **Infrastructural disparities across states** affect surveillance capabilities, laboratory networks, and digital health integration.
- Challenge of **secure and efficient data sharing** across sectors.
- Limited financial resources, including **public health expenditure of around 2.1% of GDP**. **Deforestation and urbanisation**, increases human-wildlife interaction.

Measures to Strengthen One Health Implementation

- Establishing a **statutory institutional framework** with representation from key ministries.
- Developing **integrated and real-time surveillance systems** across human, animal, and environmental sectors.
- Strengthening **primary healthcare systems such as Ayushman Arogya Mandirs**.
- Implementing strict regulations on **antibiotic use in livestock and agriculture** can help combat antimicrobial resistance.
- Enhancing capacity building, workforce training, and community participation.
- Promoting **international cooperation** can ensure equitable access to vaccines, diagnostics, and treatments.

Significance of One Health Approach

- The approach enables a shift from **reactive crisis management to preventive and holistic healthcare systems**, improving long-term health security. It strengthens **pandemic preparedness** by integrating surveillance, early warning systems, and rapid response mechanisms.
- It supports **sustainable development** by linking health outcomes with environmental protection and biodiversity conservation. It enhances **global health security** by promoting coordinated action across countries and sectors.



BIOTECHNOLOGY IN TRADITIONAL FARMING

With the agriculture industry projected to grow 2.5 times by 2033, biotech experts underscored the growing importance of agri-biotechnology in the coming years.

Climate-resilient Agriculture (CRA)

- ➔ **Climate-resilient agriculture** uses a **range of biotechnology and complementary technologies** to **guide farming practices** and reduce dependence on chemical inputs, while maintaining or improving productivity.
- ➔ **Tools include:**
 - ◆ Biofertilizers and biopesticides, and soil-microbiome analyses.
 - ◆ Genome-edited crops can be developed to withstand drought, heat, salinity, or pest pressures.
 - ◆ AI-driven analytics can integrate multiple environmental and agronomic variables to generate locally tailored farming strategies.
- ➔ **Warning:** Scientists have warned that with **every one degree Celsius** increase in temperature, India's wheat yield could decline by **6% to 10%**.

India's Bioeconomy

- ➔ India is among the **Top 12 destinations** for biotechnology worldwide and **3rd largest destination** for biotechnology in Asia Pacific.
- ➔ India's bioeconomy has grown sixteen-fold from **\$10 billion in 2014 to an impressive \$165.7 billion in 2024**.
- ➔ **Contributing 4.25%** to the national GDP, the sector has demonstrated a robust compound annual growth rate (CAGR) of **17.9%** over the past four years.
- ➔ India's Biotechnology sector is **categorised into Biopharmaceuticals, Bio agriculture, Bio IT and Bio Services**.
- ➔ **Future Goals:** Target of achieving a \$300 billion bioeconomy by 2030. India also seeks to lead globally in bio-pharma, including vaccines, diagnostics, and therapeutics.

Need of CRA

- ➔ **Agricultural Economy:** India is an agricultural nation with a rapidly growing population, which places increasing pressure on the need for higher and more reliable farm productivity.
 - ◆ Around 51% of India's net sown area is rainfed, and produces nearly 40% of the country's food, making it especially vulnerable to climate variability.
- ➔ **Conventional Farming Methods are not enough:** These methods alone may not withstand the rising stresses of climate change.
 - ◆ Recent modelling suggests that by the end of the century, yields of staple crops like rice could fall by 3-22%, and in worst-case scenarios by more than 30%.

Enhanced Productivity:

- ◆ Climate-resilient agriculture offers a suite of technologies that can enhance productivity while protecting environmental health.
- ◆ It can also reduce India's reliance on food imports and strengthen the country's strategic autonomy in the food sector.

Global Scenario

- ➔ The U.S. integrates CRA into federal policy through the USDA Climate-Smart Agriculture and Forestry (CSAF) initiative, investing billions in climate-smart practices.
- ➔ CRA is embedded in the **EU Green Deal** and Farm to Fork Strategy, both aiming to reduce chemical inputs and enhance sustainability.
- ➔ **China's CRA strategy** centres on climate-tolerant crop breeding, large-scale water-saving irrigation, and agricultural digitalisation.
- ➔ **Brazil** leads in tropical climate-resilient crop development, driven by EMBRAPA's biotechnology research.

Challenges

- ➔ **Low Adoption:** CRA techniques adoption is low among small and marginal farmers due to limited access, awareness, and affordability, and quality inconsistencies in biofertilizers and biopesticides that undermine trust in biological alternatives.
- ➔ **Uneven Distribution:** The rollout of climate-resilient seeds remains slow, with the adoption of new tools such as gene editing still emerging and uneven distribution across States.
- ➔ **The digital divide** limits the reach of precision agriculture and AI-based decision tools.
- ➔ These challenges are compounded by **ongoing soil degradation, water scarcity, and accelerating climate volatility**, which may outpace current adaptation efforts.
- ➔ **Fragmented policy coordination** further risks slowing progress.

Use of Biotechnology in Agriculture

- ➔ The Department of Biotechnology's **Agriculture Biotechnology programme** supports innovative biotechnological research for achieving sustainable agriculture by leveraging the latest advances in technologies.
- ➔ **The main achievements include:**
- ➔ **Climate-Smart Crops:** A New Superior Climate Smart Drought Tolerant High-Yielding Chickpea Variety "SAATVIK (NC 9)" with enhanced yield under drought stress was notified recently.

- **Genome-Edited Crops:** Genome editing was employed to generate loss of function mutations in several rice genes that negatively regulate crop productivity.
- **Amaranth Genetic Resources:**
 - ◆ The department of biotechnology has developed an Amaranth Genomic Resource Database, Near Infrared Spectroscopy (NIRS) techniques for screening nutritional qualities of amaranth grain, and a 64K SNP chip.
 - ◆ Amaranth accessions screened using the above resources have been shown to counteract high fat diet induced obesity.
- **Fungal Biocontrol:** A stable fungal enzyme nano-formulation from *Myrothecium verrucaria* has been developed for eco-friendly biocontrol of powdery mildew in tomato and grape.

Government Initiatives

- **National Innovations in Climate Resilient Agriculture:** In 2011, the Indian Council of Agricultural Research (ICAR) launched a flagship network project 'National Innovations in Climate Resilient Agriculture'.
- **The National Mission for Sustainable Agriculture** has been formulated to enhance agricultural productivity, especially in rainfed areas, focusing on integrated farming, water use efficiency, soil health management, and synergising resource conservation.
- **The BioE3 policy** also positioned CRA as a key thematic area for the development of biotechnology-led solutions.
- **Leading companies** such as Biostadt, IFFCO, GSFC, NFL, and IPL Biologicals supply bio-inputs that improve soil health and reduce chemical dependence.
- India also has an **expanding digital agriculture sector**, with agritech startups offering AI-enabled advisories, precision irrigation, crop-health monitoring, and yield prediction tools.

Way Forward

- There is a need to accelerate the development and deployment of climate-tolerant and genome-edited crops.
- Financial incentives, climate insurance, and credit access are essential to support farmers during the transition.
- India needs a coherent national CRA roadmap under the BioE3 framework, aligning biotechnology, climate adaptation, and policies to deliver resilience at scale.

Conclusion

- **Climate-Resilient Agriculture (CRA)** is no longer a choice but a necessity for India, as rising temperatures threaten to reduce wheat yields by up to 10% and staple crop yields like rice by as much as 30% by the end of the century.
- The integration of genome editing, soil-microbiome analysis, and bio-inputs provides a sophisticated pathway to maintain high productivity while significantly reducing the environmental footprint of chemical-intensive farming.
- With India's bioeconomy projected to reach \$300 billion by 2030, the agricultural sector is poised to benefit from a robust ecosystem.
- Addressing the digital divide and ensuring the equitable distribution of climate-resilient seeds across all states is critical to protecting the 51% of India's net sown area that remains vulnerable to rainfed conditions.
- Success depends on a coherent national roadmap under the **BioE3 framework**, supported by financial incentives and insurance schemes that de-risk the transition for small and marginal farmers.
- By leveraging its position as a top global biotechnology destination, India can transition from domestic food security to becoming a global leader in sustainable, AI-driven, and resilient agricultural practices.

Crop Varieties Developed/Released in the Last 10 Years

Rice



37

Maize



7

Wheat



3

Soybean



1

Chickpea



3

Rose



1

Okra



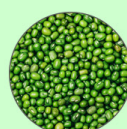
1

Bittergourd



1

Mungbean



1

Eucalyptus



1

Pea



1

Groundnut



2

COOPERATIVES OF INDIA

Centre has informed Lok Sabha that of the 8.48 lakh societies, 2.11 lakh are in loss, 1.41 lakh non-functional and 47,688 under liquidation.

Major Highlights

- Only 3.49 lakh cooperatives are in profit.
- **Uttar Pradesh** has the highest percentage of defunct societies at 41.8% , followed by Madhya Pradesh, Rajasthan, Andhra Pradesh and West Bengal.
 - ◆ The condition of smaller States is even worse Nagaland (72.7%), Delhi (67.1%), Sikkim (55.3%), Manipur (52%) and Chandigarh (46.4%).
- **Among the top ten States** with the highest number of cooperatives, southern and western States Maharashtra, Gujarat, Tamil Nadu, Karnataka and Telangana have managed to keep most of their societies afloat.
 - ◆ West Bengal, U.P., Madhya Pradesh, Rajasthan have at least 25% of their societies defunct.
- **The five States with the largest number of cooperatives** are Maharashtra, Gujarat, Telangana, Karnataka and Madhya Pradesh amount to **93.44% of societies under liquidation.**

What are Cooperatives

- A cooperative (or co-op) is an **organization or business** that is **owned and operated by a group of individuals** who share a common interest, goal, or need.
- These **individuals, known as members**, participate in the cooperative's activities and **decision-making process**, typically on a one-member, one-vote basis, regardless of the amount of capital or resources each member contributes.
- The main purpose of a cooperative is **to meet the economic, social, or cultural needs of its members**, rather than to maximize profits for external shareholders.

97th Constitutional Amendment Act 2011

- It established the right to form cooperative societies as a **fundamental right (Article 19)**.
- It included a **new Directive Principle of State Policy** on the **Promotion of Cooperative Societies (Article 43-B)**.
- It added a new **Part IX-B to the Constitution** titled "**The Co-operative Societies**" (Articles 243-ZH to 243-ZT).
- It authorizes the **Parliament to establish relevant laws** in the case of **multi-state cooperative societies (MSCS)** and state legislatures in the case of other cooperative societies.
- The **UN SDGs recognize cooperatives as crucial drivers of sustainable development**, particularly in reducing inequality, promoting decent work, and alleviating poverty.

Types of Cooperatives in India

- **Agricultural Cooperatives:**
 - ◆ **Dairy Cooperatives:** Focus on the collective production, processing, and marketing of dairy products (e.g., Amul).
 - ◆ **Farmers' Cooperatives:** Provide services like access to seeds, fertilizers, and agricultural equipment, and help with marketing and processing crops.
 - ◆ **Fishermen Cooperatives:** Support fishermen in managing resources and marketing their catch collectively.
- **Consumer Cooperatives:** These cooperatives are formed to provide goods and services to members at reasonable prices, reducing reliance on middlemen. Examples include consumer stores and fair-price shops.

Evolution of Cooperatives in India



- **Worker Cooperatives:** In these cooperatives, workers own and manage the business, sharing profits and decision-making. Examples include small-scale manufacturing cooperatives or artisan co-ops.
- **Credit Cooperatives:** Cooperative Banks and Credit Societies offer financial services, such as savings accounts, loans, and credit, to members, particularly in rural and underserved areas.
- **Housing Cooperatives:** These cooperatives help members collectively build or manage housing projects, providing affordable living spaces, especially in urban areas.



Why are Cooperatives Performing Badly

- **Dairy Cooperatives:** Act as income stabilizers for farmers, but post-COVID price crashes hurt viability; despite a 25% production rise, rising input and procurement costs due to climatic and global factors continue to strain the sector.
- **Housing Cooperatives:** Facing financial stress due to losses in scam-hit cooperative banks, along with internal issues like non-payment of dues, fund mismanagement, and delays in redevelopment.
- **Credit & Thrift Societies:** Weak regulation and small financial base lead to arbitrary lending practices, high interest burdens, and increased vulnerability due to scams and poor governance.
- **Women's Cooperatives:** Growth constrained by limited financial access, social barriers, lack of networks, and high work-life stress, restricting effective participation and entrepreneurship.

Benefits of Cooperatives

- **Democratic Control:** Members have a voice in decision-making.
- **Economic Participation:** Profits are distributed based on usage or contribution, not capital invested.
- **Community Focus:** Co-ops often aim to benefit local communities by keeping resources and profits within the group.

- **Better Services/Prices:** By pooling resources, cooperatives often offer better services or prices than for-profit businesses.

Challenges Faced

- **Weak Governance:** There are issues of poor management, corruption, and political interference, leading to inefficiency and lack of transparency.
- **Limited Access to Credit:** Many cooperatives struggle with access to financing, which hinders their ability to expand or improve their operations.
- **Competition from Private Sector:** Cooperatives often face stiff competition from large private enterprises and multinational corporations, especially in sectors like retail and agriculture.
- **Technological Gaps:** Many cooperatives, especially in rural areas, lack access to modern technology or are slow to adopt new systems that could improve efficiency.

Legal Framework and Support for Cooperatives

- In India, cooperatives are governed by the **Cooperative Societies Act**, which is implemented at both the state and national levels.
 - ♦ **The Multi-State Cooperative Societies Act (2002):** This law regulates cooperatives that operate in more than one state.
 - ♦ **The National Cooperative Policy (2002):** Aimed at creating an enabling environment for the cooperative movement, it focuses on improving governance, member participation, and financial sustainability.
 - ♦ **The Ministry of Cooperation:** Established in 2021, this ministry focuses on supporting the growth of cooperatives in India, including reforming their governance and providing financial support.
 - ♦ **National Cooperation Policy 2025:** It aims to build on the unique strengths of India's cooperative tradition, promote economic democratization, and uplift rural economies through collective participation.



Way Ahead

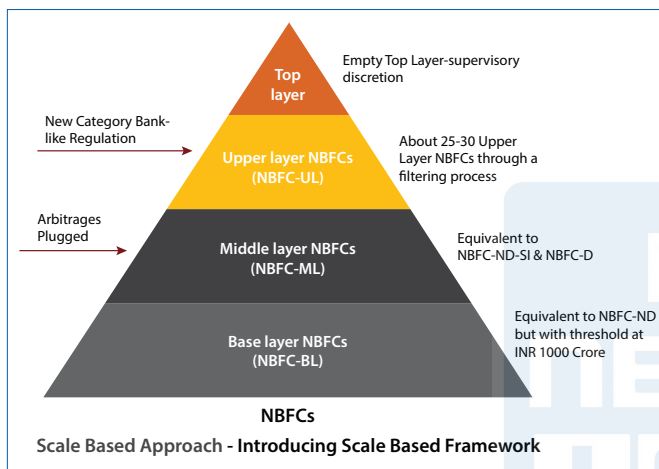
- Cooperatives in India have proven to be an essential tool for economic empowerment, especially for marginalized groups, and contribute significantly to rural development.
- With the rollout of the National Cooperation Policy, 2025, the Centre has shown intent to strengthen the cooperative system in India.

UPPER LAYER NBFCs

The RBI released draft amendment directions to revise the methodology for identifying Non-Banking Financial Companies aiming to enhance transparency, simplicity, and regulatory parity.

About

- The current **Scale Based Regulatory (SBR) Framework** for NBFCs prescribes a two-pronged methodology for identification of NBFC-UL viz.,
 - ◆ Top ten eligible NBFCs by asset size and parametric scoring methodology.
- This **dual approach** has been criticised for **being complex and less transparent**.



- NBFC-UL are the **entities posing significant systemic risks due to their size**, complexity, and interconnectedness.
- **Top 10 NBFCs** by asset size + parametric scoring methodology like Bajaj Finance, Shriram Finance, Tata Capital, Aditya Birla Finance, LIC Housing Finance.

Proposed Amendments by RBI

- **Asset Size Threshold:** Single objective criterion, NBFCs with asset size \geq ₹1,00,000 crore qualify as NBFC-UL, replacing the dual methodology. Reviewed every 5 years. Enhances predictability and ease of compliance.
- **Inclusion of Government NBFCs:** Currently placed in Base Layer (BL) or Middle Layer (ML), state-owned entities like NABARD, Exim Bank, and SIDBI will now be classified under Upper Layer based on size.
- **State Government Guarantees:** NBFC-UL entities may use state government guarantees as a credit risk transfer instrument without any cap (subject to conditions), providing greater flexibility in risk management.

Non-Banking Financial Company (NBFC)

- **Definition of NBFC:**
 - ◆ A Non-Banking Financial Company (NBFC) is a company registered under the Companies Act (1956 or 2013) that

primarily conducts financial activities like loans, advances, leasing, hire-purchase, and investment in securities.

- ◆ NBFCs are prohibited by the Reserve Bank from associating with any unincorporated bodies
- **Excluded activities:** It does not include companies whose main business is agriculture, industry, trading goods (other than securities), services, or real estate activities.
- **Residuary NBFCs:** Companies that mainly collect money through deposits or instalment schemes also fall under NBFCs (called residuary non-banking companies).
- **Eligibility:**
 - ◆ To register with the Reserve Bank of India (RBI) as a Non-Banking Financial Company (NBFC), a company must be incorporated under the Companies Act, 1956 or 2013 and have a minimum Net Owned Fund (NOF) of ₹10 crore.
 - ◆ However, higher capital requirements apply for specialised NBFCs, such as ₹300 crore for NBFC-IFCs and IDf-NBFCs, ₹100 crore for Mortgage Guarantee Companies, ₹20 crore for Housing Finance Companies, ₹150–250 crore for Standalone Primary Dealers depending on activities, and ₹2 crore for NBFC-AA and NBFC-P2P categories.

How NBFCs are Different from Banks?

- NBFCs cannot accept demand deposits.
- They cannot issue cheques or operate payment systems.
- Their deposits are not insured by DICGC.

Key Challenges

- **Regulatory Burden:** More entities under UL means higher compliance costs and stricter capital/governance norms.
- **Threshold Rigidity:** Sole reliance on asset size may ignore risk heterogeneity and qualitative factors like interconnectedness.
- **Government NBFC Impact:** Inclusion may limit operational flexibility of public sector entities.
- **Corporate Governance Conflicts:** Cases like Tata Sons highlight how regulatory changes can trigger ownership disputes and restructuring pressures.

Way Forward

- Combine asset size with risk-based indicators to avoid oversimplification.
- Phased implementation for newly included entities, especially government NBFCs.
- **Strengthen RBI's supervisory capacity** for a larger NBFC-UL pool.
- Issue clear listing guidelines to prevent regulatory arbitrage.

INDIA-SRI LANKA RELATIONS

The Vice President of India's visit to Sri Lanka marked an important diplomatic engagement during which India announced the expansion of the Overseas Citizen of India (OCI) scheme.

Key Outcomes of the Visit

- India extended OCI eligibility to the fifth and sixth generations of Indian-origin Tamils, expanding it beyond the earlier fourth-generation limit and simplifying the application process through documents certified by the Sri Lankan government.
- The visit strengthened diaspora engagement by recognising Indian-origin Tamils as a bridge for cultural, social, and economic ties between the two countries.
- India enhanced development cooperation by increasing support under the **Ceylon Estate Workers' Education Trust** and handing over 145 houses under Phase III of the Indian Housing Project, which is part of the larger commitment to construct 50,000 houses announced in 2010.
- Both countries emphasised the development of the **Trincomalee Energy Hub (major energy infrastructure project)**, which includes a proposed fuel pipeline and development of World War II-era oil tank farms under a tripartite agreement with the UAE signed in 2025.
- Sri Lanka appreciated India's USD 450 million assistance after Cyclone Ditwah, which reinforced India's role as a reliable partner.
- Both sides agreed to address the fishermen dispute in the Palk Strait through a humanitarian approach that balances livelihood concerns and ecological sustainability.

Background

- India and Sri Lanka have maintained civilisational ties for over 2,500 years, supported by strong cultural, economic, and political linkages.
- Buddhism was introduced to Sri Lanka in the 3rd century BCE by Mahinda, the son of Emperor Ashoka, which established a deep cultural and religious connection between the two countries.
- In the 10th century CE, the Chola dynasty from South India invaded Sri Lanka and influenced its art, architecture, and language despite political conflicts.
- During the colonial period, migration of Indian-origin Tamils created long-term demographic and socio-political linkages, which were later addressed through agreements such as the **Sirima-Shastri Pact of 1964**.
- India and Sri Lanka gained independence from British rule in 1947 and 1948 respectively, and India played an important role in supporting Sri Lanka's democratic institutions.
- The **Liberation Tigers of Tamil Eelam (LTTE - militant organisation)** was formed in 1976 and engaged in armed conflict with Sri Lankan forces from 1983 to 2009.

- India and Sri Lanka signed the **Indo-Sri Lanka Accord of 1987**, which led to the 13th Amendment and deployment of the **Indian Peace Keeping Force (IPKF)**.
- The assassination of former Prime Minister Rajiv Gandhi in 1991 significantly influenced India's policy towards Sri Lanka.
- The Sri Lankan civil war ended in 2009 through a military operation, after which relations shifted towards economic cooperation, connectivity, and development partnership in the Indian Ocean Region.

Significance

- India serves as a **net security provider** in the Indian Ocean Region, ensuring maritime stability and serving as a reliable "first responder," notably providing **\$4 billion** in aid during Sri Lanka's 2022 economic crisis and **\$450 million** following Cyclone Ditwah in 2025.
- Sri Lanka's strategic position is vital for India's national security and maritime trade routes connecting the Arabian Sea and the Bay of Bengal. Collaborations in **Digital Public Infrastructure (UPI integration)** and renewable energy (Trincomalee oil farms) reinforce India's "**Neighborhood First**" policy.
- Strengthening these ties is essential to balancing **China's expanding footprint** in Sri Lankan port infrastructure and maintaining a secure, inclusive Indian Ocean Rim.

Geo-Economic Relations

- Bilateral trade between India and Sri Lanka stands at about USD 5.5 billion in 2023-24, and India is one of Sri Lanka's largest trading partners and investors.
- India was Sri Lanka's second largest trading partner in 2020, with bilateral merchandise trade of about USD 3.6 billion.
- India has provided more than USD 7 billion in assistance, including credit lines and grants, which have supported Sri Lanka's economic recovery.
- The **India-Sri Lanka Free Trade Agreement (ISFTA)**, operational since 2000, has significantly expanded trade between the two countries. Both countries are negotiating the **Economic and Technology Cooperation Agreement (ETCA)** to deepen economic integration.
- India has supported infrastructure and development projects, including electricity, railway connectivity, and high-impact community development initiatives.

Geo-Political Relations

- Sri Lanka's strategic location in the Indian Ocean Region makes it central to India's geopolitical interests and maritime strategy.

- India's engagement with Sri Lanka aims to balance external influences, particularly China's presence in projects such as the Hambantota and Colombo ports under the Maritime Silk Route initiative.
- Both countries cooperate within regional groupings such as **SAARC, BIMSTEC, and the Indian Ocean Rim Association (IORA)**.
- They also collaborate in global platforms such as the United Nations, World Trade Organization, World Health Organization, International Monetary Fund, and World Bank.

Technology Relations

- India and Sri Lanka are expanding cooperation in digital and technological areas, including the introduction of the **Unified Payments Interface (UPI – real-time digital payment system)** in Sri Lanka.
- Technological collaboration is also reflected in energy infrastructure, hybrid power projects in northern Sri Lanka, and broader connectivity initiatives.

Defence Relations

- Defence cooperation includes joint military exercises such as **SLINEX (naval exercise)** and **Mitra Shakti (army exercise)**.
- Since 2012, both countries have engaged in the **Indo-Sri Lankan Defence Dialogue**, which reviews defence cooperation and security issues.
- Both countries cooperate in maritime security, counter-terrorism, and regional stability efforts in the Indian Ocean Region.

Strategic Relations

- India and Sri Lanka cooperate through the **Colombo Security Conclave (regional security platform)**, which enhances coordination on security challenges.
- Both countries share interests in maritime security, freedom of navigation, and disaster response cooperation.
- Strategic projects such as the Trincomalee Energy Hub, Kankesanthurai port development, and connectivity initiatives strengthen long-term alignment.
- India has supported infrastructure development projects in ports and energy, including hybrid power projects and port modernisation.

People-to-People Relations

- People-to-people ties are rooted in shared cultural and religious heritage, particularly Buddhism and historical exchanges.
- Cultural cooperation is supported by agreements such as the **Cultural Cooperation Agreement (1977)** and initiatives like the **India-Sri Lanka Foundation (1998)**.
- The Indian Cultural Centre in Colombo promotes Indian culture through activities such as music, dance, Hindi classes, and International Yoga Day events.

- India provides scholarships and training through the **Indian Technical and Economic Cooperation (ITEC – capacity-building programme)**.
- The Indian-origin Tamil community plays a crucial role in strengthening social, cultural, and economic linkages between the two countries.

Challenges

- **Disputes:** Illegal fishing, bottom trawling, and the sensitive **Katchatheevu** sovereignty issue remain primary frictions.
- **Political & Security:** The unresolved Tamil 13th Amendment and China's strategic port infrastructure presence pose significant security concerns.
- **Economic:** Trade imbalances and Sri Lanka's domestic instability often hinder effective policy implementation.

Way Forward

- **Integration:** Concluding the ETCA and expanding ferry and energy connectivity will deepen economic bonds.
- **Diplomacy:** Prioritizing inclusive reconciliation and deep-sea fishing solutions can resolve long-standing ethnic and maritime grievances.
- **Trust:** Strengthening civilizational ties and recognizing mutual strategic interests will ensure a stable partnership.

Overseas Citizen of India (OCI) Card

- It is a form of **permanent residency status** granted to foreign citizens of Indian origin. It was introduced through an amendment to the **Citizenship Act, 1955 (in 2005)** as part of India's **diaspora engagement policy**.
- It was merged with Person of Indian Origin (PIO) **in 2015**.
- **Eligibility Criteria:** A foreign national is eligible if they:
 - ◆ Were a **citizen of India on or after 26 January 1950**, or
 - ◆ Belonged to a territory that became part of India after independence, or are **children/grandchildren/great-grandchildren** of such persons.
 - ◆ **Not Eligible:** Citizens of **Pakistan and Bangladesh** (or other notified countries).
- **Key Features:**
 - ◆ **Lifelong visa** to visit India.
 - ◆ Multiple entry, multi-purpose travel without restriction.
 - ◆ Exemption from **registration with** Foreigners Regional Registration Office (**FRRO**).
 - ◆ Parity with **Non-Resident Indians (NRIs)** in education, economic and financial fields
 - ◆ OCI cardholders can purchase residential and commercial properties; and **cannot purchase agricultural land, plantation property**.
 - ◆ OCI holders **do NOT enjoy** voting rights, the right to hold **constitutional/public offices**, employment in **government services**, and political rights.

INDIA-AUSTRALIA RELATIONS

The India–Australia Economic Cooperation and Trade Agreement (Ind–Aus ECTA) completed four years after its signing on 2 April 2022, marking a significant milestone in bilateral economic engagement.

Key Aspects of the Agreement

- India granted preferential market access on **70.3% of its tariff lines**, covering **90.6% of trade value**, while Australia granted access on **100% of its tariff lines**, corresponding to all imports from India.
- About **98.3% of tariff lines became duty-free immediately**, while the remaining **1.7% are being phased out over five years**, ensuring gradual liberalisation.
- From **1 January 2026, all Indian exports will receive zero-duty market access in Australia**, significantly improving export competitiveness. India's exports to Australia increased from **USD 4 billion in FY 2020–21 to USD 8.5 billion in FY 2024–25**, showing more than a twofold rise after the agreement.
- Total bilateral trade reached **USD 24.1 billion in 2024–25**, while India's exports recorded an **8% growth over the previous year**.
- In **FY 2025–26, total trade stood at USD 19.3 billion**, indicating fluctuations but sustained engagement.

Background

- India and Australia upgraded their relationship from a **Strategic Partnership (2009)** to a **Comprehensive Strategic Partnership (2020)**, reflecting deeper cooperation across sectors.
- Institutional mechanisms supporting the relationship include:
 - ◆ 2+2 Defence and Foreign Ministers' Dialogue,
 - ◆ Joint Trade and Commerce Ministerial Commission,
 - ◆ Defence Policy Talks,
 - ◆ Australia–India Education Council,
 - ◆ Defence Services Staff Talks,
 - ◆ Energy Dialogue, and
 - ◆ Joint Working Groups.
- Bilateral trade reached **USD 24.1 billion in FY 2024–25**, with India's exports valued at **USD 8.58 billion** and imports at **USD 15.52 billion**, making India Australia's **8th largest trading partner** and Australia India's **14th largest**.
- Negotiations are ongoing for a more comprehensive **Comprehensive Economic Cooperation Agreement (CECA – broader trade and investment agreement)** to deepen economic ties.

Significance

- Australia is a key partner for maintaining a **free, open, and rules-based Indo-Pacific**, aligning with India's maritime and regional security interests.
- It is a major source of **critical minerals such as lithium, cobalt, rare earth elements, coal, and liquefied natural gas**, which are essential for India's energy transition and industrial growth.

- The ECTA has strengthened bilateral trade and created a pathway for deeper economic integration through CECA.
- Australia serves as an important destination for Indian students and a partner in **education, research, and innovation**, especially in science and technology fields.
- Cooperation in multilateral forums such as the **Quadrilateral Security Dialogue (QUAD), Indian Ocean Rim Association, and East Asia Summit** enhances geopolitical coordination and helps balance regional influences.



Geo-Economic Relations

- The ECTA has significantly reduced tariffs, leading to increased trade and improved market access for Indian goods.
- India's exports have diversified but still remain limited compared to Australia's **resource-based exports**, leading to a persistent trade imbalance.
- Australia launched a **New Roadmap for Economic Engagement with India in 2025**, identifying nearly **50 opportunities across defence, sports, culture, space, and technology sectors**.
- Cooperation areas include **agribusiness, clean energy, education, tourism, and infrastructure**, which support long-term economic engagement.

Geo-Political Relations

- India and Australia cooperate closely in the **Indo-Pacific region**, focusing on maritime security, freedom of navigation, and regional stability.
- Both countries work together on platforms such as **QUAD, IORA, and the East Asia Summit**, strengthening strategic alignment.
- The partnership helps India diversify its global engagements and balance the influence of major powers, particularly China.

Technology Relations

- The **Australia–India Critical Minerals Investment Partnership (2022)** led to the establishment of the **Critical Minerals Research Hub in 2023**, with funding of USD 5 million to support innovation and research.
- Collaboration focuses on **sustainable mining, processing technologies, and supply chain development** for critical minerals.
- Joint initiatives also include cooperation in **renewable energy, innovation, and skill development**, enhancing technological capabilities.

Defence Relations

- Defence cooperation includes participation in **MALABAR naval exercise**, along with the United States and Japan, strengthening naval interoperability.
- The **AUSINDEX naval exercise** enhances coordination between the Indian Navy and the Royal Australian Navy.
- The Indian Air Force participated in the **Pitch Black exercise (2018)**, improving operational coordination.
- The **Mutual Logistics Support Arrangement and Defence Science and Technology Implementing Arrangement (2020)** enable joint military operations and enhance disaster response capability.
- The **Joint Guidance for Navy-to-Navy Relations (2021)** provides a framework for deeper naval cooperation.

Strategic Relations

- India and Australia share strategic interests in ensuring **regional stability, maritime security, and supply chain resilience**.
- The partnership focuses on building **secure supply chains for critical minerals and energy resources**, reducing dependence on limited sources.
- Both countries aim to strengthen cooperation in **climate resilience, infrastructure, and emerging technologies**, supporting long-term strategic goals.

People-to-People Relations

- The **Migration and Mobility Partnership Arrangement (2023)** facilitates legal migration and addresses issues related to irregular migration.
- Australia remains a major destination for Indian students, supporting academic collaboration and skill development.
- Tourism and cultural exchanges are being promoted through simplified visa processes and increased engagement initiatives.
- Programmes such as the **India–Australia Rooftop Solar Training Academy (2025)** aim to train **2,000 women and youth**, strengthening social and skill-based linkages.

Challenges

- Trade imbalance persists due to Australia's dominance in **resource-based exports** and limited diversification of Indian exports.
- India faces **non-tariff barriers**, especially **Sanitary and Phytosanitary measures**, which account for about **32% of restrictions**, affecting agricultural exports.
- India's export competitiveness in Australia remains low compared to other global markets.
- The absence of a comprehensive agreement like CECA limits coverage of areas such as **digital trade, government procurement, and rules of origin**.
- Australia's federal elections in 2025 slowed progress on CECA negotiations.
- Issues related to **visa processes, skill recognition, and post-study opportunities** continue to affect mobility.
- Concerns regarding **safety of Indian diaspora and students** occasionally arise.
- Defence cooperation remains strong in exercises but limited in **technology transfer, joint manufacturing, and research collaboration**.

Way Forward

- Both countries should **fast-track the Comprehensive Economic Cooperation Agreement (CECA)** to deepen trade and address existing gaps.
- Efforts should be made to **diversify trade**, especially in services, digital economy, and value-added sectors.
- Cooperation in **critical minerals and clean energy** should be expanded to build resilient supply chains and support climate goals.
- Strategic and defence cooperation should be strengthened through **joint production, intelligence sharing, and QUAD initiatives**.
- Mobility and education partnerships should be improved by addressing **visa, skill recognition, and student welfare issues**.

Conclusion

- The India–Australia relationship has evolved into a **comprehensive strategic partnership** supported by strong economic, strategic, and institutional linkages.
- The ECTA has significantly enhanced trade and cooperation, but challenges such as trade imbalance, regulatory barriers, and limited diversification remain.
- A balanced approach combining **economic integration, strategic cooperation, and institutional strengthening** will be essential to fully realise the potential of this partnership in the Indo-Pacific region.

INDIA-SOUTH KOREA RELATIONS

India and South Korea have decided to resume negotiations to upgrade the Comprehensive Economic Partnership Agreement (CEPA), signalling a renewed push to deepen bilateral cooperation.

Evolution of India-South Korea Relations

- During the **Korean War (1950–53)**, India played a neutral humanitarian role by deploying a medical unit and leading prisoner repatriation efforts, establishing early goodwill.
- Formal diplomatic relations were established in **1973**, but engagement remained limited due to India's closed economy and South Korea's alignment with Western blocs.
- After **1991 economic reforms**, India's **Look East Policy** and entry of Korean companies like Hyundai, LG, and Samsung strengthened economic ties.
- The relationship advanced with the **CEPA in 2010** and was elevated to a **Special Strategic Partnership in 2015**, expanding cooperation beyond trade into defence and technology.
- Recent developments, including high-level engagements in **2026**, mark a shift towards **advanced technology, supply chains, and strategic sectors**.

Strategic Convergence

- Both countries have moved from **economic complementarity** to deeper **strategic alignment**.
- They share democratic values, commitment to rules-based order, and support for a free and inclusive Indo-Pacific, creating alignment in global governance.
- South Korea's **industrial success model** and India's **development trajectory** show strong convergence in manufacturing, infrastructure, and human capital investment.

Economic Relations

- Bilateral trade increased from **\$14.2 billion in 2010** to about **\$26.89 billion in 2024–25**, reflecting strong growth after CEPA implementation.
- Trade structure shows imbalance, with **India importing about \$21 billion and exporting around \$5.8 billion**, indicating a deficit in Korea's favour.
- South Korea is among the **top investors in India**, with investments of over **\$6–7 billion**, especially in automobiles, electronics, and heavy industries.
- Major Korean companies such as **Samsung, Hyundai, and LG** have established large manufacturing bases in India, supporting the **Make in India initiative**.

CEPA and Trade Reform

- The **CEPA (2010)** boosted trade but remains underutilised due to limited coverage and low participation of **Micro, Small and Medium Enterprises (MSMEs)**.
- The proposed **CEPA 2.0 upgrade** aims to:
 - ◆ Increase trade to **\$50 billion by 2030**

- ◆ Improve market access and reduce non-tariff barriers
- ◆ Expand services trade and digital commerce
- Addressing trade imbalance and regulatory barriers is essential for balanced growth.

Technology Cooperation

- Cooperation focuses on **semiconductors, Artificial Intelligence, electric vehicles, batteries, and clean energy**.
- India's **Semiconductor Mission (policy to build domestic chip industry)** and South Korea's expertise in advanced manufacturing create strong complementarities.
- The **India-Korea Digital Bridge (digital cooperation platform)** promotes collaboration in AI, data governance, and digital innovation.
- Joint emphasis on **"AI for All" and inclusive technology** reflects a shared approach to technological development.

Defence Cooperation

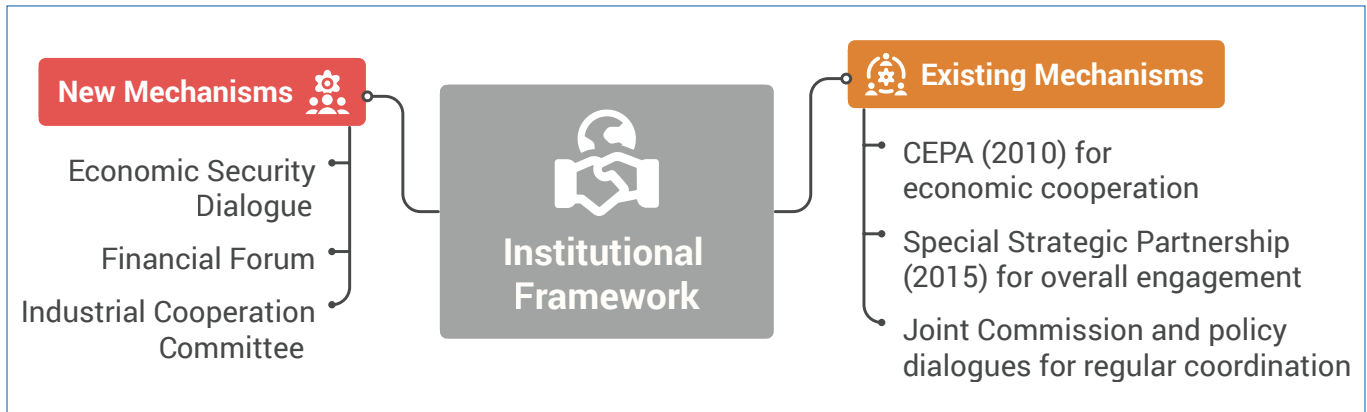
- Defence ties are evolving from **buyer-seller model (import-based relationship)** to **co-development and manufacturing partnerships**.
- The **K-9 Vajra artillery system (locally manufactured defence system)** is a key example of successful collaboration.
- Both countries are increasing cooperation in **maritime security, cyber security, and defence production**.
- Shared concerns include **regional security threats**, such as North Korea and the China-Pakistan axis.

Maritime and Industrial Cooperation

- Collaboration in **shipbuilding** combines South Korea's advanced technology with India's industrial policy support.
- Plans include developing **modern shipyards in India**, expanding logistics networks, and improving maritime infrastructure.
- Proposal for a **Korean Industrial Township** aims to attract **Korean Small and Medium Enterprises (SMEs)** and strengthen manufacturing ecosystems.

Geopolitical Alignment

- Both countries support a **free, open, and inclusive Indo-Pacific**, focusing on maritime security and freedom of navigation.
- South Korea has joined initiatives like the **International Solar Alliance** and **Indo-Pacific Oceans Initiative**, aligning with India's regional vision.
- Both advocate **reform of global institutions** and cooperate on global crises, including developments in Europe and the Middle East.



- Their partnership contributes to **supply chain resilience and global economic stability**.
- Cooperation focuses on **resilient supply chains for critical goods**, including semiconductors and strategic minerals.
- Both countries aim to ensure **stable energy supplies and reduce dependence on vulnerable global supply chains**.

Cultural and People-to-People Ties

- Cultural relations are growing through initiatives like the **Mumbai Korea Centre** (platform for Korean cultural exchange).
- The popularity of **K-pop and Korean culture in India**, and Indian cinema in Korea, is strengthening soft power links.
- Historical ties, such as the **Ayodhya–Korea connection**, reinforce civilisational links.
- However, **limited academic exchange, tourism, and professional mobility** still constrain deeper societal engagement.

Challenges

- **Trade imbalance** remains a major issue, with Indian exports facing barriers in Korean markets.
- **Non-tariff barriers** (regulatory and certification restrictions) limit market access for Indian goods and services.
- **Limited high-technology collaboration** shows a gap between strategic intent and actual joint innovation.
- **Structural differences in industrial capacity** create unequal competitiveness in trade.
- **Regulatory and bureaucratic hurdles** in India discourage Korean investment and slow project execution.
- **Supply chain integration remains weak**, especially for small and medium enterprises.
- **Geopolitical constraints**, including Korea's ties with China and India's strategic concerns, complicate alignment.
- **Limited people-to-people interaction** reduces long-term depth of partnership.

- **Absence of a dedicated technology framework** restricts coordinated research and development.

Way Forward

- Upgrade to **CEPA 2.0** to correct trade imbalance, remove barriers, and expand digital and services trade.
- Establish a **technology partnership framework** for joint research in semiconductors, AI, and clean energy.
- Strengthen **supply chain resilience** through diversified and trusted networks for critical sectors.
- Expand **defence and maritime cooperation**, including joint production and security coordination.
- Improve **ease of doing business** to attract greater Korean investment and technology transfer.
- Promote **academic exchange, tourism, and cultural engagement** to deepen societal ties.
- Institutionalise **regular strategic dialogues**, including 2+2 mechanisms, for coordinated policymaking.
- Collaborate in **Indo-Pacific and multilateral platforms** to shape regional order.
- Focus on emerging sectors such as **green hydrogen, digital economy, and space technology**.

Conclusion

- India–South Korea relations have evolved from limited engagement to a **comprehensive strategic partnership based on shared values and mutual interests**.
- The partnership combines **India's market scale and talent with Korea's technological strength**, creating strong potential for global impact.
- With reforms in trade, technology, and institutional cooperation, the relationship can become a **key pillar of Indo-Pacific stability and global supply chain resilience**.

INTERNET SHUTDOWNS IN INDIA

India recorded 65 internet shutdowns in 2025, which is the lowest number since 2017, yet it continues to remain among the countries with the highest number of shutdowns globally.

Global Scenario

- The data is based on the report titled “**Rising Repression Meets Global Resistance: Internet Shutdowns in 2025**”, published by **Access Now and the #KeptOn coalition (global digital rights network)**.
- In 2025, there were **313 deliberate internet shutdowns across 52 countries**, which is the **highest number recorded in any year since 2016**.
- The **Asia-Pacific region** accounted for the largest share, with **195 shutdowns across 11 countries**, indicating a regional pattern of using shutdowns as a governance tool.
- **Myanmar recorded 95 shutdowns**, making it the highest globally, while **India ranked second with 65 shutdowns**.
- Since 2016, India alone has accounted for **920 out of 2,102 global shutdowns**, making it the country with the **highest cumulative number of internet shutdowns**.

India Trends

Internet shutdowns in India show a fluctuating but overall high trend

2016	30 shutdowns
2017	69 shutdowns
2018	134 shutdowns (highest)
2019	121 shutdowns
2020 and 2021	108 shutdowns each
2022	85 shutdowns
2023	116 shutdowns
2024	84 shutdowns
2025	65 shutdowns

Despite the decline in 2025, the number remains significantly high for a democratic country, raising concerns about proportionality and necessity.

Reasons for Shutdowns

- Internet shutdowns in India were primarily imposed during **protests, communal violence, conflict situations, and religious events**, reflecting their use as a tool to maintain public order.
- These shutdowns affected **12 states and Union Territories**, showing their widespread application across regions.
- Authorities also targeted **circumvention tools (methods used to bypass restrictions)**, including restrictions on **Virtual Private Networks (VPNs – tools that mask internet identity)**.
- In **Jammu and Kashmir**, unauthorized VPN use was restricted under **Section 163 of the Bharatiya Nagarik Suraksha Sanhita (law for maintaining public order)**, with around **800 users penalised and devices checked**.

Legal Framework

- Internet shutdowns in India are governed by the **Indian Telegraph Act**, which allows suspension of services only in cases of **public emergency or public safety**.
- However, these terms are **not clearly defined**, creating scope for broad interpretation and potential misuse.
- Before 2017, shutdowns were often imposed under **Section 144 of the Code of Criminal Procedure (law empowering authorities to prevent gatherings and maintain order)**.
- In 2017, the government introduced the **Temporary Suspension of Telecom Services Rules**, which:
 - ◆ Provide a formal procedure for shutdowns
 - ◆ Require **review by an advisory committee within five days**
 - ◆ Aim to ensure accountability and legality

Judicial Safeguards

- In the **Anuradha Bhasin v. Union of India case (2020)**, the Supreme Court established important safeguards:
 - ◆ **Access to the internet is part of the fundamental right to freedom of expression under Article 19**
 - ◆ **Indefinite shutdowns are not permissible**
 - ◆ Shutdowns must be **temporary, necessary, and proportionate**
 - ◆ All orders must be **published for transparency**
 - ◆ Shutdown decisions are subject to **judicial review**
- The Court also clarified that **Section 144 cannot be used to suppress legitimate protests**, and can only be applied under specific conditions.

Arguments in Favour

- The government argues that shutdowns are necessary for **national security**, especially to prevent coordination of unlawful activities.
- They are seen as **temporary and targeted measures**, intended to address specific situations rather than restrict long-term access.
- Shutdowns help in **preventing violence and unrest**, particularly during sensitive situations like riots or communal tensions.
- They also aim to **control misinformation and fake news**, which can escalate conflicts during crises.

Arguments Against

- Internet shutdowns affect the **freedom of expression and access to information**, which are essential components of democratic rights.
- Frequent shutdowns harm **India's global image**, raising concerns among investors and international partners.

- They create **human rights concerns**, including restrictions on speech, assembly, and communication.
- Shutdowns disrupt the **digital economy**, leading to financial losses for businesses and workers.
- They severely impact **education**, as students lose access to online learning platforms and resources.

Challenges

- The absence of a **clear definition of public emergency** allows wide discretionary powers to authorities.
- Despite legal safeguards, concerns remain about **transparency, proportionality, and accountability** in implementation.
- The use of shutdowns as a **routine administrative tool** rather than an exceptional measure raises questions about democratic governance.

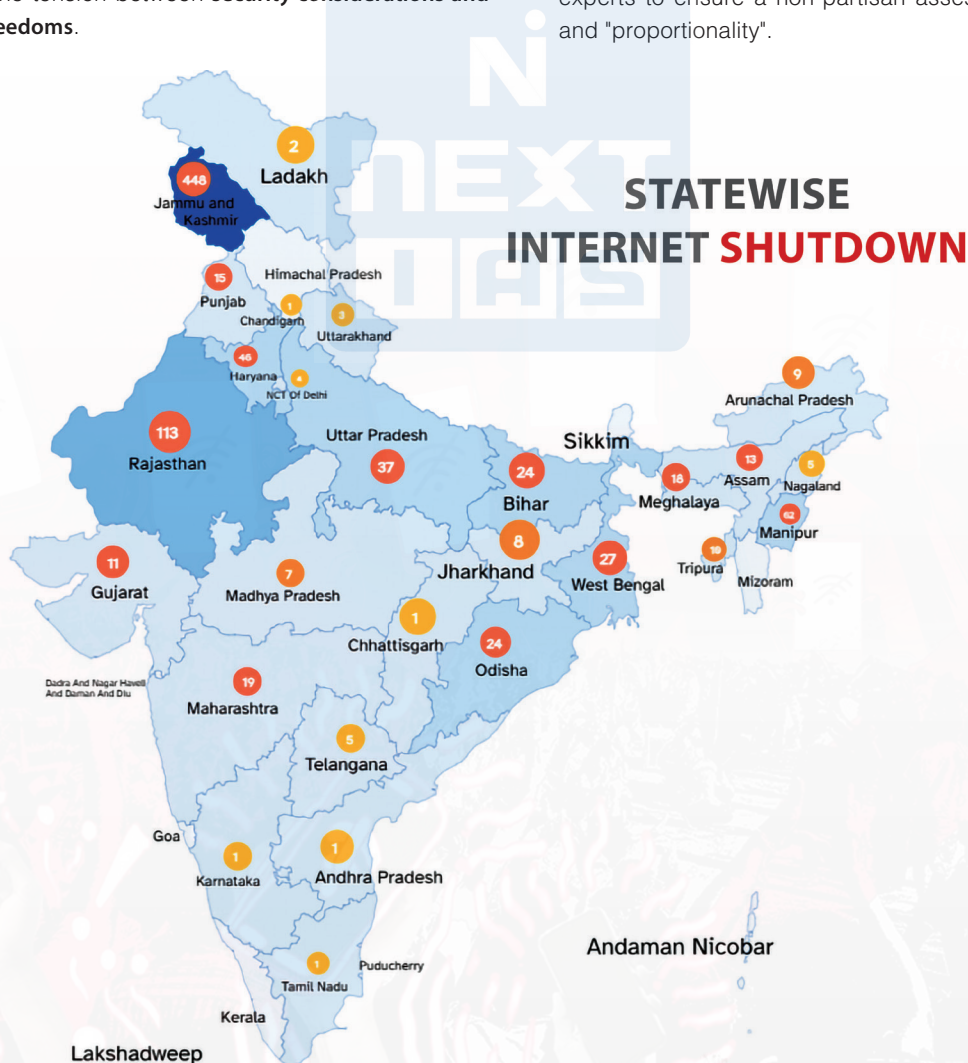
Significance

- Internet shutdowns directly affect **economic activity, governance, and citizen rights**, making them a critical policy issue.
- They reflect the tension between **security considerations and democratic freedoms**.

- The issue is increasingly linked to **digital rights, economic growth, and global credibility**.

Way Forward

- To balance national security with fundamental rights, India must transition from using internet shutdowns as a routine administrative tool to an absolute last resort.
- The government should clearly define "public emergency" and "public safety" within the **Indian Telegraph Act** to prevent broad interpretations that lead to frequent shutdowns.
- Instead of blanket blackouts, authorities should utilize targeted restrictions, such as blocking specific social media handles or URLs, to mitigate misinformation without disrupting the entire digital economy or essential services.
- In line with the **Anuradha Bhasin** judgment, all shutdown orders must be published promptly to allow for public scrutiny and timely judicial intervention.
- The advisory committees tasked with reviewing shutdown orders within five days must be empowered with independent experts to ensure a non-partisan assessment of "necessity" and "proportionality".



MIGRATION GOVERNANCE IN INDIA

The evacuation of over 4.75 lakh Indian citizens from West Asia highlights India's strong crisis response capacity, but it also exposes a deeper issue of migration governance being reactive and crisis-driven rather than continuous and structured.

Importance of Migration

➤ Economic Role:

- ◆ Migration supports **efficient labour allocation** (movement of workers to where jobs are available) across regions and sectors, contributing to industrialisation and urbanisation.
- ◆ Internal migrants provide labour to construction, manufacturing, and service sectors, sustaining economic growth.
- ◆ Migration provides employment opportunities where local economies cannot absorb surplus labour, acting as a safety mechanism against unemployment and underemployment, especially in rural areas.

➤ Remittance Contribution:

- ◆ Indian migrants are among the largest contributors to global remittances, which support household incomes and national economic stability.
- ◆ The Gulf Cooperation Council hosts about **99.35 lakh Indians** and contributes **37.9% of India's remittance inflows in 2023–24**.

➤ Human Capital: Migrants gain skills, technological exposure, and work experience, and returning migrants often contribute through entrepreneurship and improved productivity.

➤ Diplomatic Value: The Indian diaspora strengthens global presence and soft power, acting as a bridge for trade, investment, and cultural exchange.

➤ System Structure:

- ◆ Migration governance in India is distributed across multiple institutions, creating a fragmented structure:
- ◆ The Ministry of External Affairs manages emigration and international coordination
- ◆ The Ministry of Labour and Employment regulates recruitment and worker welfare
- ◆ State governments handle skilling and welfare programmes
- ◆ This structure leads to partial and disconnected oversight of migrants at different stages.

Key Challenges

➤ Institutional Gaps: Governance remains **fragmented**, operating on a **crisis-oriented** basis rather than through long-term preparedness, leading to duplicated efforts and weak **anticipatory capacity**.

➤ Data & Visibility: A severe **data deficiency** at district levels creates **incomplete visibility**, where migrants are only tracked during recruitment or return, leaving their entire journey unprotected.

➤ Structural Stress: Hidden vulnerabilities like wage stagnation and high living costs often go unnoticed, while **informal recruitment** channels expose workers to fraud and debt traps.

➤ Regional Sensitivity: Systems are highly sensitive to **jurisdictional disruptions** in regions like the Gulf, directly impacting domestic welfare.

Need for Whole-of-Journey Approach

➤ Migration must be governed as a **continuous lifecycle process**, covering **origin, recruitment, transit, destination, and return**.

➤ Such an approach ensures:

- ◆ **Protection of rights**, including fair wages and safe working conditions
- ◆ **Reduction of exploitation risks** during recruitment and employment
- ◆ **Policy coherence** across ministries and institutions
- ◆ **Better coordination** between Centre, States, and destination countries
- ◆ **Optimisation of economic benefits**, including effective use of remittances and skills

Opportunities

➤ Initiatives such as **Kerala's migration data systems** show how evidence-based policy can improve governance.

➤ The proposed **Overseas Mobility Facilitation and Welfare Bill (legislation to integrate migration governance and welfare)** can create a more structured framework.

➤ India already has a strong foundation of **diplomatic engagement and migration networks**, which can be leveraged for reform.

Way Forward

➤ **Integrated Governance & Coordination:** Develop a unified institutional framework to synchronize central ministries, states, and international partners, replacing fragmented systems with **seamless coordination**.

➤ **Data-Driven Planning:** Establish a **national migration database** with district-level granularity to track flows, skills, and employment status via digital platforms.

➤ **Recruitment & Legal Reform:** Strengthen regulation of agencies to prevent fraud while enforcing **legal mechanisms** to protect migrant rights and ensure recruitment transparency.

➤ **Bilateral & Reintegration Support:** Expand **labour mobility agreements** for standardized contracts and social security, while providing skill recognition and employment support for returning migrants' domestic reintegration.

RIVER BASIN MANAGEMENT SCHEME

The Government of India has approved the continuation of the River Basin Management (RBM) Scheme for the 16th Finance Commission period (2026–27 to 2030–31) with a total financial outlay of ₹2,183 crore.

About

- The **RBM Scheme** is a **Central Sector initiative** under the **Ministry of Jal Shakti (Department of Water Resources, River Development, and Ganga Rejuvenation)**.
- It aims to shift water governance from **fragmented, project-based approaches** to a **holistic basin-level approach**, where an entire river system is treated as one unit.
- The scheme considers **rivers, tributaries, lakes, and groundwater** as part of a **single interconnected ecosystem**, ensuring coordinated planning and management.

Concept of River Basin

- A **river basin** is the **total land area drained by a river and all its tributaries**, and it is treated as the **basic hydrological unit (scientific unit for water planning)** in India.
- **Key features of a river basin include:**
 - ◆ Tributaries (smaller streams joining a main river)
 - ◆ Confluence (point where rivers meet)
 - ◆ Watershed (boundary separating basins)
 - ◆ Source (origin of the river)
 - ◆ Mouth (point where the river drains into a sea, lake, or ocean)

River Basins in India

- India's drainage system is divided into **20 river basin groups**, consisting of **12 major and 8 composite basins**.
- **Major river basins** (above 20,000 sq km) include **Indus, Ganga–Brahmaputra–Meghna, Godavari, Krishna, Cauvery, Mahanadi, Pennar, Brahmani–Baitarani, Sabarmati, Mahi, Narmada, and Tapi**.
- The **Ganga–Brahmaputra–Meghna basin** is the largest, with a catchment area of about **11 lakh sq km**, accounting for **over 43% of the total catchment area** of major rivers.
- **Medium basins** range between **2,000 and 20,000 sq km**, while **minor basins** are below **2,000 sq km**.
- The **8 composite basins** combine smaller river systems, including Subarnarekha group, east-flowing rivers between major basins, west-flowing rivers of Kutch and Saurashtra (including Luni), coastal rivers from Tapi to Kanyakumari, and inland drainage areas of Rajasthan.
- Nearly **81% of India's geographical area** falls under **inter-state river basins**, making coordinated governance essential.

Institutional Structure

- **Institutional Structure:** The scheme is managed by three specialized bodies with specific mandates:

- ◆ **Brahmaputra Board:** Dedicated to the North Eastern Region; manages river basin planning, flood control, erosion management, and sustainable water use for the Brahmaputra and Barak systems.
- ◆ **Central Water Commission (CWC):** Conducts hydrological surveys and prepares Detailed Project Reports (DPRs) which has comprehensive technical plans for multipurpose water projects in difficult terrains like Jammu & Kashmir and Ladakh.
- **National Water Development Agency (NWDA):**
 - ◆ Directs the national Interlinking of Rivers (ILR) program.
 - ◆ Conducts feasibility studies and prepares DPRs for inter-basin water transfers to support long-term planning.

Geographical Focus

- Prioritizes strategically vital and water-rich areas, including the North Eastern States, Jammu & Kashmir, and Ladakh.
- Focuses on the Brahmaputra, Barak, Teesta, and Indus basins, essential for national and water security.

Objectives

- **Flood and Erosion Control:** Implements measures like protecting Assam's Majuli Island from river currents.
- **Project Development:** Prepares DPRs to boost irrigation and hydropower, particularly in Himalayan regions.
- **Technology Use:** Employs Geographic Information System (GIS), LiDAR (Light Detection and Ranging), and drones for accurate planning.
- **Community Participation:** Promotes local practices, such as springshed management, to protect natural water sources.

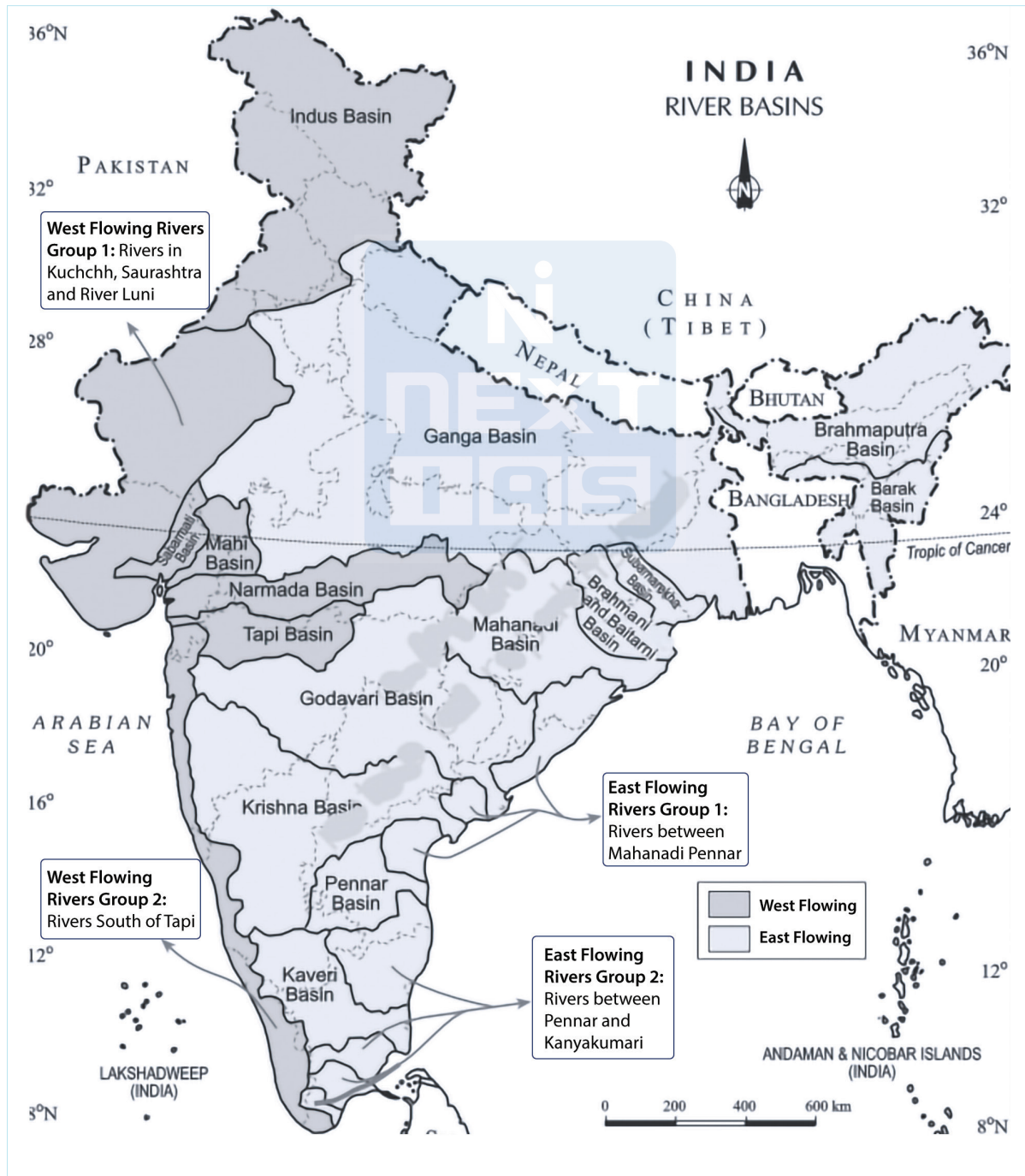
Significance

- **Water Diplomacy:** Provides data for transboundary negotiations regarding the Indus and Brahmaputra rivers.
- **Climate Resilience:** Addresses erratic monsoons and glacial lake outburst floods through integrated basin planning.
- **Inter-State Equity:** Ensures fair water distribution between states to mitigate conflicts.
- **Economic Potential:** Unlocks hydropower and irrigation resources to drive regional economic growth.

Challenges

- **Difficult Terrain:** Faced with short working seasons (4–6 months), poor connectivity, and high costs in mountain regions.
- **Inter-State Conflicts:** Lack of a binding national framework complicates project approvals.

- **Data Gaps:** Insufficient real-time hydrological data reduces prediction accuracy.
 - **Ecological Concerns:** Infrastructure impacts on sediment flow and biodiversity are often under-assessed.
 - **Cost Escalation:** Budget overruns are common due to the unpredictable nature of rivers like the Brahmaputra.
 - Strengthen institutions such as the **North East Hydraulic and Allied Research Institute (NEHARI – regional water research body)** to improve technical capacity.
 - Make environmental flow assessments (ensuring minimum water flow for ecosystem health) mandatory in project approvals.
 - Enact a **national water framework law** to provide clear rules for inter-state water sharing and support implementation of interlinking projects.
- Way Forward**
- Expand use of **LiDAR and drone-based surveys** to create high-resolution mapping for better planning.



DIGITAL PIRACY

The recent leak of the Tamil film *Jana Nayagan* in high quality before its theatrical release highlights serious concerns about film piracy and internal supply chain breaches, where authorised access may have been misused.

Meaning of Piracy

- **Piracy** refers to the **unauthorised use, copying, distribution, or sale of copyrighted material**, including films, music, software, books, and digital content.
- It is a form of **copyright infringement (violation of intellectual property rights)**, where content is used without the permission of the rights holder.

Types of Piracy

- **Physical piracy** involves illegal copying through **CDs, DVDs, or USB drives**, which was more common before widespread internet use.
- **Digital piracy** includes downloading or streaming through **torrent websites, Telegram channels, and cloud links**, and is the most prevalent form today due to cheap data and high internet access.
- **Film piracy** occurs through **camcording in theatres, leaks from OTT platforms, and pre-release leaks**, often involving insiders or weak access control.
- **Software piracy** involves the use of **cracked software, key generators, or unauthorised copies of licensed programs**.
- **Book and academic piracy** includes **photocopying textbooks and sharing pirated PDF materials** through online platforms.

Nature and Trends

- India is among the **largest consumers of pirated content globally**, with piracy shifting from **physical formats to digital ecosystems**.
- Modern piracy networks are **highly adaptive, decentralised, and technologically advanced**, making regulation difficult.
- High-quality leaks often originate from **OTT platforms through bypassing Digital Rights Management (DRM)** or from **internal production chains such as editing and distribution units**.

Legal Framework

Copyright Act, 1957

- This law protects **cinematographic works and other intellectual property**, recognising producers as the primary owners.
- **Section 63** provides for **imprisonment up to 3 years and fines up to ₹2 lakh** for infringement.
- **Section 63A** introduces **stricter penalties for repeat offenders**, applying punishment for each violation.
- **Bypassing DRM protections** is also criminalised, with punishment of up to **2 years of imprisonment**.

Cinematograph (Amendment) Act, 2023

- This law addresses **camcording and pre-release leaks**, which significantly harm film revenues.
- It criminalises **unauthorised recording and transmission of films**, with penalties that may reach **up to 5% of the film's production cost**, creating a strong financial deterrent.

Information Technology Act, 2000

- This law allows **blocking of pirated websites** and regulates digital platforms hosting content.
- Under **Section 79 (safe harbour provision)**, platforms are not automatically liable for user content.
- However, if platforms fail to remove pirated content after receiving a **court order or government notice**, they lose protection and can be prosecuted.
- Using this provision, the government has blocked **over 3,100 Telegram channels and 800 websites** involved in piracy.

Judicial Mechanisms

- **John Doe Orders** (pre-emptive court orders against unknown offenders) allow authorities to block piracy even before it occurs.
- **Dynamic injunctions** (continuous blocking orders) enable courts to block newly created piracy links as soon as they appear.
- These tools help address the **rapid and adaptive nature of online piracy networks**.

Institutional Efforts

- The **Ministry of Information and Broadcasting** oversees certification and promotes anti-piracy awareness.
- The **Department for Promotion of Industry and Internal Trade (DPIIT)** manages intellectual property policy and enforcement.
- The **National Intellectual Property Rights Policy, 2016** emphasises strong enforcement and awareness.
- **Cyber Crime Units under the Ministry of Home Affairs** track and investigate online piracy networks.

Measures by the Industry

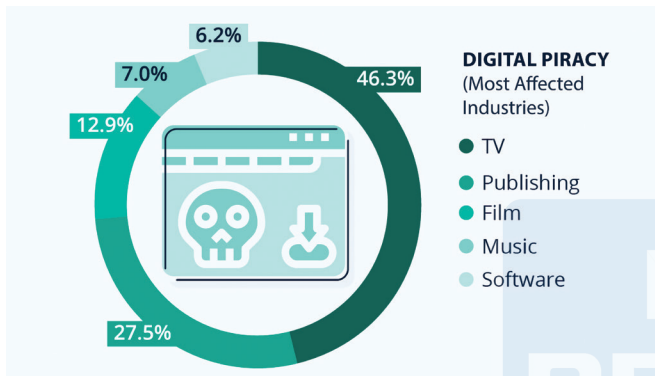
Preventive Systems

- **Digital Rights Management (DRM)** encrypts content so that only authorised devices can access it.
- **Encrypted distribution systems** use **Digital Cinema Packages (DCP – secure film distribution format)** and **Key Delivery Messages (KDM – digital access keys)** that restrict playback to specific theatres and time periods.

- **Forensic watermarking (hidden digital markers)** is embedded in each copy to trace the exact source of leaks.
- During production, **individualised copies with visible or invisible tags** are shared with technicians to identify insider leaks.

Actions after the Post-Leak

- Studios issue **takedown notices** to remove pirated content from platforms.
- They collaborate with **anti-piracy firms such as AiPlex** to track and remove illegal content.
- Courts order **blocking of websites and URLs**, limiting access to pirated material.



Challenges

- The internet operates like a **“whack-a-mole system”**, where blocked websites quickly reappear as mirror sites with new domain names.
- Pirates use **Virtual Private Networks (VPNs)** and proxy servers to hide their identity and location, making tracking difficult.
- Many piracy websites are hosted on **foreign servers in countries with weak copyright laws**, requiring slow international legal processes such as **Mutual Legal Assistance Treaties (MLATs)**.
- The shift to **encrypted platforms like Telegram and WhatsApp** prevents easy monitoring of content sharing.
- **Torrent systems (peer-to-peer networks)** distribute files across many users, making it nearly impossible to shut down a single source.
- The **Indian judicial system faces delays**, with piracy cases often taking years to resolve, reducing the effectiveness of penalties.

- Lack of **specialised intellectual property and cyber courts** limits efficient handling of complex digital piracy cases.
- International reports have criticised India as a **“notorious market” for piracy**, citing weak enforcement and slow action.
- **Behavioural and Structural Issues:** High demand for **free or low-cost content** encourages piracy among consumers.
 - ◆ Limited awareness about **legal consequences and ethical concerns** leads to continued use of pirated material.
 - ◆ Piracy is often **socially accepted**, especially where affordability of legal content is an issue.

Significance

- Digital piracy causes **huge financial losses** to the film, software, and publishing industries.
- It discourages **investment and innovation**, affecting long-term industry growth.
- It undermines **intellectual property rights and legal frameworks**, weakening trust in enforcement systems.

Way Forward

- Strengthen enforcement through **specialised intellectual property courts and faster trials**.
- Improve **cyber forensic capabilities** to track and identify piracy networks effectively.
- Promote **advanced technologies** such as AI-based detection, stronger DRM, and improved watermarking systems.
- Enhance **coordination between government agencies** like MIB, DPIIT, and cyber-crime units.
- Build **international cooperation mechanisms** for faster action against offshore piracy networks.
- Increase **public awareness campaigns** to promote ethical consumption and understanding of legal consequences.
- Strengthen **industry practices**, including tighter access control and reduced exposure during pre-release stages.

Conclusion

- Digital piracy in India is a **complex problem involving technology, law, and consumer behaviour**, which cannot be addressed through legislation alone.
- While strong legal provisions exist, **effective enforcement, technological adaptation, and public awareness** are essential to reduce piracy.

INDIA'S NEW DEPORTATION POLICY

The Ministry of Home Affairs has, recently, introduced a comprehensive deportation policy to expedite identification and removal of illegal migrants, particularly from Bangladesh and Myanmar.

Rationale Behind the Policy

- Illegal migration into India has evolved historically from Partition (1947), the Bangladesh Liberation War (1971), and continued inflows due to porous borders and economic disparities.
- Movements such as the **Assam Agitation and the Assam Accord (1985)** reflect long-standing concerns over identity, demography, and political representation.
- Continued migration driven by **economic inequality, environmental stress, and political instability in neighbouring countries** has intensified the issue.
- Recent developments such as the **regime change in Bangladesh (2024)** have increased concerns over illegal entry using forged documents.
- The policy emerges in the backdrop of heightened **national security concerns, demographic pressures, and geopolitical instability**, including events such as the **Pahalgam terror attack (April 2025)** and **Operation Sindoor (May 2025)**.
- It aligns with broader reforms under the **Immigration and Foreigners Act, 2025** to strengthen immigration governance.
- The policy represents a shift from **reactive enforcement to proactive, system-driven migration management**, addressing gaps in earlier fragmented approaches.

Deportation vs Pushback

- Deportation is a **formal legal process** involving detention, adjudication, and removal of a foreign national only after due process and confirmation of nationality by the home country.
- Pushback is an **informal and discretionary border practice**, where individuals are immediately returned without full legal procedures.
- While deportation aligns with **rule of law and procedural safeguards**, pushbacks raise concerns related to **due process and humanitarian obligations**, particularly the principle of **non-refoulement** (prohibition on returning individuals to places where they face persecution).
- Under the **Citizenship Act, 1955**, an illegal migrant is defined as a foreigner entering without valid documents or overstaying beyond permitted limits.

Key Features of the New Deportation Policy

- A **time-bound verification mechanism (30 to 90 days)** has been introduced, after which deportation proceedings are automatically initiated.
- States and Union Territories must establish **district-level Special Task Forces under police supervision** to identify and process illegal migrants.

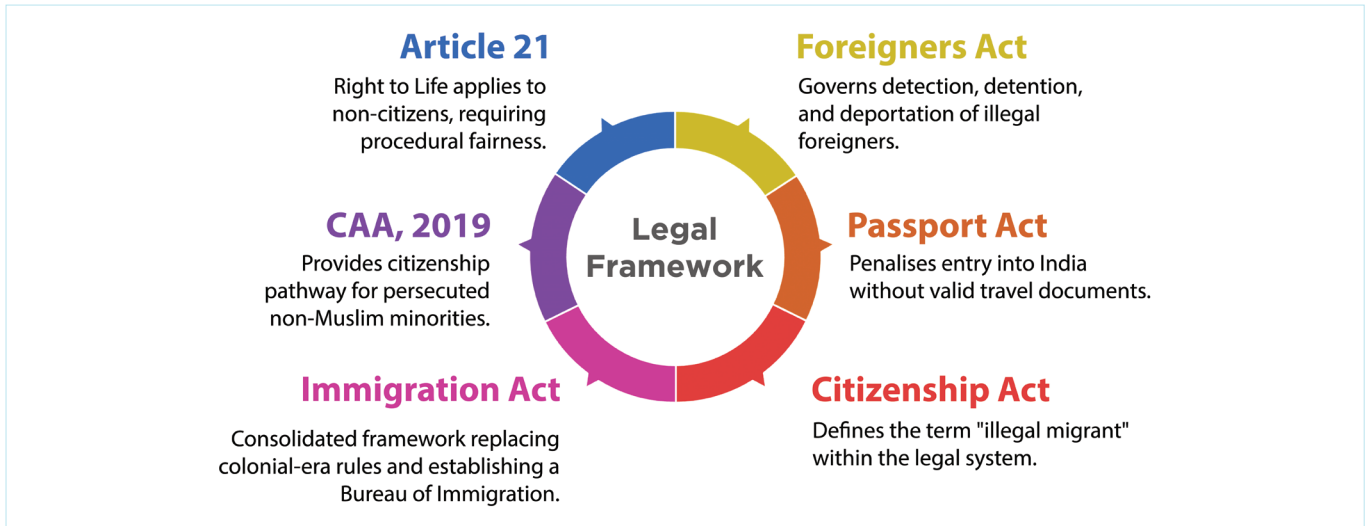
- Dedicated **holding centres** must be created with secure infrastructure, humane conditions, and provisions ensuring family unity and basic amenities.
- Authorities must collect and upload **biometric and demographic data** to the **Foreigners Identification Portal** (centralised digital tracking system).
- States are required to submit **monthly compliance reports** to the Centre, ensuring continuous monitoring and accountability.
- Illegally obtained identity documents such as **Aadhaar, Permanent Account Number, and voter identity cards** must be cancelled, and deportees will be **blacklisted by the Bureau of Immigration**.
- The Bureau of Immigration will share deportee data with agencies such as the **Unique Identification Authority of India, Election Commission, and Ministry of External Affairs** to prevent re-entry and identity fraud.
- Migrants intercepted at borders may be **immediately returned after biometric capture**, while inadvertent crossers may be handed over to neighbouring authorities.
- The policy also applies to individuals declared foreigners by **Foreigners' Tribunals**.

Impacts of Illegal Migration

- Illegal migration poses **national security risks**, with certain groups flagged for potential links with extremist networks.
- It creates **demographic imbalances** in border states such as Assam and West Bengal, leading to socio-political tensions.
- It places pressure on **public welfare systems**, including food distribution, healthcare, and housing.
- The inclusion of non-citizens in voter rolls raises concerns about **electoral integrity and democratic legitimacy**.
- It contributes to **law and order challenges** and increases pressure on urban infrastructure through slum proliferation and service deficits.

Legal and Institutional Framework

- The **Immigration and Foreigners Act, 2025** consolidates earlier laws and strengthens monitoring, enforcement, and penalties related to foreigners.
- It mandates reporting of foreign nationals by **hotels, educational institutions, and healthcare facilities**, and requires carriers to share advance passenger data.
- It provides statutory backing to the **Bureau of Immigration** for identification, detention, and deportation.
- The **Foreigners (Tribunals) Order, 1964** empowers authorities to establish tribunals for citizenship determination.



- Under **Article 258(1) of the Constitution**, the Union government delegates deportation powers to states due to administrative practicality. Border arrangements such as the **free-border agreement with Nepal** and the **Free Movement Regime with Myanmar** complicate enforcement.
- India is not a signatory to the **1951 Refugee Convention or its 1967 Protocol**, limiting formal refugee protection frameworks.
- Foreigners' Tribunals should be reformed** with trained adjudicators, standardised procedures, and strict timelines.
- Technology-driven systems such as **biometric databases and digital portals** should be strengthened while ensuring safeguards under **Article 21 (right to life and personal liberty)**.
- Conditions in holding centres must meet **international human rights standards**, ensuring dignity, healthcare, and psychological support.

Challenges in Implementation

- Identification remains complex as many individuals, especially from marginalised communities, **lack formal documentation**, risking wrongful detention. Deportation depends on acceptance by the country of origin, and refusal may result in **statelessness and prolonged detention**.
- Concerns persist regarding **human rights**, including detention conditions, treatment of vulnerable groups, and prolonged confinement. Pushback practices raise issues of **due process and violation of non-refoulement principles**, affecting India's international image.
- Administrative capacity constraints at the state level may lead to **delays, procedural lapses, and potential misuse of authority**.
- Implementation risks include **corruption, bureaucratic inefficiencies, and disproportionate impact on vulnerable populations**.
- Strengthening border infrastructure through smart fencing and Comprehensive Integrated Border Management System can reduce illegal infiltration.
- Enhancing **documentation systems, local intelligence networks, and public awareness** can prevent identity fraud and misuse.

Measures for Effective Implementation

- A **robust, transparent, and multi-layered verification system** should be developed to prevent wrongful identification of citizens.
- India should negotiate **bilateral repatriation agreements with Bangladesh and Myanmar**, ensuring time-bound and legally compliant deportation processes.
- A **domestic refugee law** should be enacted to distinguish between asylum seekers and illegal migrants while aligning with humanitarian standards.

Significance

- The policy introduces a **structured, time-bound, and technology-driven framework** for addressing illegal migration.
- It strengthens **internal security, border management, and governance efficiency**.
- It improves **data integration and inter-agency coordination**, reducing duplication and leakages.
- It attempts to balance **national security imperatives with legal due process**, though challenges remain.

Conclusion

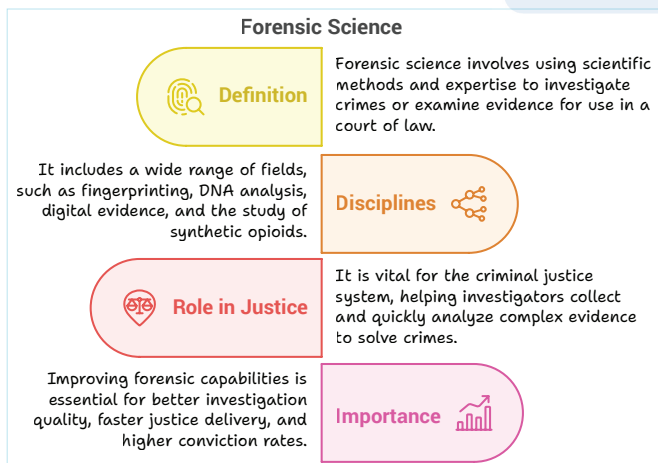
- India's new deportation policy marks a transition towards **systematic and proactive migration management**, addressing long-standing gaps in enforcement.
- Its success will depend on **fair implementation, institutional capacity, and sustained diplomatic engagement with neighbouring countries**.
- A balanced approach integrating **security, legality, and humanitarian considerations** is essential to ensure that the policy is both effective and just while preserving India's democratic and global commitments.

FORENSIC BACKLOGS OF STATES

The Union Ministry of Home Affairs (MHA) has instructed all states and Union Territories to strengthen Forensic Science Laboratories (FSLs), fill all existing staff vacancies, and eliminate case backlogs within a three-month period.

Key Directives

- **Coordination:** The **Ministry of Home Affairs** has directed states to coordinate their efforts through the **Directorate of Forensic Science Services (DFSS)**.
- **Monitoring:** States must set up monitoring systems to ensure forensic reports are delivered on time. A special drive must be launched to clear all pending backlogs by July.
- **Infrastructure Expansion:** States are required to expand regional and district-level **Forensic Science Laboratories**. They must deploy advanced equipment for analyzing physical, biological, chemical, and digital evidence.
- **On-site Collection:** There must be regular use of **Mobile Forensic Vans** for collecting evidence at crime scenes.
- **Specialized Teams:** Dedicated forensic evidence collection teams should be established at both district and sub-divisional levels.
- **Training and Accreditation:** Police personnel must receive structured training on evidence protocols. Labs must strictly follow **Directorate of Forensic Science Services** Standard Operating Procedures (SOPs) and obtain mandatory accreditation under national and international standards.
- **Innovation:** Collaboration with **Indian Institutes of Technology (IITs)**, **National Institutes of Technology (NITs)**, and universities is encouraged, including hosting hackathons at state labs.



Institutional Framework in India

- **Directorate of Forensic Science Services (DFSS):** An arm of the **Ministry of Home Affairs** that coordinates forensic laboratories across the country.
- **Central Forensic Science Laboratories (CFSs):** There are currently 7 **Central Forensic Science Laboratories** located in Chandigarh, Delhi, Kamrup (Assam), Kolkata (West Bengal),

Bhopal (Madhya Pradesh), Pune (Maharashtra), and Hyderabad (Telangana).

- **National Forensic Sciences University (NFSU):** A top-tier institution focused on forensic education and research.
- **State Forensic Science Laboratories (FSLs):** These labs operate under the jurisdiction of individual state governments.

Challenges

- **Infrastructure & Personnel:** Many labs are poorly equipped and unevenly distributed, compounded by a critical shortage of experts despite there being a **National Forensic Sciences University (NFSU)**.
- **Procedural Delays:** Massive report backlogs slow trials, while improper evidence collection by untrained police leads to crime scene contamination.
- **Reliance on Confessions:** Investigators often bypass scientific evidence, despite mandatory requirements under the **Bharatiya Nyaya Sanhita**.

Government Initiatives

- **Expansion:** Approved **8 new CFSs** (e.g., UP, Bihar, Tamil Nadu) and the establishment of **NFSU** in 2020 to train a specialized workforce.
- **Digital Repository:** Launched **e-Forensics** and the **National Forensic Data Centre** (under "Safety of Women") for secure, systematic evidence management.
- **Funding & Mobility:** Allocated **₹420 crore** for lab upgrades and **₹496.66 crore** for **Mobile Forensic Vans** in all districts to ensure onsite evidence integrity.

Malimath Committee (2000)

- Aimed at reforming the criminal justice system.
- **Suggested:**
 - ♦ Integrating forensic science deeply into the justice system to improve conviction rates. Moving from confession-based to evidence-based investigations.
 - ♦ Modernizing and expanding **Forensic Science Laboratories** in all states. Uniform national standards in forensic practices.

Way Forward

- It is necessary to strengthen institutions like the **National Forensic Sciences University**.
- The government should increase funding for laboratories and modern technology. There is a pressing need to develop uniform national standards for forensic work.
- Continuous training for the police and judiciary is essential to improve the overall **Criminal Justice System**.

LIGHT POLLUTION

A study published in the journal Nature has found that artificial light at night increased by 16% globally between 2014 and 2022.

Light Pollution

- The sharpest rise has been observed in **Sub-Saharan Africa and Southeast Asia**, with **India and China** emerging as major contributors in Asia.
- Light pollution is the human-made alteration of outdoor light levels from those occurring naturally. In practical terms, it refers to unwanted, inappropriate, or excessive artificial lighting, primarily caused by Artificial Light at Night (ALAN).
- It is increasingly recognised as an **anthropogenic environmental pollutant**. It is estimated that **over 80% of the world's population** lives under light-polluted skies; around **23% of Earth's land area** is affected by skyglow.



Causes

- **Rapid urbanisation:** Today, about **55% of the global population lives in urban areas**, and this is projected to rise to **68% by 2050**, significantly increasing the demand for outdoor lighting.
- **Unregulated outdoor lighting:** In unshielded streetlights, billboards, façade lighting, 30–50% of emitted light is wasted upward or sideways, directly contributing to skyglow.
- **Vehicle-induced light pollution:** Rapid growth in vehicle numbers increases headlight glare and roadway illumination.
 - ♦ India has over 30 crore registered vehicles, contributing significantly to urban night brightness.
- **Shift-based work:** Expansion of 24x7 services (IT, healthcare, transport, manufacturing) leads to continuous lighting demand.

Impacts

- **Human Health:** Exposure to artificial light at night suppresses melatonin production, leading to insomnia and other health issues.

- ♦ Chronic exposure to light pollution has been linked to increased stress and reduced cognitive performance.
- **Environmental and Ecological:**
 - ♦ Nocturnal animals, migratory birds, and insects rely on natural light cycles. Birds living in brightly lit areas tend to sing earlier at dawn and later at dusk, disrupting their natural rhythms and negatively impacting migration, feeding, and breeding patterns.
 - ♦ Similar effects occur in species like fireflies, whose communication suffers. Artificial lighting confuses navigation and feeding patterns.
- **Astronomy and Scientific Research:** Brightening of the night sky hampers astronomical observations, especially near urban centers.
- **Energy Waste:** Billions of units of electricity are wasted annually due to poorly directed lighting, increasing carbon emissions.

Government Initiatives

- **Energy Conservation Building Code (2017):** The ECBC is a set of standards established by India's Bureau of Energy Efficiency (BEE) to promote sustainable design and reduce energy consumption by 25–50% in new commercial buildings.
- **Street Lighting National Programme (SLNP):** Launched in 2015, to replace conventional street lights with smart and energy-efficient LED streetlights across the country.
- **Smart Cities Mission:** Adaptive lighting is a core component of India's Smart Cities Mission, designed to optimize energy consumption and reduce light pollution by dynamically adjusting street lamp intensity based on real-time traffic and time conditions.
- **Environmental Protection Act 1986:**
 - ♦ Provides umbrella power to the Central Government to regulate environmental pollution of all kinds.
 - ♦ Light pollution is not explicitly defined, but can be regulated as a form of environmental disturbance.

Conclusion

- There is a need to formally recognise Artificial Light at Night (ALAN) as an environmental pollutant and integrate light pollution standards into urban planning, Environmental Impact Assessment (EIA), and biodiversity conservation frameworks.
- A balanced approach between development and ecological protection is essential, ensuring that night skies remain a shared natural heritage while safeguarding human health and biodiversity.

CIVIL SERVICES DAY

At the 18th Civil Services Day celebrations, the Vice President emphasised that power in public administration must be guided by responsibility, integrity, and ethical conduct, reinforcing the vision of Viksit Bharat @2047.

About

- Civil Services Day is observed annually on **21st April** to commemorate **Sardar Vallabhbhai Patel's address in 1947 at Metcalfe House**, where he described civil servants as the **"steel frame of India."**

PMAEPA

- The **Prime Minister's Awards for Excellence in Public Administration (PMAEPA)** recognise outstanding work by districts and government organisations in implementing priority programmes and innovations.
- The selection process involves multi-level evaluation by Screening Committees, Expert Committees, and final approval by the Cabinet Secretary and Prime Minister.
- The award includes a **trophy, citation, and financial incentive of ₹20 lakh**, which is utilised for public welfare initiatives.

Constitutional Framework of Civil Services

- **Article 309** empowers Parliament and State Legislatures to regulate recruitment and service conditions of civil servants.
- **Art. 310** establishes the doctrine of pleasure, under which civil servants serve at the discretion of the President or Governor.
- **Article 311** provides safeguards against arbitrary dismissal, ensuring procedural fairness and security of tenure.
- **Article 312** enables the creation of **All India Services such as the Indian Administrative Service, Indian Police Service, and Indian Forest Service**, ensuring administrative uniformity.
- **Art. 315 to 323** provide for the establishment of **Union and State Public Service Commissions**, ensuring merit-based recruitment.

Ethical Dimensions of Civil Services

- Civil servant's decisions directly affect citizens' lives, creating an obligation to ensure **public welfare, transparency, and accountability**. Impartiality is essential, as civil servants must maintain **objectivity, neutrality, and fairness**, resisting undue political or external influence.
- Ethical traditions in Indian thought, such as the concept of **"Aram" (righteous conduct)**, emphasise that governance must be rooted in moral responsibility and justice.

Challenges in Functioning of Civil Services

- **Political Interference:** Frequent interference in postings and decisions erodes administrative neutrality and independence.
- **Structural Limitations:** A generalist approach often lacks the domain expertise required for complex, technical policy areas.
- **Inefficiency:** Rigid, colonial-era rules and excessive procedural requirements foster red-tapism, causing significant delays.

- **Workplace Stress:** High workloads and a culture resistant to innovation further hinder efficiency and mental well-being.

Reforms to Strengthen Civil Services

- **Mission Karmayogi** (capacity-building programme launched in 2020) aims to transform civil services from rule-based to **role-based and citizen-centric functioning**.
- **Lateral Entry into Civil Services** introduces domain experts into administration, improving efficiency and specialised decision-making.
- Digital initiatives such as the **Centralised Public Grievance Redress and Monitoring System (CPGRAMS)** improve grievance handling and citizen engagement.
- Systems like **SPARROW** (digital performance appraisal system) and digitisation of service records enhance transparency and accountability.
- Platforms such as **e-Samiksha** support real-time monitoring of governance and policy implementation.

Significance

- Ethical governance ensures that **power is exercised responsibly and in the public interest**, strengthening democratic legitimacy.
- Efficient civil services enable **effective policy implementation, service delivery, and institutional trust**.
- A value-driven administrative system promotes **inclusive development, social justice, and long-term sustainability**.

History of Civil Services in India

- **Lord Cornwallis** is considered as 'Father of Civil Services in India'.
- **Lord Wellesley** founded the College of **Fort William in Calcutta in 1800** to educate young recruits for the Civil Services.
 - ◆ But the directors of the Company, in 1806, replaced it with their own **East Indian College at Haileybury in England**.
- Before 1853 East India Company directors used to appoint Civil Servants. Board of Control members were allowed to make some nominations.
- **The Charter Act of 1853** abolished the patronage system and introduced open competitive examinations.
- The first competitive exams for the Indian Civil Services (ICS) were held in London in **1855**.
- **Satyendranath Tagore** was the first Indian to clear ICS in 1863.

PROMOTION AND REGULATION OF ONLINE GAMING RULES, 2026

The Government of India has notified the Promotion and Regulation of Online Gaming Rules, 2026, under the Promotion and Regulation of Online Gaming Act, 2025, to regulate the rapidly expanding online gaming ecosystem.

India's Online Gaming Industry

- India's online gaming sector is valued at approximately **\$5–6 billion in 2025–26**, reflecting rapid expansion and increasing digital penetration. The market is projected to reach **\$9–10 billion by 2030–31**, indicating strong future growth potential.
- The industry is growing at a **compound annual growth rate of 14–16%**, driven by rising smartphone usage, digital payments, and youth engagement.

Rationale behind the Rules

- The Rules aim to **curb harmful online money gaming**, protect users from financial and psychological risks, and simultaneously promote **e-sports and legitimate online gaming** in line with India's ambition to become a global gaming and innovation hub.
- Rapid growth of online gaming has been accompanied by concerns related to **addiction, financial fraud, predatory monetisation**, and regulatory fragmentation across states.
- The absence of a uniform national framework created **legal ambiguity** between **permissible games and prohibited betting or gambling platforms**.
- The Rules address these challenges by introducing a clear classification system, coordinated enforcement framework, and user protection mechanisms, while maintaining a light-touch approach for non-monetary games.

Regulatory Framework

- The Rules establish a **centralized, digital-first regulatory framework** with coordination between the central government, financial regulators, law enforcement agencies, and state governments.
- They **prohibit financial systems** such as banks, payment gateways, and financial institutions from facilitating transactions linked to illegal online money games.
- The framework ensures user rights protection through **structured grievance redressal** and statutory appeal mechanisms.

Online Gaming Authority of India

- The Rules establish the **Online Gaming Authority of India (OGAI)** as a unified regulator under the Ministry of Electronics and Information Technology.
- It functions as a **digital-first body headquartered in New Delhi**, with representation from key ministries including Home Affairs, Information and Broadcasting, Youth Affairs and Sports, Financial Services, and Legal Affairs.
- The Authority is responsible for maintaining the list of online money games, issuing compliance directions and codes of

practice, handling complaints, and coordinating enforcement with financial and investigative agencies.

- It operates through **technology-driven processes**, reducing physical interface and improving efficiency in governance.

Determination and Classification of Online Games

- The Rules introduce a time-bound determination mechanism to classify games as either prohibited online money games or permissible social games and e-sports.
- Classification can be initiated suo motu by the Authority, through applications by service providers, or via government notification.
- The determination process considers objective criteria such as presence of monetary stakes, expectation of winnings, revenue models, and monetisation of in-game rewards.
- To ensure regulatory certainty, decisions must be completed within 90 days of application or notification.

Registration Framework

- Registration is mandatory for e-sports platforms and notified categories of games, while most online social games are exempt unless specifically notified.
- Upon approval, platforms receive a digital certificate of registration valid for up to 10 years, ensuring long-term regulatory certainty.
- Prohibited online money games are ineligible for recognition or registration under the sports governance framework.

User Safety and Consumer Protection

- The Rules mandate risk-based user safety features tailored to the nature of each game.
- These include age verification systems, parental controls, time restrictions, user reporting tools, counselling support for addiction, and fair-play monitoring mechanisms.
- Service providers are **required to disclose safety features** and internal grievance mechanisms, ensuring transparency and accountability.
- The framework prioritises protection of vulnerable users, particularly children and young adults.

Grievance Redressal

- A **two-tier grievance redressal system** is established to safeguard user rights. At the first level, service providers must maintain a functional internal grievance redressal mechanism.
- Users dissatisfied with the outcome can appeal to the **Online Gaming Authority of India** within 30 days, which must resolve the issue within a further 30 days.

➤ A second appeal lies before the **Appellate Authority** (Secretary, Ministry of Electronics and Information Technology), ensuring accountability and fairness.

Enforcement

- The Rules provide for a **proportionate enforcement mechanism**, ensuring penalties are aligned with the severity of violations.
- Proceedings are primarily conducted in digital mode, enhancing efficiency and transparency.
- Penalties are determined based on factors such as financial gain from non-compliance, harm caused to users, recurrence of violations, and mitigation efforts by the entity.
- **Complaints must be resolved within a 90-day** time frame, ensuring timely enforcement.

Significance

- The Rules provide regulatory clarity by clearly distinguishing between legal and illegal gaming formats, reducing ambiguity.
- They strengthen consumer protection through safety features, grievance mechanisms, and financial safeguards.
- The framework promotes formalisation and growth of the e-sports ecosystem, attracting investment and innovation.
- It reflects a whole-of-government approach, with multi-ministerial coordination ensuring comprehensive regulation.
- By enabling a balanced regulatory environment, the Rules support India's ambition to become a global hub for gaming, innovation, and digital creativity.

Limitations

- Enforcement remains challenging due to the use of **Virtual Private Networks (VPNs)**, which allow users to bypass restrictions and access offshore betting platforms.
- Many illegal gaming platforms operate from **foreign jurisdictions**, limiting India's enforcement reach and creating cross-border regulatory challenges.
- Risks of **gaming addiction, especially among minors**, continue to persist despite safety measures. Ensuring effective implementation across states and platforms requires high technological capacity and inter-agency coordination.

Way Forward

- The government should develop a robust, transparent, and objective classification framework to clearly distinguish between different types of games.
- Technological capabilities for real-time monitoring, tracking, and enforcement must be strengthened, particularly against offshore platforms.
- Regulation of VPN usage should be balanced to prevent misuse without undermining privacy and legitimate digital activities. Public awareness campaigns should promote responsible gaming practices, addressing risks such as addiction and financial loss.
- Continued coordination between regulators, industry, and stakeholders is essential to ensure a safe, innovative, and sustainable gaming ecosystem.

WHAT'S PROHIBITED?

All Online Money Games: A complete ban on any game involving monetary stakes or winnings, regardless of whether it is based on skill or chance.

This includes: Online Fantasy Sports and Lotteries.

Also Banned: All advertising, promotion, and financial transactions (via banks or payment apps) related to money games.

THE PROMOTION AND REGULATION OF ONLINE GAMING ACT, 2025

The government, on Aug 20, introduced the Bill to promote legitimate gaming like e-sports while imposing a blanket ban on all online money games.



STRICT PENALTIES

Offering Money Games: Up to 3 years jail and/or ₹1 crore fine.

Advertising Money Games: Up to 2 years jail and/or ₹50 lakh fine.

Repeat Offences: Harsher penalties – 3-5 years of jail, fines up to ₹2 crore. Key offences are cognizable and non-bailable.

THE REGULATOR: ONLINE GAMING AUTHORITY

A new national-level body will be established to:

- Categorise and register online games.
- Determine if a game is a prohibited "money game".
- Handle user complaints and ensure compliance.

Capital Outlay

Initial Setup: ₹ 50 Crore
Annual Cost: ₹ 20 Crore



INTER-STATE WATER DISPUTES

The Mahanadi Water Disputes Tribunal has given Odisha and Chhattisgarh a final opportunity to reach a negotiated settlement before proceeding with adjudication, highlighting persistent challenges in inter-state river water sharing.

Understanding Inter-State Water Disputes

- Inter-state water disputes arise when **two or more states contest the use, control, or allocation of river waters** flowing across political boundaries.
- These disputes reflect the balance between **state autonomy over water resources and the need for collective management of shared ecosystems**.
- With nearly **80% of freshwater used in agriculture**, rising population, urbanisation, and industrial demand have made water a **strategic and politically sensitive resource**.

Structural Causes

- **Asymmetric river geography** allows upstream states to control water flows, often reducing availability for downstream states during critical periods.
- **State boundaries not aligned with river basins** disrupt integrated planning, as rivers traverse multiple administrative units with differing priorities.
- **Rising water demand** from agriculture, industry, and urban sectors intensifies competition over limited resources.

- **Unilateral infrastructure development**, such as dams and barrages, without downstream consultation leads to mistrust and conflict.
- **Lack of transparent hydrological data sharing** results in conflicting claims over water availability and weakens scientific allocation.
- **Climate variability**, including erratic monsoons and droughts, increases uncertainty and complicates long-term agreements.
- **Politicisation of water issues** transforms technical disputes into identity-based conflicts, delaying resolution.

Constitutional and Legal Framework

Constitutional Provisions

- **Article 262** empowers Parliament to legislate on inter-state river disputes and allows exclusion of court jurisdiction in such matters.
- **Entry 17 of the State List** grants states authority over water-related subjects such as irrigation and water supply.
- **Entry 56 of the Union List** enables Parliament to regulate and develop inter-state rivers in the public interest, ensuring national coordination.

Major Inter-State Water Disputes

Cauvery Dispute

Involves Karnataka and Tamil Nadu, with Cauvery Water Management Authority overseeing implementation.



Ravi-Beas/Mahadayi Disputes

Political resistance is delaying settlement. [Punjab, Haryana, Rajasthan]

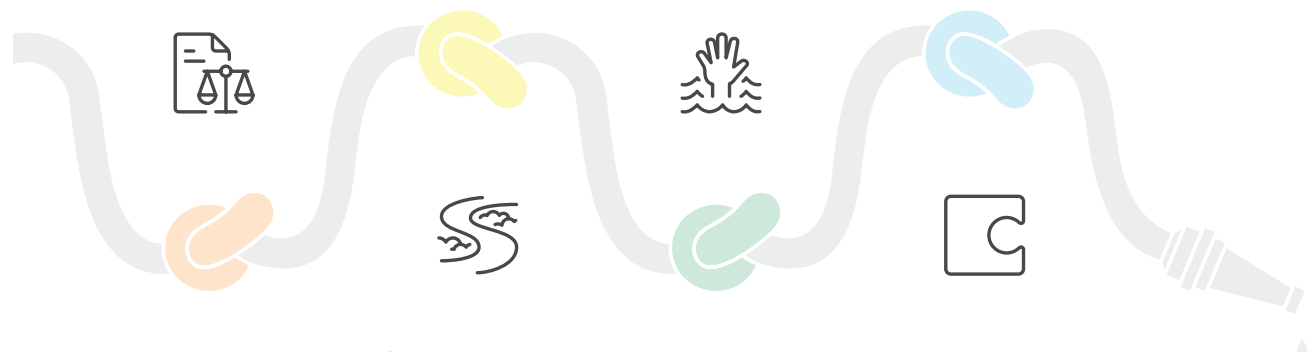


Krishna/Godavari Disputes

Complex Multi-state allocation and demands. [Andhra Pradesh, Telangana, Karnataka, and Maharashtra]

Mahanadi Dispute

Data gaps, upstream development and hindered adjudication. [Odisha and Chhattisgarh]



Institutional and Legislative Mechanisms

- The **Inter-State River Water Disputes Act, 1956 (ISRWDA)** provides for the establishment of **Water Disputes Tribunals**, which are quasi-judicial bodies to adjudicate disputes when negotiations fail.
- Tribunal awards are **binding and have the force of law**, ensuring legal finality.
- The **River Boards Act, 1956** envisages basin-level coordination through river boards, but has remained largely ineffective in practice.
- The constitutional framework thus combines **adjudication through tribunals and regulation through central oversight**.

Role of the Judiciary

- Courts are generally **excluded from direct adjudication** of inter-state water disputes once a tribunal is constituted.
- However, the **Supreme Court retains limited jurisdiction** in matters related to interpretation, implementation, and constitutional validity of tribunal awards.

Recent Reforms

- The **Inter-State River Water Disputes (Amendment) Bill, 2019** proposes significant reforms to improve efficiency and transparency.
- It introduces a **Disputes Resolution Committee (DRC)** to facilitate amicable settlement before tribunal adjudication.
- It proposes a **single permanent tribunal with multiple benches**, replacing the ad hoc tribunal system.
- It mandates **time-bound adjudication** and establishes a **centralised data bank and information system** for scientific decision-making.

Shift Towards Basin-Based Management

- There is a growing recognition that disputes require a **river basin approach**, rather than fragmented state-wise management.
- This approach emphasises **integrated planning, equitable utilisation, ecological sustainability, and continuous institutional coordination**.
- It moves beyond legal adjudication to focus on **long-term cooperative governance of shared water resources**.

Challenges

- Tribunal processes often face **significant delays**, reducing credibility and timely resolution.
- Weak enforcement mechanisms allow states to **delay or partially implement tribunal awards**.
- Fragmented institutional structures prevent **coordinated basin-level governance**.
- Limited involvement of **multidisciplinary experts**, including hydrologists and climate scientists, affects decision quality.
- Political pressures and **judicial interventions** complicate and prolong dispute resolution.

- Environmental degradation and **over-extraction of water resources** reduce availability and intensify conflicts.

Way Forward

- Strengthening **cooperative federalism** is essential through dialogue, negotiation, and consensus-building among states.
- Establishing a **permanent tribunal system and functional river basin authorities** can ensure faster and more coordinated resolution.
- Developing a **centralised, transparent water data system supported by satellite monitoring** can improve trust and scientific allocation.
- Promoting **efficient water use practices such as micro-irrigation and crop diversification** can reduce demand pressures.
- Incorporating **climate-resilient frameworks and ecological flow requirements** can ensure long-term sustainability of river systems.

Conclusion

- Inter-state water disputes in India are rooted in **structural, ecological, and political complexities**, requiring more than legal adjudication.
- A shift towards **cooperative, data-driven, and basin-based governance** is essential to balance competing interests and ensure equitable water sharing.
- Strengthening institutions, improving transparency, and integrating sustainability principles will be critical for **long-term water security and federal harmony**.

Mahanadi River and Dispute

- The Mahanadi River, spanning about 851 kilometres, originates from the **Amkantak plateau** in **Chhattisgarh** and flows extensively through **Odisha** before draining into the **Bay of Bengal**. Its basin supports agriculture, industry, and dense human settlements.
- The central issue revolves around assessment of annual water availability, which forms the basis of any sharing formula. The absence of reliable and mutually accepted hydrological data has stalled progress.
- Odisha alleges that extensive upstream infrastructure, including over 500 anicuts and multiple barrages, has altered river flow, while Chhattisgarh argues its developmental and irrigation needs justify water utilisation.
- The dispute is compounded by the absence of a formal water-sharing agreement, making the tribunal's decision critical for future allocation and governance.
- Odisha approached the Union Government in 2016, leading to the constitution of the **Mahanadi Water Disputes Tribunal in 2018** under the Inter-State River Water Disputes Act, 1956, after negotiations failed to yield results.

INDIA-NEW ZEALAND FTA

India and New Zealand signed the India- New Zealand Free Trade Agreement (IN- NZ FTA).

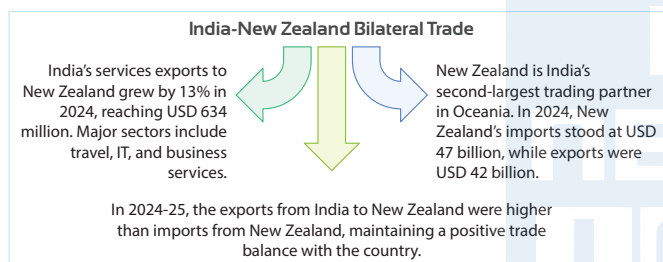
About

- The **India–New Zealand Free Trade Agreement** was concluded in **nine months** and marks a key milestone in India's engagement with developed economies.
- India is **signing its seventh FTA** in the last three and a half years, with plans for agreements with the **European Union and the United States**, taking the total to **nine FTAs with 38 advanced economies**, covering nearly 65–70% of global GDP.

What is a Free Trade Agreement (FTA)?

FTA is a pact between two or more countries where they agree to:

- Reduce or eliminate customs duties on goods and liberalise trade in services;
- Provide investment protection and ensure safeguards for intellectual property rights (IPR).



Major Highlights of the FTA

- **Zero-Duty Market Access:** India-New Zealand FTA **eliminates duty on 100% of Indian Exports**. India has offered market access in **70.03%** of the **tariff lines while keeping 29.97 % tariff lines in exclusion**.
- **FDI Commitment:** New Zealand will invest **USD 20 billion** in India over 15 years, strengthening long-term economic ties.
- **Organic Primary Products:** Mutual recognition of organic certification to be agreed between the two sides.
- **MSME Cooperation:** Institutional linkages to help small businesses access trade-related information and global markets.
- **Technical Assistance:** Cooperation has been agreed in AYUSH, audio visual industries, tourism, sports and traditional knowledge systems. The FTA promotes India's AYUSH systems internationally, encourages medical value travel, and positions India as a global wellness hub.
- **MFN Treatment:** Commitment across 118 services sectors, with Most-Favoured Nation (MFN) treatment in 139 sectors.
- **Student Mobility:** New Zealand signed Annex on Student Mobility and Post Study Work Visa for the first time with any country. Indian students can work up to 20 hours per week

while studying, even if there are policy changes in future, with extended post-study work visas (STEM Bachelor: 3 yrs; Master's: up to 3 yrs; Doctorate: up to 4 yrs).

- **Professional Pathways:** A quota of 5,000 visas for skilled Indians for stay upto 3 years in the sectors of interest to India.
- **Working Holiday Visa:** 1,000 young Indians annually can avail multiple entry in New Zealand for a period of 12 months.
- **Certain products are kept in exclusion** from the dairy and agriculture sector of India, which is a huge win for labour intensive sectors.
 - ♦ Dairy, animal products, vegetable products, sugar, artificial honey, Animal, vegetable or microbial fats and oils, Arms and Ammunition, Gems and Jewellery, Copper and Articles, Aluminium and articles.

Significance of the FTA

- The India–New Zealand FTA secures **duty free or preferential access across a wide range of sectors**. These gains are expected to boost India's exports, create jobs, and strengthen the competitiveness of Indian industries in the Oceania region.
- **Dedicated cooperation in Ayush and Indian traditional knowledge** has been agreed.
 - ♦ Engagement with **New Zealand's indigenous Maori communities** to promote cultural exchange and mutual respect. This strengthens India's **soft power and global recognition of its heritage**.
- **Gains in Horticulture Sector:** New Zealand has agreed on **focused Action Plans for kiwifruit, apples, and honey** to improve productivity, quality, and sectoral capabilities of these **fruits growers in India**.
 - ♦ Projects for premium apple cultivators and sustainable beekeeping practices will enhance production and quality standards.
 - ♦ This access will be managed through a **Tariff Rate Quota (TRQ) system** with Minimum Import Price and seasonal imports, ensuring consumer choice while protecting domestic farmers.

Conclusion

- The India–New Zealand Free Trade Agreement opened new avenues for comprehensive economic cooperation.
- From farmers and MSMEs to students and skilled professionals, the gains from this Agreement are expected to be broad-based.
- It reinforces India's position as a trusted, forward-looking global partner and advances the vision of a globally integrated Viksit Bharat 2047.

BAD LOANS

The Reserve Bank of India (RBI) has tightened the rules governing classification of bad loans, definition, and recovery, to align with globally-accepted standards, effective April 1, 2027.

About NPA or Bad Loans

- It refers to a loan in which the borrower has not paid either principal amount or interest for over 90 days.
- It is classified into three types: substandard assets (overdue up to 12 months), doubtful assets (overdue beyond 12 months with uncertain recovery), and loss assets (considered largely irrecoverable).

Factors Driving Bad Loans

- **Income loss or business setbacks** weaken repayment ability.
- **Rising interest rates** make loan repayments difficult.
- **Over-borrowing** creates financial stress for borrowers.
- **Poor credit** assessment increases risky lending.
- Economic and sector-specific slowdowns trigger defaults.
- **Market volatility** affects business cash flows.
- Intentional **non-repayment** by capable borrowers leads to wilful defaults.
- Emergencies and economic shocks result in loan defaults.

Impacts of NPAs

- **Weakens the Banking Sector:** As the backbone of India's financial system, banks suffer from reduced income and increased losses due to NPAs, forcing higher provisions that limit lending and slow economic growth.
- **Reduces Credit Flow:** High NPAs foster caution among lenders, restricting essential credit for businesses and infrastructure, which ultimately hinders job creation and national competitiveness.
- **Increases Borrowing Costs:** Banks often raise lending rates to offset NPA-related losses, making loans costlier and discouraging the capital formation necessary for economic expansion.
- **Fiscal Burden on Government:** High NPAs in Public Sector Banks necessitate recapitalization using taxpayer money, which increases the fiscal burden and diverts funds from welfare, healthcare, and education.
- **Weakens Investor Confidence:** Financial instability indicated by high NPAs discourages both domestic and foreign direct investment (FDI), reducing inflows and weakening India's global market attractiveness.
- **Affects Employment and Income:** Restricted lending prevents industrial expansion, leading to job losses and lower consumption across vital sectors like manufacturing, retail, and construction.

Steps Taken by Government & RBI

- **Insolvency and Bankruptcy Code (IBC):** Introduced in 2016 for time-bound default resolution, the **2026 amendment** further

streamlines the process with provisions for out-of-court settlements, group insolvency, and cross-border cases.

- **Strengthening Debt Recovery Tribunals (DRTs):** The pecuniary jurisdiction was doubled from **₹10 lakhs to ₹20 lakhs**, allowing DRTs to prioritize high-value cases and improve recovery rates.
- **SARFAESI Act, 2002:** This legislation empowers banks to recover bad loans by seizing and selling pledged assets without the requirement of lengthy court approvals.
- Public Sector Banks have established stressed asset management branches and utilized **Business Correspondents** and the **"Feet-on-street"** model to intensify recovery follow-ups.
- **Bad Bank:** In 2021, the RBI licensed the **₹6,000 crore National Asset Reconstruction Company Ltd. (NARCL)** to specifically manage and resolve large-scale stressed assets.

Latest Master Directions of RBI

Key directions include:

- **Stricter NPA tagging:** If any one loan of a borrower becomes a Non-Performing Asset (NPA), all loans of that borrower will be treated as NPAs.
 - ◆ However, classification still depends on the 90-day overdue rule.
 - ◆ A borrower can return to "standard asset" status only after clearing all dues across all facilities.
- **Automation requirement:** Banks must use automated systems to identify NPAs instead of manual tagging.
- **New provisioning model (Expected Credit Loss - ECL):** Banks will now estimate potential loan losses in advance using a three-stage framework based on credit risk levels, replacing the older "incurred loss" model that triggered provisions only after default (90+ days overdue).
- **Change in interest metric:** The ECL will be calculated using the Effective Interest Rate (EIR), which factors in expected cash flows rather than just contractual interest rates.
- **Phased implementation:** New loans from April 2027 will follow the EIR-based ECL system, while older loans must transition by March 2030.

Way Forward

- Improve **credit assessment** and **loan monitoring** to detect risks early.
- Use restructuring for temporary financial stress. **Adopt AI and data analytics** for NPA prediction.
- Strengthen recovery mechanisms through regulatory reforms like IBC and collaborate with **Asset Reconstruction Companies (ARCs)** to manage stressed assets effectively.

DIGITAL PUBLIC INFRASTRUCTURE

NITI Aayog has launched DPI@2047 for Viksit Bharat, a roadmap for India's next phase of Digital Public Infrastructure (DPI) aimed at driving inclusive and productivity-led growth.

About DPI

- **Digital Public Infrastructure (DPI)** refers to foundational digital systems that are accessible, secure, and interoperable, supporting essential public services.
- **India's Digital Public Infrastructure** began with the **JAM trinity** i.e. Jan Dhan bank accounts, Aadhaar identity, and mobile connectivity which linked citizens directly to government systems. This enabled direct transfer of welfare benefits, reducing intermediaries, delays, and leakages, and laid the foundation for India's broader digital transformation.

Importance of DPI

- **Governance Efficiency:** DPI Enables direct benefit transfers, subsidy delivery, and e-governance platforms, reducing leakages and corruption.
- **Financial Inclusion:** UPI has transformed payments, now operational in 8 countries, supporting cross-border transactions.
- **Economic Growth:** India is the world's 3rd-largest digitalised economy, with digital platforms embedded in daily economic and social life. DPI drives entrepreneurship, fintech innovation, and digital commerce.
- **Global Leadership:** India Stack Global and DPI cooperation agreements with 24 countries showcase India's role in shaping trusted digital pathways.

Key DPIs and Digital Solutions

- **Aadhaar:** A biometric-based digital identity platform that enables unique identification and authentication of residents for efficient service delivery.
- **UPI:** A real-time digital payment system enabling instant, interoperable, and secure person-to-person and merchant transactions. UPI is now active in 8 countries, improving cross-border payments, remittances, and financial inclusion, and strengthening India's fintech influence globally.
- **CoWIN:** A digital platform for end-to-end management of vaccination services, including registration, scheduling, and certification.
- **API Setu:** A platform that enables secure and standardized sharing of government data and services through APIs.
- **DigiLocker:** A digital document wallet that allows citizens to store, access, and share authenticated electronic documents.
- **Aarogya Setu:** A digital health application providing risk assessment, health advisories, and access to health-related services.
- **GeM:** An online platform for transparent and efficient procurement of goods and services by government entities.

- **UMANG:** A unified mobile and web platform providing single-window access to a wide range of government services.
- **DIKSHA:** A national digital platform supporting teachers and learners with e-content, training, and academic resources.
- **e-Sanjeevani:** A telemedicine platform enabling remote doctor-to-patient consultations, particularly in rural and underserved areas.
- **e-Hospital:** A hospital management system providing online registration, appointments, diagnostics, and billing services.
- **e-Office:** A digital platform for paperless governance enabling electronic file management and decision-making in government offices.
- **eCourts:** A mission-mode project for digitising court processes and improving access to judicial services.
- **POSHAN Tracker:** A mobile-based application for real-time monitoring of nutrition service delivery under ICDS.
- **National Non-Communicable Diseases Platform (NCD):** A digital platform for screening, diagnosis, and management of major non-communicable diseases.
- **Skill India Digital Hub (SIDH):** A unified digital platform integrating skilling, training, and employment-related services.
- **Public Financial Management System (PFMS):** A platform for end-to-end monitoring of government funds and direct benefit transfers.
- **PM GatiShakti:** A GIS-based digital platform for integrated planning and coordinated implementation.

International Collaborations

- India has signed agreements with 24 countries to share expertise on India Stack and DPI, focusing on digital identity, payments, data systems, and service delivery. The aim is collaboration on design principles, not exporting fixed products.
- **India Stack Global:** A dedicated platform that shares India's digital tools and frameworks with partner countries, presenting them as adaptable "building blocks" for digital systems.
- **G20 recognition:** During India's 2023 G20 Presidency, DPI was recognised as a key development tool. A Global DPI Repository was created to share knowledge, with India contributing the most solutions.
- **Modular Open-Source Identity Platform (MOSIP) :** It is developed in India and provides a configurable and open-source framework for countries seeking to build sovereign digital identity systems.
 - ♦ More than 25 nations are adopting or exploring the platform for their national identity programmes.

➤ **Roadmap for India's next phase of Digital Public Infrastructure:**

It is Developed with EkStep Foundation and Deloitte and it outlines two stages:

- ◆ **Stages:** DPI 2.0 (2025–2035), focused on scaling digital infrastructure into sectors like agriculture, MSMEs, education, health, and services,
 - ◆ DPI 3.0 (2035–2047) for broader prosperity.
- ◆ It emphasizes using AI, better data systems, digital platforms, and local-level implementation to improve livelihoods, productivity, and market access.

Challenges

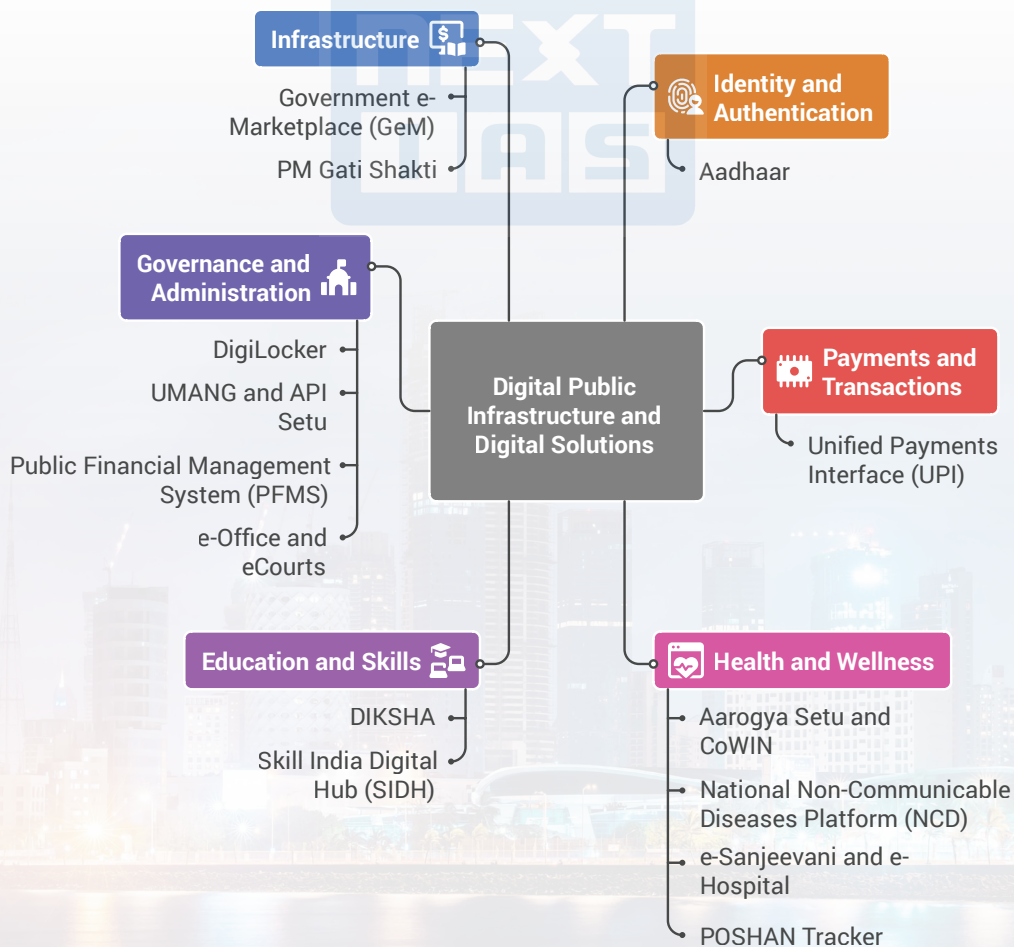
- **Digital Divide:** Unequal access to smartphones, internet connectivity, and digital literacy, especially in rural areas.
- **Data Privacy & Security:** Concerns over surveillance, misuse of personal data, and weak data protection frameworks.
- **Issues of Interoperability:** Need for seamless integration across states, sectors, and international systems.
- **Trust Deficit:** Building digital trust among citizens and businesses remains a major challenge.
- **Capacity Constraints:** Limited institutional capacity to regulate emerging technologies like AI, blockchain, and quantum computing.

Suggestions

- **Enact robust data protection laws** and enhance cybersecurity standards.
- **Expand broadband highways**, mobile connectivity, and digital literacy programs under Digital India.
- **Scale India Stack Global** to support partner nations, positioning India as a DPI hub.
- **Invest in AI**, IoT, blockchain, and quantum computing to future-proof DPI.
- **Ensure DPI remains open**, transparent, and accountable, reinforcing its role as a public good.

Conclusion

- **India's Digital Public Infrastructure** has grown into a secure, interoperable system that supports governance, services, and economic activity while promoting inclusive growth.
- It is seen globally as a model for building scalable digital public goods.
- Despite challenges like privacy and access, it remains central to **India's Viksit Bharat 2047 vision**, with a focus on balancing innovation and regulation to empower citizens and modernise governance.



MYTHOS CHALLENGE

The emergence of highly advanced models such as Anthropic's Mythos, which has the ability to autonomously discover and exploit vulnerabilities in critical infrastructure, has made governance an urgent global priority.

AI and the Changing Nature of Cybersecurity

- ➔ AI is reshaping cybersecurity through advanced threat detection, predictive risk analysis, and **automated defence mechanisms**.
- ➔ At the same time, it can facilitate autonomous **cyberattacks**, exploit vulnerabilities, and endanger **critical infrastructure**.
- ➔ The emergence of **agentic AI** is making conventional cybersecurity systems increasingly ineffective.

Case of Anthropic's Mythos

- ➔ The Mythos model exemplifies the **dual-use dilemma of AI**. It can strengthen cyber defences, however, its ability to exploit system weaknesses poses serious threats:
 - ◆ Potential misuse by non-state actors
 - ◆ Risk of unauthorised access
 - ◆ Capability to outmatch human cybersecurity experts
- ➔ Such developments have made **AI governance an immediate necessity**.

Governance Challenges in the AI Era

- ➔ **Regulatory Gaps:** Existing cybersecurity laws are not designed for **self-learning AI systems**. India's cyber laws struggle to accommodate AI-driven threats.
- ➔ **Lack of Global Consensus:** AI risks transcend national boundaries. There is a need for **cyber diplomacy** and **international cooperation**, as cyber threats to critical infrastructure have global spillovers.
- ➔ **Accountability and Transparency:** AI systems often function as 'black boxes', making it difficult to assign responsibility.
- ➔ **Private Sector Dominance:** The development and deployment of powerful AI models are largely controlled by private corporations, raising concerns about **accessibility, safety, and accountability in case of misuse**.

Challenges Specific to India

- ➔ **Financial & Critical:** AI models like Mythos pose risks to **financial systems and critical infrastructure**. The government has initiated **high-level consultations** to assess threats.
- ➔ **Regulatory:** Fragmented regulatory frameworks; and insufficient preparedness for AI-driven cyber threats.
- ➔ India's large digital ecosystem like UPI, Aadhaar, telecom networks makes it particularly vulnerable. At the same time, its scale positions it as a key stakeholder in **global AI governance**.

Related Global Efforts

- ➔ **Regulatory Shift:** Transitioning from voluntary guidelines to binding, risk-based regulations.

- ➔ **Safety & Security:** Emphasizing pre-deployment safety testing and AI's dual-use role in cybersecurity.
- ➔ **European Union (Risk-Based):** The AI Act mandates strict compliance for high-risk applications (e.g., infrastructure) focusing on transparency and human oversight.
- ➔ **USA (Security-Centric):** Uses Executive Orders to balance innovation with national security through government-firm collaboration.
- ➔ **UK (Frontier Risks):** The AI Safety Institute targets autonomous cyber-risks and international standards.
- ➔ **China (State-Controlled):** Centralized oversight integrating AI deployment with national security and strict data controls.

Key Initiatives

- ➔ **G7 Hiroshima AI Process:** Focus on **safe, secure, and trustworthy AI**; and encourages **voluntary codes of conduct**.
- ➔ **OECD AI Principles:** Promote **responsible AI use**, human rights, and transparency
- ➔ **United Nations Efforts:** Discussions on **global AI governance frameworks**; and emphasis on **inclusive participation of developing nations**.
- ➔ **Cybersecurity-Specific Global Cooperation:**
 - ◆ **NATO Cooperative Cyber Defence Centre:** Focus on AI-enabled cyber threats.
 - ◆ **Global Forum on Cyber Expertise (GFCE):** Capacity building for cybersecurity; and increasing emphasis on **AI-driven cyber defence collaboration**.
- ➔ **India** emphasises the need for **secure digital infrastructure** and responsible AI deployment, and has taken several steps to address cybersecurity and AI governance:
 - ◆ National Cyber Security Policy (2013) and Digital Personal Data Protection Act (2023)
 - ◆ NITI Aayog's **National Strategy for AI**

Way Forward

- ➔ Establish **global norms and treaties** for AI use; and promote **information sharing** on cyber threats.
- ➔ Categorise AI systems based on risk (low, medium, high); and impose stricter controls on high-risk systems.
- ➔ **Public-Private Collaboration:** Governments and tech companies need to collaborate on **secure deployment**; Initiatives like controlled access (e.g., Mythos testing) can help.
- ➔ **Strengthening Domestic Frameworks:** Update cyber laws to include AI-specific provisions; and build **institutional capacity** for monitoring and enforcement.
- ➔ India and other emerging economies need to have a **seat at the global table**, as they are major data providers and AI markets.



POLITY & GOVERNANCE

NEW INCOME TAX ACT, 2025

The Income Tax Act, 2025 has replaced the Income Tax Act, 1961 with effect from 1 April 2026.

Key Aspects

- The New Law is brought with the objective of improving **transparency, predictability, ease of compliance, and modernisation** of the tax system.
- The Act introduces a unified concept of **'Tax Year,' defined as a twelve-month period beginning on 1 April**, thereby replacing the earlier distinction between Financial Year and Assessment Year.
- The **Central Board of Direct Taxes (CBDT)** has notified the **Income-tax Rules, 2026** to operationalise the provisions of the Act.
- The reform aligns tax provisions with **inflation trends and broader developmental goals such as Viksit Bharat**.
- The Act significantly reduces complexity by bringing down the number of **sections from 819 to 536, rules from 511 to 333, and forms from 390 to 190**, while rationalising schedules from 14 to 16.
- **Digital and Compliance Reforms:** The Act adopts a **digital-first framework** by recognising virtual digital spaces such as email, cloud platforms, and online trading accounts, including their use in search and seizure operations.
 - ◆ It expands the scope of **Virtual Digital Assets (VDAs)** to include cryptocurrencies and tokenised assets.
 - ◆ It replaces **Form 16 with system-generated Form 130**, upgrades **Form 26AS to Form 168**, and introduces a unified **Form 121**.
 - ◆ The new Act merges **Form 15G and Form 15H** into a single unified Form 121. Under this all **eligible resident individuals, Hindu Undivided Families (HUFs), and specified entities** can use Form 121 irrespective of age.
- **Tax Administration and Anti-Avoidance:** The Act empowers the government to introduce **faceless assessment schemes** to improve efficiency and transparency.
 - ◆ It incorporates **General Anti-Avoidance Rules (GAAR)**, which target **Impermissible Avoidance Arrangements** and allow authorities to deny tax benefits or recompute liabilities.
- The provisions related to **Tax Deducted at Source (TDS)** have been consolidated under **Section 393** for simplicity.
- The **Tax Collected at Source (TCS)** rate on specified remittances above ₹10 lakh has been reduced from **5% to 2%**.
- The Act introduces the **FAST-DS (Foreign Assets Disclosure Scheme, 2026)** to enable voluntary disclosure of undisclosed foreign assets.

General Anti-Avoidance Rules (GAAR)

- General Anti-Avoidance Rules are **anti-tax avoidance regulations** designed to **prevent companies and individuals** from using artificial, legal loopholes solely to reduce their tax liabilities.
- It was implemented in India on April 1, 2017.
- **Target:** Focuses on **"Impermissible Avoidance Arrangements" (IAAs)**, which are arrangements entered into with the main purpose of obtaining a tax benefit.
- Under GAAR, authorities can recompute tax liabilities, deny tax benefits, and cancel deductions or tax exemptions.

FCRA AMENDMENT BILL, 2026

The Union Government has deferred discussion on the FCRA Amendment Bill, 2026, which has triggered controversy.

About FCRA

- The **Foreign Contribution (Regulation) Act (FCRA)** regulates the acceptance and utilisation of foreign funds by individuals, NGOs, and associations, and is administered by the **Ministry of Home Affairs (MHA)**.
- It aims to ensure that foreign contributions do not affect **national interest, sovereignty, or public order**.
- The law evolved from **FCRA 1976 (Emergency period)** to **FCRA 2010**, which strengthened regulation and transparency.
- **Key Features of FCRA, 2010:**
 - ◆ Registration or prior permission is mandatory for entities receiving foreign funds.
 - ◆ Foreign funds can be used for **social, educational, cultural, economic, and religious purposes**, but are prohibited for **political actors and certain public officials**.
 - ◆ Entities must maintain **separate bank accounts and annual reporting compliance**.
- The **2020 amendment** prohibited sub-granting, mandated an **SBI New Delhi account**, reduced the **administrative expense cap to 20%**, required **Aadhaar**, and enhanced government powers.

Key Provisions of the 2026 Amendment Bill

- The Bill proposes a **"Designated Authority"** empowered to **manage funds and assets of NGOs** when registration is cancelled, surrendered, or expires.
- It introduces a **clear asset management framework**, including **transfer, return, or disposal of assets** depending on registration status.

- Registration will be deemed ceased if **renewal is not applied for, denied, or lapses before expiry**.
- The authority may **restore assets upon re-registration or permanently take over assets if the NGO becomes defunct**, and may transfer them to government bodies or dispose of them.
- For **religious institutions**, the authority may manage operations but must **preserve the religious character (Clause 16A(7))**.

Key Concerns and Controversy

- Critics argue that the Bill leads to **excessive centralisation of power and executive overreach**.
- There are concerns about **loss of NGO autonomy, risk of asset takeover due to procedural delays, and impact on welfare activities**.
- Opposition leaders have raised concerns about **possible impact on minority institutions and religious freedom under Articles 25–30**.

GOVERNOR'S DISCRETION

The Madras High Court has ruled that the Governor must act on the aid and advice of the Council of Ministers while exercising powers under Article 161, particularly in cases of remission and premature release of convicts.

Article 161 of the Constitution

- Article 161 empowers the Governor to grant **pardon, reprieve, respite, remission, and commutation of sentences** for offences under laws within the State's executive domain.
- It is analogous to **Article 72**, which grants similar powers to the President at the Union level.
- However, unlike the President, the Governor **cannot pardon death sentences or intervene in court-martial cases**.
- Under **Article 163**, the Governor is required to act on the **aid and advice of the Council of Ministers**.

Highlights of the Recent Judgment

- The Court held that the **Governor cannot take a view different from the Council of Ministers under any circumstances**.
- It reaffirmed that this position has been **consistently upheld by the Supreme Court**.
- It clarified that reliance on the **M.P. Special Police Establishment (2003)** case to justify discretion is **misplaced**.
- It declared the earlier **Murugan (Thirumalai Murugan) judgment** as **per incuriam** to the extent it allowed discretionary powers.

Key Judgements

- In **Shamsher Singh v. State of Punjab**, the Supreme Court held that the **Governor is a constitutional head and must act on ministerial advice**.
- In **Maru Ram v. Union of India**, it clarified that **clemency powers are not personal discretion**.

- In **A.G. Perarivalan case**, the Court held that **delays by the Governor are subject to judicial review**, and relief can be granted under Article 142.

Comparison of Pardoning Powers of President and Governor

- The **President of India** can grant **pardon, reprieve, respite, remission, suspension, or commutation of punishment or sentence** to any person convicted of an offence against a law under the Union's executive power.
- He can pardon, reprieve, respite, remit, suspend or commute a **death sentence**. He is the **only authority to pardon a death sentence**.
 - ◆ The **Governor cannot pardon a death sentence**. However, the Governor can suspend, remit or commute a death sentence.
- The President can exercise pardoning powers in cases where the punishment has been awarded by a **court-martial (military court)**.
 - ◆ The Governor does **not possess any such power**.

Nature of Pardoning Power:

- **Pardon:** It removes both the sentence and the conviction and completely absolves the convict from all sentences, punishments and disqualifications.
- **Commutation:** It denotes the substitution of one form of punishment for a lighter form.
- **Remission:** It implies reducing the period of sentence without changing its character.
- **Respite:** It denotes awarding a lesser sentence in place of one originally awarded due to some special fact, such as the physical disability of a convict or the pregnancy of a woman offender.
- **Reprieve:** It implies a stay of the execution of a sentence (especially that of death) for a temporary period.

DEEMED UNIVERSITY TAG FOR NCERT

The Ministry of Education has declared the National Council of Educational Research and Training (NCERT) an Institution Deemed to be a University.

About the Decision

- The deemed university status has been granted not only to NCERT headquarters, but also to its six **Regional Institutes of Education (RIEs)**, subject to certain conditions.

Impact of the Decision

- The **National Council of Educational Research and Training (NCERT)** is now authorized to launch academic programs and award **degrees**, including research, doctoral, and innovative courses.

Deemed to be University

- Higher education institutions, other than universities, functioning at a high level in a specified field of education, may be declared as an institution deemed to be a university by the Central Government on the advice of the University Grants Commission.
- Institutions declared as deemed to be universities enjoy the academic standards and privileges of a university.
- It must gradually expand into other academic domains following UGC regulations and the NEP 2020.
- NCERT is strictly prohibited from commercial or profit-making activities. Starting new programs, off-campus centers, or offshore campuses must comply with UGC guidelines.
- The institution must seek program accreditation from the National Board of Accreditation (NBA) and institutional accreditation from the National Assessment and Accreditation Council (NAAC).
- It is also required to participate in the National Institutional Ranking Framework (NIRF). Additionally, NCERT must create Academic Bank of Credits (ABC) IDs for students and upload records to digital lockers for the ABC portal.

YUVA SANGAM

Registrations have been conducted for Yuva Sangam Phase-VI (2026), covering 22 States and Union Territories, reflecting the continued expansion of the programme since its launch in 2023.

About Yuva Sangam

- Yuva Sangam is a youth exchange initiative of the Government of India aimed at strengthening people-to-people connect among youth from different States and UTs.
- It is implemented under the Ek Bharat Shreshtha Bharat (EBSB) programme and was conceptualised by the Ministry of Education in collaboration with multiple ministries.
- The programme is inspired by the model of Kashi Tamil Sangamam, promoting cultural and knowledge exchange.

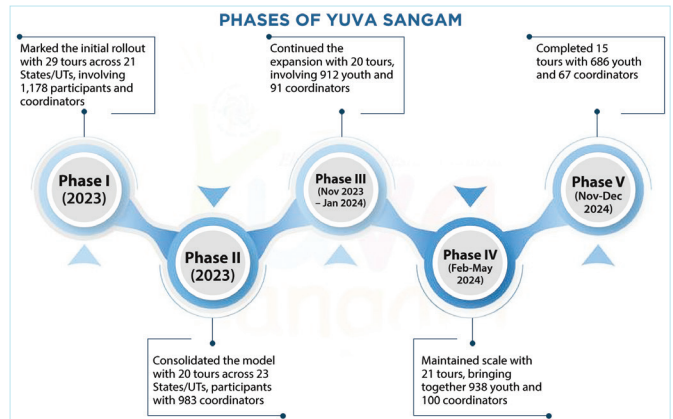
Ek Bharat Shreshtha Bharat (EBSB)

- EBSB was launched on 31 October 2015 (Rashtriya Ekta Diwas) to strengthen national unity through structured inter-state engagement.
- It pairs States and UTs for continuous interaction in culture, language, tourism, and knowledge exchange.

Participation and Implementation

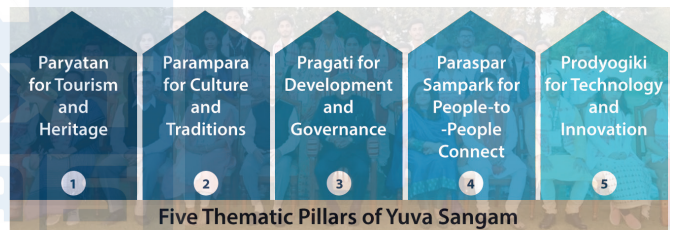
- The programme targets youth aged 18–30 years, including students, NSS volunteers, NYKS members, and young professionals.
- Participants undertake institution-led exposure tours to paired States/UTs, where they interact with local communities, institutions, and development initiatives.

- It is anchored by the Ministry of Education and implemented through Higher Education Institutions, following a whole-of-government approach involving sectors such as education, culture, tourism, and youth affairs.



Framework and Approach

- The programme is guided by the Five P's framework, which structures engagement across key dimensions of learning and cultural exchange.



Significance

- Yuva Sangam promotes national integration through experiential learning, aligns with the National Education Policy 2020, and supports the vision of Viksit Bharat @2047 by fostering an informed and connected youth population.

BHARAT TRIBES FEST 2026

Bharat Tribes Fest 2026 was concluded recently.

About

- It is a flagship initiative of the Ministry of Tribal Affairs organised in association with TRIFED.
- The 19-day festival brought together tribal artisans, entrepreneurs, and self-help groups from across the country, showcasing India's diverse tribal heritage and products.
- Top-performing tribal artisans and sellers were felicitated across ten categories, including pottery, cane and bamboo, jewellery, cuisines, textiles, and forest-based products.
- Key attractions included the RISA Pavilion promoting contemporary tribal design and the Bharat Tribes Fest Bazaar, aimed at strengthening market linkages.

Tribal Cooperative Marketing Development Federation of India Limited

Established in 1987 under the Ministry of Tribal Affairs, TRIFED is a national-level cooperative body dedicated to the socio-economic upliftment of tribal communities.

Mandate and Objectives	Retail and Support
<ul style="list-style-type: none"> ➤ Facilitates the trade of Minor Forest Produce (MFP) and Surplus Agricultural Produce (SAP). ➤ Forms Self Help Groups (SHGs) and provides training in modern technology and artistic skills to meet global market demands. ➤ Identifies target groups and monitors activities to ensure stable livelihoods. 	<ul style="list-style-type: none"> ➤ Markets products under the brand name TRIBES INDIA via retail outlets, e-marketing, and exhibitions like Aadiship and OCTAVE. ➤ Implements the Minimum Support Price (MSP) scheme for Minor Forest Produce, ensuring fair returns for tribal collectors and cultivators.

Arguments in Favor of such Restriction

- **Power Concentration:** Reduces the risk of centralizing authority in a single individual.
- **Authoritarian Safeguard:** Acts as a check against weakening democratic norms during long, uninterrupted rule.
- **New Leadership:** Encourages fresh ideas and strengthens internal party democracy and competition.
- **Democratic Culture:** Reinforces that no office is permanent, deepening democratic values.
- **Global Alignment:** Matches practices in other major democracies to ensure accountability.
- **Institutional Independence:** Prevents long tenures from leading to the capture or undue influence over independent institutions.

Conclusion

- **Dr. B.R. Ambedkar** distinguished between the 'daily assessment' of executive responsibility via parliamentary motions and the 'periodic assessment' through elections.
- These mechanisms ensure the executive remains accountable to both the legislature and the people.

THE EXECUTIVE OFFICE WITHOUT A LIMIT

India follows a convention limiting the President to two terms, but the Constitution of India places no such restriction on the Prime Minister's tenure.

Restricting Executive Tenure

- **Meaning:** Placing constitutional or legal limits on the duration or number of terms an executive can serve.
- **Purpose:** Ensures leadership changes periodically to prevent any individual from holding power indefinitely.
- **Global Examples:** Common in presidential systems; the **United States, South Korea, Brazil, Colombia, and Indonesia** all impose presidential term limits.

Arguments against such Restriction

- **Parliamentary Accountability:** The Prime Minister is continuously accountable as they must maintain majority support in the **Lok Sabha** (Lower House of Parliament).
- **Democratic Choice:** Limits may force out effective leaders whom voters wish to keep.
- **Policy Continuity:** Long-term national projects and reforms benefit from stable leadership.
- **Stability Risks:** Frequent changes can cause political instability and weak governance.
- **Existing Checks:** Accountability is already maintained via elections, no-confidence motions, and judicial oversight.
- **System Suitability:** Term limits fit presidential systems with concentrated power better than parliamentary ones.
- **Loss of Experience:** Experienced leaders may be forced into premature exit.

NEW CBSE CURRICULUM

The Union Education Minister has launched a **CBSE curriculum on Computational Thinking (CT) and Artificial Intelligence (AI) for Classes 3 to 8, to be implemented from the 2026–27 academic session in line with the National Education Policy (NEP) 2020.**

About the Curriculum

- The curriculum introduces **Computational Thinking** as a cross-curricular skill integrated into **Mathematics, Science, Languages, and Social Sciences**.
- For **Classes 3–5**, learning is based on unplugged activities such as puzzles, pattern recognition, and logical reasoning.
- For **Classes 6–8**, it includes AI concepts, project-based learning, and reflective assessments, which require digital tools.

Concept of Computational Thinking

- Computational Thinking is a **structured problem-solving approach** involving decomposition, pattern recognition, abstraction, and algorithmic thinking.
- It depends on **strong language abilities (listening, speaking, reading, writing)** because problem-solving requires clear comprehension and expression.

Objectives

- The curriculum aims to develop **logical reasoning, problem-solving ability, digital literacy, and ethical awareness** in AI use.
- It prepares students to become **informed users of AI technologies** and aligns India with **global practices in countries such as Singapore, South Korea, and Finland**.

- The curriculum builds a **cognitive foundation for AI-driven innovation** and supports the vision of a **digitally skilled and future-ready population**.

Challenges

- Foundational gaps persist, as over 50% of Class 5 students **cannot read a Class 2-level text (ASER 2024)**.
- **PARAKH Rashtriya Sarvekshan 2024**, covering **23 lakh students across 88,000 schools**, highlights learning deficits even in urban schools.
- Effective implementation requires **teacher training and adequate digital infrastructure**.

NAMO DRONE DIDI SCHEME

According to the Ministry of Civil Aviation, 1,094 SHG members have been trained as drone pilots under the scheme.

About the Scheme

- The **Namo Drone Didi Scheme** is a ₹1,261 crore Central Sector initiative (2023–24 to 2025–26) aimed at empowering **women-led Self-Help Groups (SHGs)** under the Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM).
- The scheme seeks to provide **15,000 drones to selected SHGs** to offer **rental agricultural services**, particularly for **spraying fertilizers and pesticides**.
- The scheme aims to promote precision agriculture, improve crop yields, and create sustainable livelihood opportunities for rural women.
- One SHG member is trained as a drone operator through a **15-day programme**.
 - ◆ It includes 5 days of drone pilot training and 10 days of training in nutrient and pesticide application.
 - ◆ The training enables women to become **certified drone pilots** providing professional agricultural services.
- The scheme is implemented through convergence of the **Department of Agriculture & Farmers' Welfare, Department of Rural Development, and Department of Fertilizers**, along with **Lead Fertilizer Companies**.

TWO NEW REPOSITORIES

The **National Biodiversity Authority (NBA)**, in consultation with the **Ministry of Environment, Forest and Climate Change**, has notified two new institutions as designated repositories under the **Biological Diversity Act (BDA), 2002**.

About

- **The New Repositories are:**
 - ◆ **Referral Centre Bhavasagara:** Located at the **Centre for Marine Living Resources and Ecology (CMLRE)**, Kochi.

- ◆ **MACS Collection of Microorganisms and National Fungal Culture Collection:** Located at the **Agharkar Research Institute (ARI)**, Pune.

Role and Mandate:

- ◆ The **Biological Diversity Act, 2002** empowers the Central Government to designate specific institutions to store different categories of biological resources.
- ◆ These repositories maintain biological materials under scientific conditions.
- ◆ Any person discovering a new **taxon** (a group of one or more populations of an organism) is legally required to notify these designated repositories.

National Network of Repositories

- With these two additions, there are now **18 institutions** designated as national repositories under **Section 39** of the Act.
- This expansion strengthens the national network for systematic documentation and conservation, ensuring biological materials are preserved and accessible for research and innovation.

National Biodiversity Authority (NBA)

- It is a **statutory authority** set up under India's Biological Diversity Act (2002).
- It came into existence in **2003, with its headquarters in Chennai**.
- It provides facilitative, regulatory, and advisory functions to the Government of India on issues of conservation, sustainable use, and fair and equitable sharing of benefits arising from the country's biological resources.
- Under the **Biodiversity Act, 2002 and Biodiversity Rules, 2004**, the following two other entities have been established to complement the NBA:
 - ◆ State Biodiversity Boards (SBB) at the State level, and
 - ◆ Biodiversity Management Committees (BMC) at the local village level.

WORLD INEQUALITY LAB REPORT

A report by the **World Inequality Lab** analyses land inequality using **SECC data covering about 650 million people across 2.7 lakh villages and 10 states, representing nearly 75% of the rural population**.

Key Findings

- The **top 10% of rural households own 44% of land**, the top 5% own 32%, and the top 1% own 18%, indicating extreme concentration.
- Nearly **46% of rural households are landless**, showing widespread exclusion.
- The largest landholder in a village owns about 12.4% of land, and in 3.8% of villages one owner controls more than 50% of land.

- Land inequality is high, with a village-level Gini coefficient of about 71.1; Kerala has the highest inequality (~90), while Karnataka and Rajasthan have lower inequality (below 65).
- Landlessness is highest in Punjab (73%)**, followed by Bihar (59%) and Madhya Pradesh (51%), while Rajasthan (34%) and Uttar Pradesh (39%) are relatively lower.

Determinants of Land Holding

- Natural factors** such as fertile land and high agricultural productivity encourage accumulation by large landowners.
- Historical factors**, especially the **zamindari system**, created landlord dominance, while former princely states show relatively lower inequality.
- Market forces**, including proximity to **roads, railways, mandis, and financial institutions**, increase land consolidation, and villages with higher **Scheduled Caste populations face greater inequality**.
- Fragmentation of small holdings due to inheritance laws and **distress sales** further increase concentration.

Legal and Policy Measures

- India implemented **zamindari abolition, tenancy reforms** (such as Operation Barga), land ceiling laws, and consolidation of holdings to redistribute land and improve efficiency.
- The **Digital India Land Records Modernization Programme (DILRMP)** digitises land records, including initiatives such as the Bhoomi project in Karnataka, to improve transparency and reduce disputes.

Steps Taken to Reduce Inequality

- The **Forest Rights Act, 2006** recognises land rights of forest-dwelling communities and tribal populations, addressing historical injustice.
- The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 ensures fair compensation and rehabilitation in land acquisition.
- The **Bhoodan and Gramdan movements (1951)** promoted voluntary land redistribution.

Challenges

- Land reforms face resistance from landed elites, ineffective implementation, benami practices, incomplete tenancy reforms, poor land records, and caste-based exclusion.
- Since land is a State subject, implementation varies significantly across states, limiting uniform outcomes.

Conclusion

- Land inequality in India is **deeply structural**, combining **extreme concentration with widespread landlessness**, and requires sustained, inclusive, and effectively implemented reforms for equitable rural development.

REGULATION OF ANIMAL FEED

The Delhi High Court recently struck down a regulation by the Food Safety and Standards Authority of India (FSSAI) that prohibited animal feed containing meat or bone meal of bovine or porcine origin for milk-producing animals.

The Ruling

- The Court held that the **FSSAI** mandate is strictly limited to food for **human consumption**.
- Consequently, the authority is not empowered to prescribe standards for animal feed, even if it impacts the quality of animal-derived products like milk and meat.

About FSSAI

- Establishment:** Created under the **Food Safety and Standards Act, 2006**, with its headquarters in **Delhi**.
- Administrative Authority:** Operates under the **Ministry of Health & Family Welfare**.
- Objective:** To lay down science-based standards and regulate the manufacture, storage, and sale of food to ensure safe and wholesome products for humans.
- Enforcement:** **FSSAI** and **State Food Safety Authorities** are responsible for enforcing the Act's provisions nationwide.

WOMEN'S RESERVATION IN LEGISLATURES

The Prime Minister has emphasised that women's reservation in legislatures is essential for making Indian democracy more inclusive and participative, and the government is considering early operationalisation of the Nari Shakti Vandan Act for the 2029 elections.

Status of Women's Political Representation

- Women's representation in the **Lok Sabha remained between 5–10% till 2004, increased to 12% in 2014, and is about 14% in the 18th Lok Sabha**, which is below the **global average of 24%**.
- Representation in **State Assemblies is around 9%**, and India ranks **143rd globally (Inter-Parliamentary Union, 2024)**.

Reservation Framework in India

- The **73rd and 74th Constitutional Amendments** mandate **one-third reservation for women in Panchayati Raj Institutions and Urban Local Bodies**, including seats for SCs and STs.
- The **Nari Shakti Vandan Act, 2023 (106th Constitutional Amendment)** provides 33% reservation for women in the Lok Sabha, State Assemblies, and the Delhi Assembly, including SC/ST reserved seats.

Key Provisions of the Act

- The Act inserts **Articles 330A, 332A, and 239AA** to provide reservation in Parliament, State Assemblies, and Delhi Assembly.
 - Article 330A:** It mandates reservation of seats for women in the Lok Sabha.

- ◆ **Article 332A:** It extends similar reservation to State Legislative Assemblies.
- ◆ **Amendment to Article 239AA:** It enables reservation in the Delhi Legislative Assembly.
- ➔ The reservation will be **implemented after delimitation based on the first Census conducted after enactment**, although there is a proposal to use the **2011 Census to expedite implementation**.
- ➔ Reserved seats will rotate after each delimitation, as determined by Parliament.

Reasons for Low Representation

- ➔ Women face gender bias, societal expectations, work-life balance pressures, harassment, and limited access to political networks, which restrict participation.

Significance

- ➔ **Advancing Women's Empowerment:** Increased involvement of women in decision-making strengthens empowerment.
- ➔ **Enhancing Democratic Values:** Makes India's democracy more inclusive, participatory, and responsive.
- ➔ **Improving Legislative Effectiveness:** Diverse viewpoints contribute to better policymaking and decisions.
- ➔ **Ensuring Substantive Equality:** Helps reduce the long-standing underrepresentation of women in politics.

Conclusion

- ➔ Women's reservation is a structural reform that strengthens democratic representation and ensures more equitable governance.

CONSTITUTION OF INDIA IN SINDHI LANGUAGE

On Sindhi Bhasha Diwas (April 10, 2026), Vice President C. P. Radhakrishnan released the updated version of the Constitution of India in the Sindhi language at the Vice President's Enclave in New Delhi.

Key Highlights

- ➔ **Dual Scripts:** The translation was published in two scripts, namely, the **Devanagari script** (first edition) and the **Persian script** (second edition).
- ➔ **Significance:** Sindhi is an **Indo-Aryan** language with a rich literary tradition blending **Vedantic and Sufi philosophies**.
- ➔ **Constitutional Status:** It is one of the 22 official languages in the **Eighth Schedule**, added via the **21st Constitutional Amendment Act, 1967**.

Original Language of the Constitution

- ➔ The Constitution was originally drafted in **English**.
- ➔ A committee led by **Ghanshyam Das Gupta** produced the official **Hindi** version.
- ➔ Both versions were signed by the **Constituent Assembly** and submitted on **January 24, 1950**.

COMMONWEALTH PARLIAMENTARY ASSOCIATION (CPA)

The Commonwealth Parliamentary Association (CPA) India Region Zone VII Conference recently concluded in Goa.

About the Association

- ➔ **Origin:** Founded in **1911** as the Empire Parliamentary Association; renamed in **1948** following decolonization. It is one of the oldest Commonwealth organizations.
- ➔ **Mission:** To advance parliamentary democracy, good governance, the rule of law, individual freedoms, youth engagement, and gender equality.
- ➔ **Structure:** An international community of over **180 Legislatures (Branches)** across **nine geographic regions**. Membership is institutional (national, state, provincial, and territorial parliaments).
- ➔ **Governance:** Managed by a **General Assembly** (supreme authority), an **Executive Committee**, and a **Headquarters Secretariat** in **London, United Kingdom**.

CPA India Region

- ➔ **Overview:** Comprises **32 Legislatures**. After Africa, India has the largest number of CPA member branches.
- ➔ **Leadership & Secretariat:** The **Lok Sabha Speaker** serves as the Regional Chairperson. The Secretariat is located within the **Lok Sabha** at the Parliament of India.
- ➔ **Administrative Zones:** Divided into **9 zones**:
 - ◆ **Zone 1:** Uttar Pradesh, Uttarakhand.
 - ◆ **Zone 2:** Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab.
 - ◆ **Zone 3:** Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura.
 - ◆ **Zone 4:** Odisha, West Bengal.
 - ◆ **Zone 5:** Bihar, Jharkhand.
 - ◆ **Zone 6:** Chhattisgarh, Madhya Pradesh, Rajasthan.
 - ◆ **Zone 7:** Goa, Gujarat, Maharashtra.
 - ◆ **Zone 8:** Andhra Pradesh, Karnataka, Telangana.
 - ◆ **Zone 9:** Kerala, Puducherry (Union Territory), Tamil Nadu.

RESIGNATION OF JUSTICE VARMA

Recently, Justice Yashwant Varma, an Allahabad High Court judge submitted his resignation to the President of India.

About

- ➔ India has a **single unified judiciary** (unlike the US dual system).
 - ◆ Supreme Court of India (Top level); Articles 124–147
 - ◆ High Courts (State level); Articles 214–231
 - ◆ Subordinate Courts (District & lower courts); Articles 233–237

- This structure ensures **uniform interpretation of law** across the country.

Key Features of Indian Judiciary

- Independence of Judiciary (basic structure doctrine)
- Judicial Review, as it can strike down unconstitutional laws
- Separation of Powers
- Rule of Law

High Court Judges

High Court judges are governed mainly by:

- **Article 214:** High Courts for States
- **Article 216:** Constitution of High Courts
- **Article 217:** Appointment & conditions of office
- **Article 218:** Application of provisions of removal (same as SC judges)
- **Article 219:** Oath or affirmation
- **Article 220–224:** Other provisions (practice restrictions, additional judges, etc.)

Appointment of High Court Judges

- Under **Article 217(1), President of India**, after consultation with the Chief Justice of India, Governor of the State, and Chief Justice of the High Court makes the appointment.
- **Qualifications:** A person must be a **citizen of India**. Held judicial office for **10 years**, or been an advocate of a High Court for **10 years**.
- **Tenure:** Holds office until **age of 62 years** (Article 217(1))
- **Oath or Affirmation (Article 219):** Judge must take oath before the **Governor of the State**; Oath includes upholding Constitution, and performing duties without fear or favour.

Removal of High Court Judges

- **Grounds:** Proved misbehaviour & Incapacity.
- **Procedure (Impeachment-like):** Motion introduced in Parliament; supported by special majority (majority of total membership, and 2/3rd of members present & voting), address sent to President and President orders removal.
- **Resignation:** Judge may resign by writing to the **President of India**.

WHIP

The ruling party issued a three-line whip to its Members of Parliament (MPs), requiring their presence during the extended Budget session.

What is a Whip?

- A whip is a directive issued by a political party to its legislators to follow a specific party line.
- **Origin:** Derived from the British practice of "whipping in" lawmakers to follow the party line.
- **Status:** It is a **parliamentary convention**, not mentioned in the Constitution of India.

- **Enforcement:** Disobeying a whip can lead to an MP losing their seat.
- Parties appoint a senior member from among their House contingents to issue whips. This member is called a **chief whip**, and he/ she is assisted by **additional whips**.

Whips	
Types	Importance
<ul style="list-style-type: none"> ➤ One-line: Informs members of a vote but allows them to abstain. ➤ Two-line: Requires members to be present but does not dictate their vote. ➤ Three-line: The strictest form; mandates presence and requires voting exactly as the party directs. 	<ul style="list-style-type: none"> ➤ Discipline: Ensures attendance and party unity during crucial votes. ➤ Communication: Acts as a link between party leadership and legislators. ➤ Feedback: Helps leaders gauge member opinions on key issues.

PRADHAN MANTRI GRAM SADAK YOJANA–III (PMGSY–III)

The Union Cabinet has approved the extension of PMGSY–III beyond March 2025 till 2028–29, increasing the total outlay from ₹80,250 crore to ₹83,977 crore to ensure completion of pending rural infrastructure projects.

About PMGSY

- The Pradhan Mantri Gram Sadak Yojana is a **100% Centrally Sponsored Scheme** under the **Ministry of Rural Development**, launched in **2000** to provide **all-weather road connectivity to unconnected rural habitations** as part of poverty reduction.

Evolution of PMGSY

- **PMGSY-I (2000):** Focused on connecting unconnected habitations.
- **PMGSY-II (2013):** Focused on upgradation of existing rural roads.
- **RCPLWEA (2016):** Targeted road connectivity in **Left Wing Extremism-affected areas**.
- **PMGSY-III (2019):** Focuses on **consolidation of rural road networks**.
- **PMGSY-IV (2024–25 to 2028–29):** Aims to connect **25,000 newly eligible habitations**.

Key Features of PMGSY–III Extension

- **Completion timelines have been extended based on terrain:**
 - ◆ **Plain areas:** Roads and bridges to be completed by **March 2028**.
 - ◆ **Hilly areas:** Roads by **March 2028** and bridges by **March 2029** due to technical challenges.

- **Un-awarded projects sanctioned before 31 March 2025** are now allowed to proceed to tendering and execution.
- The Cabinet has approved **161 Long Span Bridges (LSBs)** with an estimated cost of **₹961 crore**.
- **Objectives of PMGSY-III:** The scheme focuses on consolidation and upgradation of through routes and major rural links. It aims to improve connectivity to Gramin Agricultural Markets (GrAMs), higher secondary schools, and healthcare facilities.

Significance

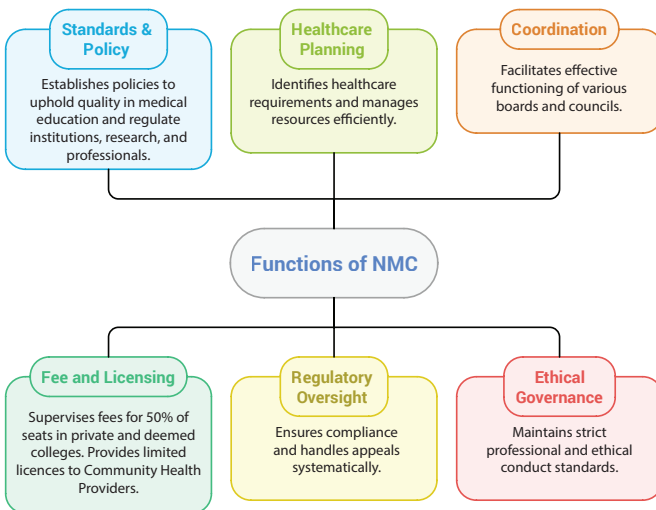
- The extension will improve market access, reduce transportation costs, and enhance access to education and healthcare, especially in remote areas.
- It will support inclusive rural development and bridge the rural-urban divide, contributing to the vision of Viksit Bharat 2047.

NATIONAL MEDICAL COMMISSION (NMC)

The National Medical Commission has proposed amendments to the Registration of Medical Practitioners and Licence to Practice Medicine Regulations, 2026, with the objective of expanding medical education capacity while strengthening quality standards.

About NMC

- The NMC is India's **apex statutory regulator for medical education, professionals, and institutions**, established under the **National Medical Commission Act, 2019** and operational since **25 September 2020**.
- It replaced the **Medical Council of India** to improve governance, transparency, and quality in healthcare.



Structure

- The Commission comprises a **Chairperson, 10 ex-officio members, and 22 part-time members**, all appointed by the Central Government.
- It functions through **four autonomous boards**:

- ◆ **Under-Graduate Medical Education Board (UGMEB)** regulates undergraduate education.
- ◆ **Post-Graduate Medical Education Board (PGMEB)** regulates postgraduate education.
- ◆ **Medical Assessment and Rating Board (MARB)** assesses and accredits institutions.
- ◆ **Ethics and Medical Registration Board (EMRB)** maintains the National Medical Register and oversees professional ethics.

Key Issues and Challenges

- The Commission faces a **governance gap**, as its composition is dominated by medical professionals with limited representation of public health experts and civil society.
- The grievance redressal system is restrictive because **appeals are effectively limited to registered practitioners**, reducing patient participation.
- Fee regulation applies to only **50% of seats in private colleges**, leaving the rest vulnerable to high fees.
- Ethical oversight lacks **clear timelines and judicial expertise**, raising concerns about impartiality.
- The **National Medical Register is being updated slowly**, creating risks of unverified or unqualified practitioners.

Conclusion

- The NMC represents a **major institutional reform in medical governance**, but addressing issues of **accountability, inclusiveness, and effective regulation** is essential to ensure quality and equity in India's healthcare system.

MULTI-HAZARD EARLY WARNING DECISION SUPPORT SYSTEM (MHEW-DSS)

The India Meteorological Department received the National Award for e-Governance 2025 for developing the MHEW-DSS, marking a major step in digital transformation of weather forecasting and disaster preparedness.

About the System

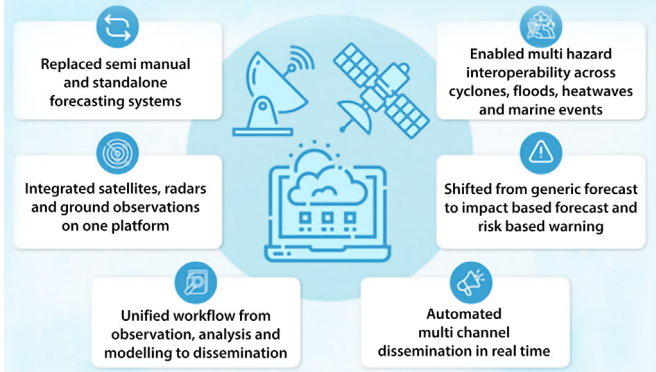
- The MHEW-DSS is an **advanced digital platform** that automates **weather forecasting, risk assessment, and warning dissemination** for citizens, governments, NGOs, and specialised stakeholders.
- The system was launched in **January 2024 under Mission Mausam**, and developed indigenously by IMD using **in-house expertise and open-source technology**, ensuring technological self-reliance.
- The Ministry of Earth Sciences acts as the **nodal ministry**.

Working Mechanism

- The platform integrates **real-time data from satellites, radars, and ground and upper-air sensors** into a **centralised GIS-enabled system**, enabling spatial analysis and visualisation.

- It replaces manual workflows with an **automated, integrated system**, allowing faster collection, analysis, and dissemination of weather information.

Multi-Hazard Early Warning Decision Support System From Fragmented Forecasts to Integrated Decision Support



Key Features and Performance Improvements

- Data Automation:** Over **90% of data processing** (collection, quality checks, integration) is automated, improving efficiency.
- Model Integration:** More than **95% of numerical weather prediction model inputs** are utilised, enhancing accuracy.
- System Redesign:** The forecasting process is fully re-engineered for **real-time alerts and faster decisions**.
- Lead Time:** Forecast lead time has increased from **5 days to 7 days**, improving preparedness.
- Speed:** Forecast preparation time has reduced from **6 hours to about 3 hours**.
- Accuracy:** Forecast accuracy has improved by **around 30%**, strengthening reliability.

Significance

- The system enhances **disaster preparedness and response** for hazards such as cyclones, floods, and heatwaves.
- It improves **decision-making through real-time, integrated information** and strengthens **public safety by reducing loss of life and property**.
- It represents a shift towards **technology-driven governance and scientific forecasting systems**.

Conclusion

- MHEW-DSS marks a **major advancement in India's forecasting capability** by combining automation, real-time data integration, and advanced modelling, thereby strengthening disaster management and governance.

Additional Information

- IMD was established in 1875 and completed 150 years of service in 2025.
 - IMD functions under the Ministry of Earth Sciences

- India is a Regional Specialised Meteorological Centre (RSMC) for the North Indian Ocean, responsible for cyclone tracking and naming.
- Mission Mausam** is the overarching framework under which MHEW-DSS was developed
- The **Sendai Framework for Disaster Risk Reduction 2015–2030** is a **non-binding international agreement** adopted at the Third UN World Conference on Disaster Risk Reduction, held in Sendai, Japan, on March 18, 2015.
 - It is the primary global framework guiding how nations reduce disaster risk, build resilience, and protect development gains from natural and human-induced hazards over the 15-year period from 2015 to 2030.

CONSTITUTION AMENDMENT BILL

The Lok Sabha is currently debating the Constitution (131st Amendment) Bill, 2026. This proposal seeks to increase the size and composition of the Lok Sabha and State Legislative Assemblies to reflect India's demographic growth.

Constitutional Amendments

- An amendment is a legislative proposal to modify, add, or repeal provisions of the **Constitution of India**.
- Under **Article 368**, Parliament holds the power to amend the fundamental law.
- The procedure is a synthesis of flexibility and rigidity, ensuring the Constitution remains a dynamic document.
- However, Parliament cannot alter the **"Basic Structure"** of the Constitution, as ruled by the **Supreme Court** in the **Kesavananda Bharati case (1973)**.

Procedures for Amendment

The Constitution provides three distinct pathways for amendment:

- Simple Majority (Outside Article 368):** Requires more than 50% of members present and voting. This applies to ordinary matters like the admission of new states (**Article 2**), citizenship, and the **Fifth Schedule**.
- Special Majority (Article 368):** Requires a majority of the total membership of each House and a 2/3rd majority of those present and voting. This covers **Fundamental Rights** and **Directive Principles of State Policy**.
- Special Majority + State Ratification:** For provisions affecting the federal structure (e.g., **Presidential elections**, the **Seventh Schedule**, or representation of states), the bill requires a special majority in Parliament plus ratification by at least half of the **State Legislatures** via simple majority.

Step-by-Step Passing Procedure

- A bill can be introduced in either the **Lok Sabha** or **Rajya Sabha** by a Minister or a Private Member. Prior permission from the **President** is not required.

- ➔ The bill must be passed in each House separately by a special majority. Unlike ordinary bills, there is **no provision for a joint sitting** in case of disagreement. If the bill impacts federal provisions, it is sent to the states for approval.
- ➔ Once passed by both Houses (and ratified if necessary), the bill is presented to the **President**. Under the **24th Amendment Act**, the President **must** give assent; they can neither withhold it nor return the bill for reconsideration.
- ➔ Upon receiving assent, the bill becomes a **Constitutional Amendment Act**.

How to amend the Constitution		Similar to ordinary law: simple majority in Parliament: as mentioned in some articles
		Special majority in Parliament in both Houses separately: as per article 368
		Special majority + Legislatures of half the states: article 368

Challenges

- ➔ Achieving a 2/3rd majority in a fragmented polity is difficult.
- ➔ There are also risks of centralizing power, regional imbalances due to delimitation, and intense judicial scrutiny regarding the **Basic Structure**.

Significance

- ➔ Amendments allow for **democratic adaptation to socio-political changes**, enable **social justice reforms** (like women's reservation), and strengthen institutions.

Conclusion

- ➔ The amendment process strikes a balance between governance modernization and constitutional stability.
- ➔ Future reforms should prioritize consensus-building with states and the opposition, ensuring that the **federal balance** and core constitutional values are preserved.

URBAN CHALLENGE FUND (UCF)

The Ministry of Housing and Urban Affairs (MoHUA) has launched the operational guidelines for the Urban Challenge Fund (UCF) and the Credit Repayment Guarantee Sub-Scheme (CRGSS).

About

- ➔ The UCF is a **Centrally Sponsored Scheme** designed to catalyze large-scale urban investments through competition and financial discipline.
- ➔ **Financial Outlay:** The Centre has allocated ₹1,00,000 crore (FY 2025–26 to 2030–31), intended to leverage a total investment of ₹4 lakh crore over five years.

- ➔ **Challenge-Mode Selection:** Projects are selected through a competitive process, ensuring only transformative, bankable, and reform-oriented proposals receive funding.

- ➔ **Funding Pattern:** * **25%:** Central Assistance.

- ◆ **Minimum 50%:** Market sources (Loans, Municipal Bonds, Private Equity, or Public-Private Partnerships).
- ◆ **Remaining 25%:** Contribution from States/Urban Local Bodies (ULBs) or additional market borrowings.

- ➔ **Verticals/Focus Areas:**

- ◆ Creative redevelopment of cities.
- ◆ Developing cities as economic growth hubs.
- ◆ Water and sanitation infrastructure.

Eligibility and Scope

- ➔ All cities with a population of **10 lakh or more** (2025 estimates).
- ➔ All State and Union Territory capitals.
- ➔ Major industrial cities with a population of **1 lakh or more**.
- ➔ **Exclusion:** Projects already funded under **AMRUT 2.0**, **SBM 2.0**, or other Centrally Sponsored Schemes are ineligible to prevent duplication.

Credit Repayment Guarantee Sub-Scheme (CRGSS)

To support smaller or financially weaker cities that struggle to access capital markets, the government introduced a ₹5,000 crore guarantee mechanism.

- ➔ **Target:** Tier-II and Tier-III cities, as well as cities in **Hilly and Northeastern states**.

- ➔ **Guarantee Terms:**

- ◆ **First-time loans:** 70% guarantee (up to ₹7 crore).
- ◆ **Subsequent loans:** 50% guarantee (up to ₹7 crore).

- ➔ **Project Limits:** Enables ULBs to raise funds for projects worth ₹20 crore (initial) and ₹28 crore (subsequent).

Guiding Principles and Role of Private Sector

The UCF transforms cities into investment destinations by:

- ➔ **Market-Linked Financing:** Ensuring fiscal discipline by mandating private capital "crowding-in."
- ➔ **Reform-Linked Disbursement:** Funds are released only upon achieving governance, financial (e.g., property tax reforms), and planning milestones.
- ➔ **Outcome-Based Approach:** Success is measured by tangible results rather than just expenditure.

Key Challenges

Despite its innovative design, the UCF faces several implementation hurdles:

- ➔ **ULB Constraints:** Many municipalities have weak revenue bases, poor creditworthiness, and lack the technical expertise for complex project preparation (DPRs and financial modeling).

- **Fiscal Risks:** High reliance on market borrowing could lead to debt stress if projects fail to generate expected revenues.
- **Private Sector Hesitancy:** Investors often avoid low-return or high-risk sectors like water and sanitation unless there is extreme regulatory clarity and commercial viability.
- **Regional Disparities:** Large, prosperous cities are better positioned to win "challenges," potentially leaving smaller towns or geographically disadvantaged regions behind.
- **Coordination Issues:** Harmonizing actions between the Centre, States, financial institutions, and private players requires seamless inter-agency cooperation.

Conclusion

- The **Urban Challenge Fund** marks a paradigm shift in India's urban strategy, aligning infrastructure growth with financial sustainability and governance reforms.
- By incentivizing private participation and local accountability, it serves as a critical pillar for the **Viksit Bharat** (Developed India) vision, aiming to turn cities into self-sustaining engines of economic growth.

SMILE SCHEME

The **Support for Marginalised Individuals for Livelihood and Enterprise (SMILE) Scheme** is promoting inclusive rehabilitation and social reintegration of vulnerable groups such as transgender persons and individuals engaged in begging.

About the Scheme

- It was launched on **12 February 2022**.
- SMILE is a **Central Sector Scheme** implemented by the **Union Ministry of Social Justice and Empowerment**.
- It is India's **first unified national framework** covering the entire cycle from identification and rescue to rehabilitation, skill development, and long-term livelihood support.
- **Components:**
 - ◆ Comprehensive Rehabilitation of **persons engaged in begging**, based on consent-based identification, profiling, and rehabilitation.
 - ◆ Comprehensive Rehabilitation for Welfare of **Transgender Persons**, focusing on dignity, protection, and socio-economic inclusion.
- **Objectives:** The scheme aims to make religious, tourist, and historical urban areas free from beggary through rehabilitation rather than punishment.
 - ◆ It seeks to ensure dignity, social inclusion, and economic independence for marginalised individuals.

Key Features

- The scheme provides **education support through scholarships for transgender students from Class IX to post-graduation**.
- It promotes **skill development and livelihood opportunities** through convergence with schemes like **PM-DAKSH**.

- It ensures **healthcare support**, including coverage under **PM-JAY** and access to **gender-affirmation surgeries**.
- It establishes **Garima Greh shelter homes** to provide safe and dignified accommodation to transgender persons facing homelessness.
- It mandates **Transgender Protection Cells in each state** to monitor offences and ensure timely legal action.
- It includes a **national portal and helpline** for access to services, information, and grievance support.

Progress

- As of **January 2026**, about **30,257 individuals** engaged in begging have been identified, and 8,129 individuals have been rehabilitated across cities.

ATAL PENSION YOJANA (APY)

The Atal Pension Yojana, has achieved a historic milestone by surpassing total gross enrolments of "9 crore" subscribers on 21st April, 2026.

About the APY

- Launched in **2015**, it is a flagship social security scheme of the Government of India. It is managed by the **Pension Fund Regulatory and Development Authority (PFRDA)**.
- **Target Group:** This voluntary, contributory pension scheme is primarily designed to provide financial security to the poor, the underprivileged, and workers in the **unorganized sector**.
- **Eligibility Criteria:** The scheme is open to all Indian citizens aged between **18 and 40 years**, with the exception of individuals who are or have previously been **income tax payers**.
- **Pension Benefits:** It offers a guaranteed monthly pension ranging from **₹1,000 to ₹5,000**, depending on the contribution level, once the subscriber reaches **60 years of age**.

ANTI-DEFECTION LAW

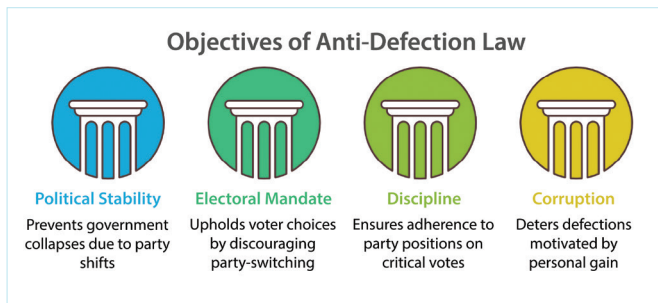
Recently, more than two-thirds of the MPs of the Aam Aadmi Party in the Rajya Sabha have decided to merge with the Bharatiya Janata Party, raising questions around the application of the anti-defection law.

Background

- **Aaya Ram Gaya Ram** was a phrase that became popular in Indian politics after a Haryana MLA Gaya Lal changed his party thrice within the same day in 1967.
- The anti-defection law (Tenth Schedule of the Constitution) was inserted by the **52nd Amendment in 1985** to prevent political defections.
- The **91st Amendment Act, 2003** removed the one-third split provision to strengthen the law.
- Related disqualifications are also provided under **Articles 102(1) and 191(1)** (office of profit, insolvency, citizenship issues, etc.).

Objective

- To **prevent defections driven by office or personal gain**, ensure **government stability**, and maintain **party discipline**.



Grounds for Disqualification

- A legislator is disqualified if they **voluntarily give up party membership**, even without formal resignation.
- A legislator is disqualified if they **vote or abstain against the party whip** without prior permission and the action is not condoned within **15 days**.
- An **independent member** is disqualified if they join a political party after an election.
- A **nominated member** may join a party within six months; joining after that leads to disqualification.

Exceptions

- No disqualification occurs if **two-thirds of members of a legislature party agree to merge** with another party.
- The earlier provision allowing **one-third splits was removed in 2003**.
- The **Speaker/Chairman** may resign from their party to act neutrally and rejoin later without penalty.

Decision on Defection

- The **Speaker/Chairman** decides disqualification cases.
- Proceedings begin only after a **formal petition**, and the member is given an opportunity to **present a defence**.
- Disqualification is **not automatic** and may involve committee reference.
- The Presiding Officer has the power to **frame rules**, which must be laid before the House for **30 days**.
- Decisions are subject to **judicial review**.

Key Judicial Pronouncements

- **Kihoto Hollohan v. Zachillhu (1992)**: Speaker's decisions are subject to judicial review.
- **Ravi S. Naik v. Union of India (1994)**: Voluntarily giving up membership can be inferred from conduct.
- **Keisham Meghachandra Singh (2020)**: Disqualification petitions should be decided within **three months**.
- **Padi Kaushik Reddy v. State of Telangana (2025)**: Highlighted concerns over **delays by the Speaker**.

Challenges

- Delay in decisions undermines legislative stability.
- Allegations of bias due to political affiliation of the Presiding Officer.
- Limited judicial intervention until after the Speaker's decision.
- Restriction on legislators' freedom of speech and conscience due to strict party whip.
- Mass defections through the two-thirds merger rule dilute the law's intent.

Conclusion

- The anti-defection law has **reduced political instability but weakened deliberative democracy** due to over-centralised party control and procedural delays, highlighting the need for **independent adjudication, timely decisions, and balanced reforms**.

PROJECT AI4 WATER POLICY

Project AI4WaterPolicy improved community-led water governance in Rajasthan by using AI for better feedback and last-mile responsiveness.

About

- It was a pilot project in **Sirohi and Pali districts** that used AI to "listen" to communities rather than only deliver information.
- An AI model conducted 352 interviews across 50 villages via WhatsApp (voice/text in local languages) with **Pani Mitras, Panchayat leaders**, and frontline staff.
- It performed real-time thematic analysis, identifying key issues and enabling quick validation by field teams.

Key Outcomes

- The project revealed **gender burden, funding delays, and low awareness** of Panchayat processes, alongside local success stories.
- These insights enabled mid-course policy correction, including redesign of training and stronger engagement with government officials.
- Follow-up showed **higher community participation**, improved confidence, and faster administrative response.

Significance

- It demonstrates a shift from top-down service delivery to participatory governance, where citizens act as co-creators of solutions.
- **AI strengthens feedback loops** and real-time decision-making, while complementing human intermediaries.

NITI AAYOG

Recently, the Prime Minister has reconstituted NITI Aayog, appointing noted economist Ashok Lahiri as Vice-Chairperson and replacing four of its five full-time members.

About NITI Aayog

- **Established:** NITI (National Institution for Transforming India) Aayog is a government think tank established in **2015**.
- **Aim:** It replaced the Planning Commission, aiming to focus on more **contemporary challenges like sustainable development, policy innovation, and governance reforms**.
- **Composition:** It is led by the Prime Minister as the Chairperson, with the Vice-Chairperson and CEO leading the executive functions.
- **Governing Council:**
 - ◆ The Prime Minister of India,
 - ◆ It comprises the Chief Ministers of states and Union Territories,
 - ◆ The Lieutenant Governors of Union Territories, except Delhi and Puducherry,
 - ◆ The Vice Chairman of NITI Aayog,
 - ◆ Full-time members of NITI Aayog.

NITI Aayog's Operational Framework

Focus on Cooperative Federalism

Focus on cooperative federalism, long-term development, and policy research.

Leadership

Led by the Prime Minister with a Vice-Chairperson, CEO, and Governing Council.

Approach

Bottom-up, encouraging state participation and cooperation.

Advisory Body

Advisory body, without direct enforcement power.

Focus

Does not formulate Five-Year Plans, focuses on long-term policy.

ADMISSIONS MANDATORY UNDER RTE ACT

In **Lucknow Public School v. State of Uttar Pradesh (2026)**, the Supreme Court held that **neighbourhood schools, including private unaided schools, must admit students allotted by the State under the RTE Act without delay, calling it a national mission.**

Key Highlights of the Judgment

- Schools are **legally bound** to grant admission once the State forwards the list; refusal violates **Article 21A (Right to Education)**.
- **25% reservation** for children from economically weaker (EWS) and disadvantaged sections is mandatory and promotes **social equality and integration**.
- Any obstruction would render the right to education an **"empty promise"**, making compliance enforceable.

Right to Education Act, 2009

- **Article 21A** (inserted by the 86th Constitutional Amendment Act, 2002) guarantees free and compulsory education for children aged 6–14 years.

- Earlier under Article 45 (DPSP), it became a justiciable Fundamental Right.
- **Article 51A(k)** imposes a duty on parents/guardians to provide education.
- **Major Provisions:**
 - ◆ Free and compulsory education in neighbourhood schools till elementary level. 25% reservation in private unaided schools with State reimbursement.
 - ◆ No detention, expulsion, or board exams till completion of elementary education.
 - ◆ Special training for school dropouts to mainstream them.
 - ◆ Duty of governments to ensure infrastructure, teachers, and learning standards.

Significance

- Ensures **universal access** and strengthens enforceability of Article 21A. Advances **substantive equality**, reducing social and economic disparities.
- Reinforces the **Common School System (Kothari Commission)** vision. Supports **human capital development** and aligns with **SDG-4 (Quality Education)**.

Challenges

- Resistance by private schools and delays in admission.
- Hidden costs (uniforms, books) burden poor families. Weak monitoring, accountability gaps, and inter-state disparities.

E-PRAAPTI PORTAL

The Employees' Provident Fund Organisation (EPFO) is launching **E-PRAAPTI to resolve long-pending issues of unclaimed and inoperative EPF accounts.**

About the Portal

- E-PRAAPTI is a dedicated digital platform to enable identification, tracking, UAN linking, and activation of old EPF accounts.
- It uses **Aadhaar-based authentication** to allow secure access to accounts, including those not linked to a Universal Account Number (UAN).
- A PF account becomes inoperative if no contributions are made for 36 months after leaving employment or if it is not linked to an active UAN.

Significance

- Addresses around **31.83 lakh inoperative EPF accounts**, many inactive for decades.
- Supports retirees and inactive members by enabling **easy recovery and access to savings**.
- Strengthens EPFO's digital governance, complementing its **high-volume claim settlement system (8.31 crore claims in FY26)**.

2

INTERNATIONAL RELATIONS

UNITED NATIONS SECURITY COUNCIL (UNSC)

Russia and China vetoed a UNSC resolution aimed at reopening the Strait of Hormuz, highlighting the role of veto power in global security decisions.

About UNSC

- The **United Nations Security Council (UNSC)** is one of the **six principal organs of the United Nations**, established in **1945**.
- It has the primary responsibility for maintaining **international peace and security**.
- It is the **only UN body whose resolutions are legally binding** on all member states under **Article 25** of the UN Charter.
- **Headquarters:** New York, USA.

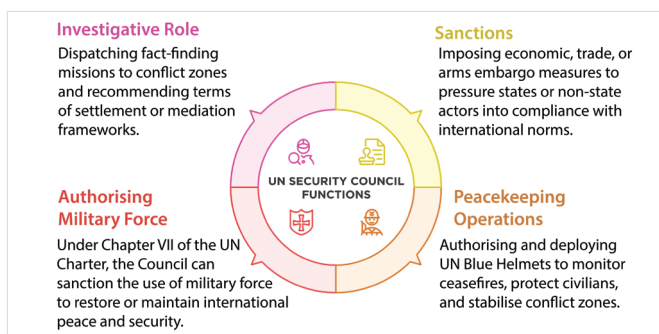
Structure and Composition

- **The Council has 15 members:**
 - ◆ **Permanent Members (P5) with veto power:** China, France, Russia, United Kingdom, United States.
 - ◆ **Non-Permanent Members (10):** Elected by the UN General Assembly for **two-year terms** with regional distribution:
 - ◆ Africa (3), Asia-Pacific (2), Eastern Europe (1), Latin America & Caribbean (2), Western Europe & Others (2).
- A **single veto by any P5 member** can block a substantive resolution, irrespective of majority support.

Working Mechanism of UNSC

- **Voting:** Each member has one vote; a resolution requires **at least 9 affirmative votes and no P5 veto**.
- **Presidency:** Rotates **monthly in alphabetical order** among members.
- **Binding Nature:** Member states are obligated to **accept and implement UNSC decisions**.

Functions and Powers



- **Conflict Resolution:** Investigates disputes and promotes peaceful settlement through mediation.

- **Sanctions:** Imposes **economic or trade sanctions** (e.g., arms embargoes).
- **Peacekeeping:** Deploys **UN peacekeeping forces (Blue Helmets)** to maintain ceasefires and protect civilians.
- **Use of Force:** Can **authorise military action under Chapter VII** of the UN Charter.
- **Investigative Role:** Sends missions to assess conflicts and recommend solutions.
- **Institutional Role:** Recommends **appointment of the UN Secretary-General** and admission of new UN members.

Significance

- The UNSC acts as the **central global authority on peace and security and legality of use of force**.
- It serves as the **primary forum for major powers to manage conflicts**, as seen in contemporary geopolitical crises.

MADMAN THEORY

The ongoing West Asia crisis has revived discussion on the Madman Theory, particularly in relation to the foreign policy posture of Donald Trump, where strategic unpredictability and backchannel diplomacy contributed to a fragile ceasefire.

What is the Madman Theory?

- The Madman Theory is a **foreign policy and strategic doctrine** in which a leader deliberately projects an image of being **irrational, unpredictable, or willing to take extreme actions**, including war or even nuclear confrontation.
- Its objective is to **force adversaries into concessions by making escalation appear credible and uncontrollable**.
- **Origin:** The concept is most closely associated with **Richard Nixon** and his National Security Adviser **Henry Kissinger** during the **Cold War**, particularly in the context of the **Vietnam War**.
- It operates primarily through **psychological signalling**, focusing on shaping the perception and calculations of adversaries rather than immediate military action.

Key Features of Madman Theory

- **Strategic Unpredictability:** Leaders adopt inconsistent positions, sudden threats, or abrupt policy shifts to keep opponents uncertain.
- **Credible Extreme Threats:** Use of rhetoric indicating willingness to employ disproportionate or escalatory force.
- **Perception Management:** Emphasis on influencing the adversary's belief about potential actions rather than actual deployment of force.

INDIA–DENMARK ECONOMIC TIES

Denmark has announced the establishment of the first Danish Chamber of Commerce in India, to be set up in New Delhi.

About the Initiative

- The Chamber will act as an institutional platform for **business interaction between India and Denmark**.
- It will support Danish companies operating in India and facilitate market entry for new firms.

India–Denmark Relations

- Diplomatic relations were established in **1949**.
- Bilateral ties were elevated to a **Green Strategic Partnership in 2020**, focusing on sustainable development.
- **Economic Relations:** India and Denmark share over 400 years of trade relations. More than 225 Danish subsidiaries operate in India, employing over 1 lakh people.
 - ◆ Bilateral trade in goods and services stands at about \$7.8 billion (2024).
- **Trade Composition:**
 - ◆ **India's exports to Denmark:** Textiles, vehicles and components, iron and steel, metal goods, leather products.
 - ◆ **Denmark's exports to India:** Pharmaceuticals, power-generating and industrial machinery, metal waste, ores, organic chemicals.
- Both countries signed a **Migration and Mobility Partnership Agreement** (February 2024) to facilitate the movement of skilled professionals.

CHINA'S FICTITIOUS NAMING OF PLACES

India has categorically rejected China's renaming of places in Arunachal Pradesh as "fictitious and mischievous", warning that such actions harm bilateral relations.

China's Actions

- China claims **Arunachal Pradesh as "Zangnan"** (southern Tibet) and has issued multiple renaming lists (2017, 2021, 2023).
- It has created following **administrative units in disputed areas:**
 - ◆ **He'an and Hekang counties** covering parts of the **Aksai Chin plateau (Ladakh)**, a key India–China dispute zone.
 - ◆ **Senling county**, located near the **Karakoram range**, close to **Pakistan-occupied Kashmir (PoK)** and the **Wakhan Corridor (Afghanistan)**, a strategically sensitive tri-junction region.

India's Response

- The **Ministry of External Affairs** has reaffirmed that Arunachal Pradesh and all such areas are integral and inalienable parts of India.
- India views these steps as **attempts to legitimise illegal territorial claims through cartographic and administrative measures**.

- Such actions **undermine efforts to normalise relations**, strained since the **2020 eastern Ladakh standoff**, and are linked to concerns over **CPEC passing through PoK**.

Line of Actual Control (LAC)

- The LAC is the de facto boundary separating Indian- and Chinese-controlled areas.
- India considers it 3,488 km long, while China estimates about 2,000 km.
- It has three sectors: **Eastern (Arunachal–Sikkim), Middle (Uttarakhand – Himachal), Western (Ladakh)**.

BRICS AND QUAD GROUPINGS

India, with BRICS chairmanship, is set to host BRICS and Quad Foreign Ministers' meetings in May 2026 in New Delhi. The BRICS meeting is scheduled for May 14–15, 2026, while the Quad meeting is expected in the last week of May.

About BRICS

- **Origin:** BRIC formed in **2006** (UNGA meeting); first summit in **2009 (Russia)**; **South Africa joined in 2010** (BRICS).
- **Members (11):** Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Iran, Saudi Arabia, UAE, Indonesia.
- **Partner Countries (2025):** Belarus, Bolivia, Kazakhstan, Cuba, Malaysia, Nigeria, Thailand, Uganda, Uzbekistan, Vietnam.
- **Nature:** Informal intergovernmental grouping without a treaty-based charter; operates through **consensus-based declarations**.
- **Purpose:** Cooperation on **global governance, economic coordination, and regional issues**.
- **Pillars of Cooperation:**
 - ◆ **Political and Security:** Focuses on diplomatic relations, conflict resolution, and defense.
 - ◆ **Economy and Finance:** Deals with trade, investment, and financial stability.
 - ◆ **Cultural and People to People Exchanges:** Promotes mutual understanding through education, art, and tourism.

India's BRICS Chairmanship (2026)

- Theme: **"Building for Resilience, Innovation, Cooperation and Sustainability"**
- Summit scheduled for **September 9–10, 2026 (New Delhi)**.
- Agenda includes **de-dollarisation, local currency trade, climate finance, water security, and atmospheric technologies**.
- Focus on **digital public infrastructure (Aadhaar, UPI)** as scalable models.
- India faces a **diplomatic balancing challenge** amid divergent member positions on the **West Asia crisis**, including Iran–UAE engagement.

Quadrilateral Security Dialogue (Quad)

- **Members:** India, USA, Japan, Australia.
- **Origin:** Emerged after 2004 tsunami, formalised in 2007 by Shinzo Abe; revived in 2017.
- **Nature:** Informal strategic forum with no secretariat, no treaty, and no mutual defence commitments.
- **Objective:** Promote a free, open, and inclusive Indo-Pacific.

Notable Quad Developments:

- **Malabar Exercise:** Expanded in 2020 with Australia's inclusion.
- **2021 Summit:** Adoption of "Spirit of the Quad" principles.
- **Quad Cancer Moonshot:** India to supply \$7.5 million worth of HPV vaccines, screening kits, and diagnostics.
- **Critical Minerals Initiative:** Aims to diversify supply chains and reduce dependency risks.

UNDP REPORT ON WEST ASIA CONFLICT

The United Nations Development Programme released a report titled "Military Escalation in the Middle East: Human Development Impacts Across Asia and the Pacific."

About the Report

- The report covers **36 countries** and is based on inputs from **22 UNDP country offices, simulations, and analytical assessments.**
- It analyses a **28-day conflict scenario with an adjustment period of up to 8 months** to estimate long-term impacts.

Key Findings

Global

- The report highlights that the **West Asia conflict is not just geopolitical but a major human development shock** affecting economies across Asia-Pacific.
- The Asia-Pacific region may face **economic losses between \$97 billion and \$299 billion**, equivalent to **0.3–0.8% of GDP.**
- Globally, up to **8.8 million** people may be pushed into poverty under severe scenarios.
- The crisis affects countries through **higher fuel prices, rising freight and insurance costs, supply chain disruptions, and increased input costs**, which reduce purchasing power and increase food insecurity.

India-Specific Impact

- India's poverty may increase by **4 lakh to 2.5 million people**, with the severe estimate at about **24.6 lakh.**
- The poverty rate may rise from **23.9% to 24.2%**, increasing the total number of poor to about **35.40 crore.**
- India may lose **0.03 to 0.12 years of Human Development Index (HDI) progress.**

Energy and Trade Dependence

- India imports **more than 90% of its oil**, with over **40% of crude oil, 90% of LPG, and more than 45% of fertilizers** coming from West Asia.
- Around **85% of domestic urea production depends on imported LNG.**
- West Asia accounts for **14% of India's exports and 20.9% of imports**, including **\$48 billion worth of non-oil exports.**

Food, Agriculture and Remittances

- Rising costs and supply disruptions may affect the **Kharif cropping season** and worsen food insecurity.
- India has about **9.37 million workers in GCC countries**, and **38–40% of remittances** come from the Gulf region.
- The available **urea stock of about 6.11 million tonnes** provides only a short-term buffer.

Employment and Sectoral Impact

- About **90% of India's workforce is informal**, making it highly vulnerable to economic shocks.
- MSMEs may face **higher costs, supply shortages, job losses, and reduced working hours.**
- The cost of **medical devices may rise by around 50%**, while **medicine prices may increase by 10–15%.**

Policy Recommendations

- Countries should strengthen **shock-responsive social protection systems** to protect vulnerable populations.
- They should build **resilient supply chains and diversify energy and food systems.**
- Governments should support **MSMEs and informal workers** and promote **regional cooperation.**

AZEC PLUS

At the AZEC Plus meeting, India expressed significant concern regarding disruptions in maritime energy corridors.

About AZEC Plus

- **Inception:** The **Asia Zero Emission Community (AZEC)** is a Japan-led platform launched in 2023. It aims to synchronize **decarbonization** efforts with **clean energy transitions** and regional **energy security.**
- **Model:** It offers an Asia-specific energy transition framework that accounts for the unique developmental stages and requirements of different Asian economies.
- **Focus Areas:**
 - ♦ **Technology Transfer:** Enabling the exchange of clean energy technologies, specifically **hydrogen, ammonia, and renewables.**
 - ♦ **Sustainable Growth:** Pursuing carbon neutrality without compromising economic expansion.
 - ♦ **Supply Chain Resilience:** Enhancing the stability of energy supply chains across the continent.

- **AZEC Plus Framework:** This expanded initiative incorporates additional Asian nations and key international organizations, including the **Asian Development Bank (ADB)** and the **International Energy Agency (IEA)**.
- **Evolving Mandate:** Beyond emissions, AZEC Plus addresses critical security issues such as **maritime safety**, access to **critical minerals**, and broader energy supply disruptions.

INDIA–RUSSIA RELOS PACT

India and Russia have operationalised the Indo-Russian Reciprocal Exchange of Logistics Agreement (RELOS).

About RELOS

- RELOS is a **logistics support agreement** that establishes standardised procedures for dispatching and hosting military units during authorised activities.
- It defines **administrative, logistical, and operational arrangements** when forces of one country are present in the territory, airspace, or waters of the other.
- The **agreement is not a permanent basing arrangement**; it is **valid for 5 years (extendable)** and allows reciprocal access to facilities.
- **Comparison with Other Agreements:** RELOS is similar to India's agreements with the US—LEMOA, COMCASA, and BECA—but is specifically tailored to India–Russia defence cooperation.

Key Provisions

- It governs the movement of **troops, warships, and military aircraft** between the two countries.
- It enables mutual use of airspace and port calls by naval vessels.
- It provides logistical support such as refuelling, repairs, maintenance, and supplies.
- It applies to joint exercises, training, deployments, and **humanitarian assistance and disaster relief (HADR)**, with scope for expansion by mutual consent.

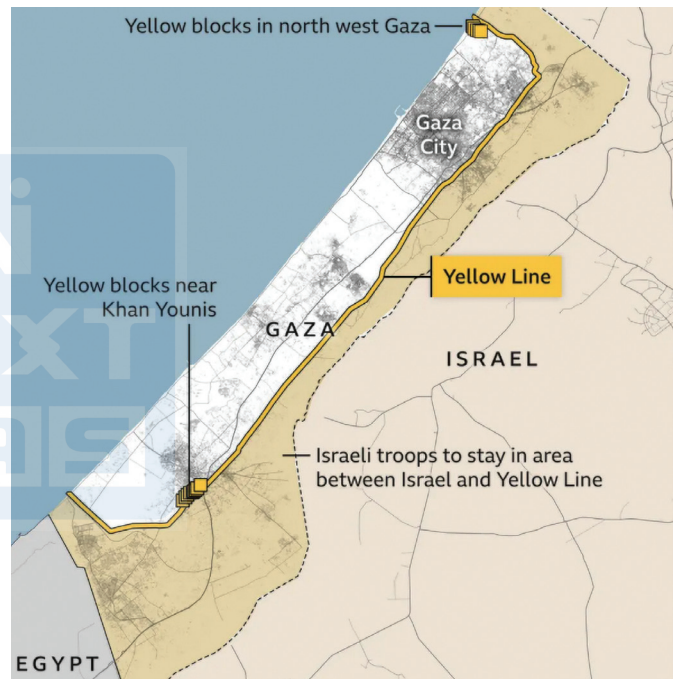
Significance for India	Significance for Russia
<ul style="list-style-type: none"> ➤ It provides access to Russian bases from Vladivostok (Pacific) to Murmansk (Arctic). ➤ It enhances long-range deployment capability using Russia's network of 40+ military bases. ➤ It improves operational reach, endurance, and logistics support, especially for Russian-origin platforms. 	<ul style="list-style-type: none"> ➤ It enables access to Indian ports and airfields, strengthening its presence in the Indian Ocean Region (IOR). ➤ It reinforces Russia's role in a multipolar global order.

ISRAEL'S 'YELLOW LINE' IN SOUTHERN LEBANON

Israel has announced the establishment of a "Yellow Line" in southern Lebanon after a 10-day ceasefire, marking a new phase in its security strategy.

What is the Yellow Line?

- The Yellow Line is a **military demarcation and deployment boundary** created by Israel to **separate areas of control in a conflict zone**.
- It marks the **limit of Israeli troop deployment**, and any movement beyond it is treated as a **security threat**.
- It functions as a **temporary operational boundary and buffer zone** to control territory and restrict civilian movement.



Origin and Evolution

- The concept was first used in the **Gaza war (October 2025)**, where it divided the territory into Israeli-controlled and Palestinian-controlled zones.
- It was physically marked by **yellow bollards with poles placed at intervals inside Gaza**.
- Its use in Lebanon reflects an attempt to **replicate the "Gaza Model"** in another conflict zone.

Purpose

- It represents a **forward defensive posture** aimed at preventing groups like **Hamas and Hezbollah** from operating near Israeli borders.
- It allows Israel to control territory, restrict civilian return, destroy militant infrastructure, and continue military operations beyond the line.

DRUZHBA PIPELINE

The resumption of Russian oil flow through the Ukrainian section of the Druzhba pipeline led Hungary to lift its veto on a €90 billion EU loan to Ukraine.

About

- The Druzhba (“Friendship”) pipeline is one of the world’s longest crude oil pipeline networks, connecting Russian oil fields to Central and Eastern Europe.
- It was constructed by the Soviet Union and became operational in 1964 to supply oil to the Council for Mutual Economic Assistance (COMECON) countries and integrate their economies with Soviet energy systems.
- **Purpose:** To provide a reliable, high-capacity overland route for Russian crude to Europe, reducing reliance on maritime transport.
- **Route and Structure:**
 - ◆ **Origin:** Almetyevsk region (central Russia), where oil from Siberia, the Urals, and the Caspian region converges.
 - ◆ Passes through Belarus, then splits into two branches:
 - ◆ **Northern Branch:** Poland → Germany
 - ◆ **Southern Branch:** Ukraine → Hungary → Slovakia → Czech Republic

- Transit relies on cooperation between **Ukraine and Belarus** for supply to Europe.
- The southern route that passes through Ukraine is **exposed to geopolitical disruptions**.

Significance

- Remains a **critical energy lifeline**, especially for **landlocked countries like Hungary and Slovakia**.
- Acts as a **geopolitical lever**, where disruptions influence sanctions, aid decisions, and EU–Russia energy relations.

SANCTION WAIVER ON CHAHBAHAR PORT

The U.S. sanctions waiver for India’s operations at Chabahar Port expired on 26 April 2026, prompting India to recalibrate its strategy, including the option of a temporary exit without abandoning long-term objectives.

Background

- India and Iran signed an agreement in **2003**, followed by an MoU in **2015** to develop the **Shahid Beheshti Terminal**, and a **2016 India–Iran–Afghanistan trilateral pact** to operationalise connectivity.
- The U.S. granted a **sanctions waiver in 2018**, recognising Chabahar’s role in supporting Afghanistan.



About Chabahar Port

- Located in **Sistan–Baluchestan province (Iran)** on the **Gulf of Oman (Makran coast)**, it is **Iran's only oceanic port**.
- It comprises **two terminals: Shahid Kalantari and Shahid Beheshti** (India is involved in the latter).
- It provides **direct sea access bypassing Pakistan**.
- Distance: **~550 nautical miles from Kandla** and **~786 nautical miles from Mumbai**.

Recent Developments

- India has **withdrawn personnel, prepaid its ~\$120 million investment commitment**, and is **considering transferring its stake** in the Shahid Beheshti Terminal to an Iranian entity (under discussion).
- The situation presents a clear **strategic dilemma: continue engagement and risk U.S. sanctions, or scale back involvement while preserving long-term interests**.

Significance for India

- **Geopolitical and Strategic:** Provides direct access to Afghanistan and Central Asia, bypassing Pakistan.
 - ◆ Located at the intersection of South Asia, Central Asia, and the Middle East.
 - ◆ Acts as a counterbalance to China's Gwadar Port.
- **Connectivity and Trade:** Serves as a gateway to the International North-South Transport Corridor (INSTC), a multimodal network (sea, rail, road) linking India with Iran, Russia, Central Asia, and Europe.
 - ◆ Offers an alternative route for regional connectivity, enhancing resilience of trade routes.
 - ◆ Improves access to markets such as Kazakhstan and Uzbekistan, reducing transport time and costs.
- **Economic and Energy:**
 - ◆ Facilitates trade in iron ore, sugar, and rice, and can help reduce oil import costs.
 - ◆ Humanitarian and Regional Role
 - ◆ Enables delivery of humanitarian aid to Afghanistan.
 - ◆ Strengthens India's regional influence and connectivity strategy.

UAE EXIT FROM OPEC AND OPEC+

The United Arab Emirates announced its withdrawal from OPEC and OPEC+ (effective May 1, 2026). UAE blamed fellow Arab states for not doing enough to protect it from numerous Iranian attacks during the war and decided to exit the grouping.

About OPEC

- The **Organization of the Petroleum Exporting Countries (OPEC)** is an intergovernmental organization founded in 1960 during the Baghdad Conference. Its original founding members were **Saudi Arabia, Iran, Venezuela, Kuwait, and Iraq**.

- **Objectives:** The organization coordinates petroleum supply and demand policies to maintain stable and fair market prices while ensuring a consistent income for oil-producing nations.
- **Current Membership:** It consists of 11 member nations: Algeria, Congo, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, and Venezuela.

About OPEC+

- OPEC+ is an expanded framework now consisting of 21 members. This includes the 11 original OPEC countries plus 10 other major oil-producing nations: **Russia, Kazakhstan, Azerbaijan, Brunei, Bahrain, Mexico, Oman, South Sudan, Sudan, and Malaysia**.
- **Formation:** It was established in 2016 following the **Algiers Accord (Sep. 2016)** and the subsequent **Vienna Agreement (Nov. 2016)** between OPEC and non-OPEC exporters.
- **Purpose:** The alliance was primarily created **to stabilize the market in response to a significant drop in oil prices** triggered by the rapid increase in U.S. shale oil production.

WORLD FOOD PROGRAMME (WFP)

The World Food Programme is delivering food and nutrition assistance in South Sudan amid ongoing humanitarian challenges.

About WFP

- The World Food Programme is the **UN's food assistance arm** and the **world's largest humanitarian organisation** addressing hunger and food insecurity.
- It was established in **1961 by the UN General Assembly and the Food and Agriculture Organization (FAO)**.
- It operates in **over 120 countries** and territories.
- The organisation is **fully funded through voluntary contributions** from governments, corporates, and private donors.
- Its work is aligned with **Sustainable Development Goal 2 (Zero Hunger)**.
- **Headquarters:** Rome, Italy

Functions of WFP

- Provides **emergency food assistance** during conflicts, disasters, and pandemics.
- Delivers **nutritional support** to children, pregnant women, and vulnerable groups.
- Works to **reduce malnutrition and stunting**.
- Runs **school meal programmes** to improve attendance and learning outcomes.
- Supports community resilience and food security systems.

Key Contributions

- Awarded the **Nobel Peace Prize (2020)** for efforts in **combating hunger and preventing its use as a weapon of war**.
- Publishes the **Global Report on Food Crises**, assessing levels of acute hunger worldwide.

CHANGI NAVAL BASE

INS Sunayna, deployed under IOS SAGAR, arrived at Changi Naval Base, Singapore, marking its fourth port call after Malé, Phuket, and Jakarta.

About

- The deployment includes a **multinational crew from 16 Friendly Foreign Countries (FFCs)** under the vision of **MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions)**.
- **Changi Naval Base:**
 - ◆ **Location:** Eastern tip of Singapore near Changi Airport.
 - ◆ **Strategic Position:** Close to the Strait of Malacca and the South China Sea, enabling control over one of the world's busiest sea lanes.
 - ◆ **Capability:** Can accommodate large warships, including aircraft carriers and amphibious vessels.
 - ◆ **Role:** Supports Singapore in securing Sea Lines of Communication (SLOCs) and regional maritime stability.
- The 2017 India–Singapore Logistics Agreement allows the Indian Navy access to Changi Naval Base for refuelling, maintenance, and operational support.

Other Strategic Overseas Ports for India

- **Port of Duqm (Oman):** Access to the Arabian Sea.
- **Sabang Port (Indonesia):** Near the entrance of the Strait of Malacca.
- **Others:** Chabahar (Iran), Haifa (Israel), Sittwe (Myanmar), Chattogram and Mongla (Bangladesh).

INDIA–EGYPT DEFENCE COOPERATION

India and Egypt held the 11th Joint Defence Committee (JDC) meeting in Cairo, advancing defence ties under the Strategic Partnership (2023) and MoU on Defence Cooperation (2022).

Background

- **Historical links:** Trade between **Indus Valley and Nile civilisations**; later cultural exchanges via Greco-Roman and Islamic networks.
- **Post-independence:** Close ties under **Nehru–Nasser**, including leadership in the **Non-Aligned Movement (NAM)** and cooperation during the **Suez Crisis (1956)**.
- **Post-Cold War:** Renewed engagement since the **1990s** with economic reforms.

Present Status

- **Political Relations:** Elevated to a **Strategic Partnership (2023)**; high-level visits, Egypt as **Republic Day Chief Guest (2023)**.
- **Economic Relations:** Bilateral trade around **\$6–7 billion**; cooperation in petroleum, fertilizers, textiles; Indian investments in pharma, IT, manufacturing.
- **Geostrategic Relations:** Egypt's control of the **Suez Canal** is vital for India's trade; convergence in **Indian Ocean–Mediterranean connectivity**.

Defence Cooperation Framework

- Institutional mechanism: **Joint Defence Committee (JDC)**.
- **Focus areas:**
 - ◆ Joint training and military exercises
 - ◆ Defence production and technology collaboration
 - ◆ Maritime security cooperation
- **Exercise Cyclone:** Joint special forces exercise focusing on **counter-terrorism, desert and urban warfare, and special operations coordination**.

Key Outcomes of 11th JDC Meeting

- **Defence Roadmap (2026–27):**
 - ◆ Expansion of military-to-military engagements
 - ◆ Intensification of joint training exercises
 - ◆ Strengthening maritime security cooperation
 - ◆ Increasing scale and complexity of exercises
 - ◆ Enhancing defence technology and production ties
- **Defence Industry Collaboration:**
 - ◆ India highlighted **\$20+ billion defence production** and **\$4 billion exports to 100+ countries**
 - ◆ Agreement to develop a **Defence Industry Cooperation Plan**
 - ◆ Focus on **co-development, co-production, technology transfer, and industrial partnerships**
 - ◆ Supports **Atmanirbhar Bharat and defence exports**
- **Maritime Cooperation:**
 - ◆ First-ever Navy-to-Navy Staff Talks
 - ◆ Emphasis on freedom of navigation and role of Information Fusion Centre–Indian Ocean Region (IFC-IOR)
 - ◆ Focus on securing Sea Lines of Communication (SLOCs) under SAGAR vision
- **Air Force Cooperation:**
 - ◆ Engagement with Egyptian Air Force leadership
 - ◆ Scope for joint exercises and training exchanges

Challenges

- Trade imbalance and underutilised potential
- Limited private sector participation
- Regulatory and bureaucratic hurdles
- Competition from China and other global players
- Regional instability in West Asia–North Africa (WANA)

Future Roadmap

- **Economic:** Expand trade via CEPA/FTA possibilities; use Egypt as a gateway to Africa and Europe
- **Defence:** Enhance co-production, exports, and maritime security cooperation (Suez–IOR linkage)
- **Energy & Technology:** Collaboration in green hydrogen, renewables, and digital infrastructure
- **Multilateral:** Joint role in Global South platforms, climate negotiations, and counter-terrorism.

JAPAN EASES DEFENCE EXPORT RESTRICTIONS

Recently, Japan ended its decades-old restriction on arms exports, allowing export of lethal weapons; India welcomed the move and both sides agreed to increase practical defence cooperation.

Japan's Policy Shift

- Japan's earlier policy, rooted in its **post-WWII pacifist Constitution (Article 9)**, restricted arms exports to five non-lethal categories: **rescue, transport, warning, surveillance, and minesweeping.**
- The **2026 revision marks a major departure**, permitting export of **lethal systems such as missiles, destroyers, and fighter jets.**
- This builds on the **2023 amendment to the "Three Principles for Transfer of Equipment and Technology"**, which enabled greater flexibility in defence transfers.
- Exports are restricted to **17 trusted partner countries** with defence agreements (including India, the U.S., Australia, and the Philippines).
- Each transfer requires approval by **Japan's National Security Council.**
- Exports are generally **prohibited to countries in active conflict or under UN sanctions**, and recipients must **use equipment in accordance with the UN Charter.**

Drivers of the Shift

- **Industrial rationale:** Japan's defence industry was constrained by a **"Self-Defense Forces-only"** market, leading to stagnation; exports are needed for scale and sustainability.
- **GCAP Catalyst:** Participation in the **Global Combat Air Programme (GCAP)** with the UK and Italy (6th-generation fighter by 2035) requires export flexibility to **manage costs and ensure viability.**
- **Geopolitical context:** Rising security challenges in the **Indo-Pacific**, particularly China's assertiveness.

Implications for India

- Expands scope for **co-development, co-production, and advanced technology transfer** in defence systems.
- Enables **deeper defence industrial collaboration**, including **supply chain integration and MSME participation.**
- Strengthens coordination in the **Indo-Pacific security architecture**, including the Quad.

India–Japan Defence Cooperation

- Institutional mechanisms include the **Joint Working Group on Defence Equipment and Technology Cooperation (JWG-DETC)** and multiple agreements:
 - ◆ Joint Declaration on Security Cooperation (2008)
 - ◆ Defence Cooperation MoU (2014)
 - ◆ Information Protection Agreement (2015)
 - ◆ Reciprocal Provision of Supplies and Services Agreement (2020)

➤ Regular tri-service exercises enhance interoperability:

- ◆ JIMEX (naval)
- ◆ Malabar (with U.S. and Australia)
- ◆ Dharma Guardian (Army)
- ◆ Veer Guardian (Air Force)
- ◆ Coast Guard cooperation

➤ Growing **industry linkages** since 2017, including co-development projects such as the **UNICORN naval mast (2024).**

Broader India–Japan Strategic Relation

- Diplomatic relations since **1952**, elevated to **Special Strategic and Global Partnership (2014).**
- Alignment between India's **Act East Policy/IPOI** and Japan's **Free and Open Indo-Pacific (FOIP)** vision.
- Cooperation across trade (\$22.8 billion), investment (\$43.2 billion FDI), infrastructure (ODA), space (ISRO–JAXA), and global initiatives (ISA, CDRI, SCRI).

Challenges

- Trade imbalance in Japan's favour
- Cultural and language barriers
- Infrastructure constraints in India
- Limited people-to-people exchanges
- Regional geopolitical tensions

Way Forward

- Deepen defence co-production and export collaboration
- Reduce trade imbalance by boosting Indian exports
- Expand cooperation in emerging technologies (AI, semiconductors, clean energy)
- Strengthen people-to-people and skill linkages.

SAARC CURRENCY SWAP FRAMEWORK

India approved a ₹30 billion drawal for Maldives under the SAARC Currency Swap Framework, reaffirming financial support and regional cooperation.

About SAARC Currency Swap Framework

- It is a **bilateral currency swap arrangement within the Global Financial Safety Net**, operational since **2012**, to provide **short-term foreign exchange liquidity** to SAARC countries.
- A **currency swap** is a contract between countries to exchange currencies on **pre-determined terms**, helping meet temporary forex needs without exposure to market volatility.

Structure and Mechanism

- Operates through bilateral agreements between the Reserve Bank of India (RBI) and central banks of SAARC countries.
- **Includes:**
 - ◆ **INR Swap Window:** ₹25,000 crore
 - ◆ **USD/Euro Swap Window:** \$2 billion

- Enables countries to access funds quickly to **manage balance of payments pressures**.

Key Features SAARC Currency Swap Framework

- **Liquidity Support:** Provides immediate forex during external stress without relying on costly market borrowings.
- **Pre-determined Terms:** Minimises exchange rate and market risks.
- **Regional Integration:** Strengthens economic interdependence among South Asian countries.
- **INR Internationalisation:** Encourages use of Indian Rupee in regional transactions.

Significance

- Enhances **financial stability in the region** during crises.
- Strengthens **India's economic diplomacy and neighbourhood engagement**.
- Reinforces India's role as a **regional net security provider in financial terms**.

SAARC

- The **South Asian Association for Regional Cooperation (SAARC)** is a regional intergovernmental organisation, established on 8 December 1985 in Dhaka.
- **Members:** Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.
- **Secretariat:** Kathmandu, Nepal.

Objectives:

- Accelerate economic growth, social progress, and cultural development.
- Promote collective self-reliance among South Asian countries.
- Enhance cooperation in economic, technical, scientific, and cultural fields.
- Strengthen collaboration with other developing countries.

Principles:

- Consensus-based decision-making.
- Exclusion of bilateral and contentious issues from deliberations.

2026 SCO DEFENCE MINISTERS' MEETING

At the Shanghai Cooperation Organisation (SCO) Defence Ministers' Meeting in Bishkek, Kyrgyzstan.

Key Highlights of India's Position

- India called for unified action against terrorism, emphasised a zero-tolerance approach, and warned against double standards.
- India highlighted **Operation Sindoor** to demonstrate its firm resolve that terrorist safe havens will not remain immune from action.

- India urged SCO members to act against countries that shelter or support terrorism and emphasised that there should be no political double standards in counter-terrorism efforts.
- India reiterated that combating terrorism, separatism, and extremism is a foundational principle of the SCO.
- India referred to the **Tianjin Declaration (2025)** to underline the commitment to regional security, condemnation of terrorism, and the promotion of a multipolar world order.
- India emphasised the importance of the **Regional Anti-Terrorist Structure (RATS)** in intelligence sharing, counter-radicalisation, and strengthening regional security.
- India advocated for a rule-based international order where coexistence, cooperation, and dialogue prevail over conflict.
- India reaffirmed its commitment to diplomacy and dialogue and highlighted the guiding principle of **"Vasudhaiva Kutumbakam"** to promote unity and peace.

Shanghai Cooperation Organisation (SCO)

Origin and Evolution

- The SCO originated from the **Shanghai Five (1996)**, which included China, Russia, Kazakhstan, Kyrgyzstan, and Tajikistan, and was later expanded in 2001 with the inclusion of Uzbekistan.
- The SCO currently has ten members: China, Russia, India, Pakistan, Iran, Belarus, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan, along with observer states such as Afghanistan and Mongolia.
- The organisation operates with Russian and Chinese as official languages and is guided by the **Council of Heads of State (CHS)** as the highest decision-making body.
- The SCO has two permanent bodies, namely the Secretariat in Beijing and the **RATS in Tashkent**.
- India became a full member in 2017 and assumed the rotating chairmanship in 2023.
- The grouping represents approximately 40% of the global population and around 30% of global GDP.
- **Objectives:** The SCO aims to strengthen cooperation to combat terrorism, separatism, and extremism while promoting regional stability, economic cooperation, and political coordination.

Significance for India

- The SCO provides India with an important platform to address **regional security concerns, particularly terrorism and radicalisation**, through mechanisms such as RATS.
- The organisation enables India to engage with China and Pakistan in a multilateral setting and assert its position in regional security discussions.
- The SCO facilitates India's **access to energy resources in Central Asia**, including oil, gas, and uranium.

- The grouping promotes economic cooperation and opens opportunities for trade and investment with Central Asian countries.
- The SCO supports India's efforts to strengthen its **outreach to Central Asia** despite geographical constraints.

Challenges

- The close **alignment between China and Pakistan** within the SCO limits India's influence on key security issues.
- Ongoing geopolitical tensions with China and Pakistan affect India's ability to engage constructively within the organisation.
- The SCO's focus on security issues often overshadows economic and developmental cooperation.
- The consensus-based decision-making process slows progress and limits the effectiveness of outcomes.

BRICS-MENA ENVOYS MEETING ON WEST ASIA CONFLICT

A meeting of BRICS Deputy Foreign Ministers and Special Envoys on MENA (Middle East and North Africa) in New Delhi expressed concern over the U.S.-Israel war against Iran.

About the Meeting

- Members could not agree on a unified position, reflecting sharp differences on West Asia issues.
- **Chair's Statement by India:** As BRICS Chair, India issued a statement summarising discussions instead of a consensus outcome.
- **The statement addressed:**
 - ◆ **Israel-Palestine conflict and Gaza situation**
 - ◆ Role of the **United Nations Relief and Works Agency (UNRWA)** in humanitarian support
 - ◆ Concerns over attacks on the **United Nations Interim Force in Lebanon (UNIFIL)**

India's Position and Diplomatic Balancing

- India attempted to **moderate language critical of Israel**, facing opposition from most members.
- Proposed replacing **"Israel" with "occupying power"** in certain references.
- Sought removal of **"East Jerusalem" as the capital of a future Palestinian state**, consistent with its **post-2017 balanced approach** between Israel and Palestine.

Reason for Lack of Consensus

- **Expanded BRICS composition** (including countries like Iran, Egypt, UAE, Ethiopia, Indonesia) has increased ideological diversity and geopolitical differences.
- Members hold divergent positions on Israel-Palestine and West Asia conflicts, making consensus difficult.
- The **MENA focus** reflects the region's direct involvement in the conflict, increasing sensitivity and stakes.

BRICS

- BRICS comprises **Brazil, Russia, India, China, South Africa**, and new members **Egypt, Ethiopia, Iran, Indonesia, and UAE (Saudi Arabia invited but not formally joined)**.
- It represents **about 41% of the global population, about 24% of GDP, and nearly 16% of global trade.**
- **Origin and Structure:**
 - ◆ Term **"BRIC" coined by Jim O'Neill (2001)**; formalised in **2006**, first summit in **2009**; expanded to BRICS in **2010**.
 - ◆ **Works through three pillars:**
 - ◆ Political and security cooperation
 - ◆ Economic and financial cooperation
 - ◆ Cultural and people-to-people exchanges
 - ◆ **Decision-making is consensus-based**, which becomes challenging with expansion.
 - ◆ The **New Development Bank (NDB)** finances development projects through loans, guarantees, and equity support.

Middle East and North Africa (MENA)

- Spanning **15 million km²** (10% of Earth's land), the region serves as a vital crossroads between Europe, Africa, and Asia, enriched by diverse environments and vast **oil and gas** reserves.
- It controls global trade through critical chokepoints like the **Strait of Hormuz, Suez Canal, and Bab al-Mandab**, connecting the Mediterranean and Arabian Seas.
- GDP has surged from \$610 billion in 1994 to **\$4.4 trillion** (4% of global GDP) today, fueled by technological adoption in the Gulf.
- China is the primary partner (exporting \$171 billion in 2022), alongside significant trade with **India and Italy**. Membership of Saudi Arabia, Egypt, Iran, and the UAE in **BRICS** adds \$1 trillion in export potential.



PRADHAN MANTRI AWAAS YOJANA

PMAY-G completes 10 years of implementation in 2026, marking a decade of India's flagship rural housing mission.

What is PMAY-G?

- **Aim:** Provide "Housing for All" in rural areas — financial assistance to eligible rural households, including houseless families and those living in zero, one, or two-room kutcha houses, to construct pucca homes with basic amenities.
- **Beneficiary Selection:** Using housing deprivation parameters from the Socio-Economic and Caste Census (SECC), 2011, verified by Gram Sabhas.
- **Funding Pattern:** 60:40 (Centre:State) in plain areas; 90:10 for North-Eastern and Himalayan states.
- **Nodal Ministry:** Ministry of Rural Development (MoRD).
- **Financial Assistance:**
 - ♦ Minimum unit size of 25 sq. m.
 - ♦ ₹1.20 lakh in plain areas; ₹1.30 lakh in hilly/North-Eastern states.
 - ♦ Additional ₹12,000 for toilet construction via convergence with Swachh Bharat Mission.

Reforms in the Scheme

- **Direct Benefit Transfer (DBT):** Financial assistance released directly to beneficiaries' bank accounts, eliminating middlemen.
- **Geo-tagging:** Time and date-stamped photographs uploaded at every construction stage for real-time monitoring.
- **AI-driven monitoring:** AI and Machine Learning tools for anomaly detection; Aadhaar face authentication (including eye-blink detection) to verify beneficiaries and prevent fraud.
- **Village-level Functionaries:** Each sanctioned house is tagged to a local functionary who follows up with the beneficiary.
- **Social Audits:** Every Gram Panchayat conducts a formal social audit at least once a year.

KAR SAATHI

An AI-enabled digital chatbot platform launched by the Income Tax Department to provide 24x7 guidance on direct tax matters under the new Income Tax Act, 2025 framework.

About

- It provides round-the-clock assistance for queries related to ITR filing, tax provisions, forms, notices, deductions, refunds, and compliance.
- It brings all direct tax-related resources such as forms, challans, e-payment, e-verification, and FAQs under one platform.

- Supports taxpayer grievance resolution and compliance queries.

Significance

- Part of India's broader push toward AI-driven digital governance.
- Facilitates smooth transition to the Income Tax Act, 2025.

PURCHASING MANAGER'S INDEX (PMI)

The West Asia crisis has led to India's Manufacturing PMI falling from 56.9 in February 2026 compared to 53.9 in March 2026.

About PMI

- PMI is a survey-based economic indicator that captures **changes in business conditions** compared to the previous month.
- It provides insights into **both current and near-term economic trends**.
- It is prepared separately for **manufacturing, services**, and also as a composite index.
- PMI is measured on a **scale of 0 to 100**. A reading above 50 indicates expansion, below 50 indicates contraction, and 50 indicates no change.
- PMI is compiled globally for many economies by IHS Markit, which is now part of S&P Global.

AD VALOREM DUTY

The United States has announced a 100% ad valorem duty on imports of patented pharmaceuticals and associated active pharmaceutical ingredients (APIs).

India's Stake

- The **US is India's single largest pharmaceutical export destination**, absorbing nearly 40% of India's total pharma exports.
- India dominates the American generics market supplying approximately 47% of all generic medicines consumed in the US.

What is Ad Valorem Duty?

- Ad valorem duty is a **customs tariff calculated as a fixed percentage of the declared value of imported goods** — as opposed to specific tariffs, which are levied on the basis of weight, volume, or quantity regardless of price.
- As the value of the imported product rises, the **absolute duty burden rises proportionally**.

- A 100% ad valorem duty effectively doubles the **landed cost of the imported product for the buyer**, making domestically produced alternatives significantly more competitive on price.

BANKING CORRESPONDENT CLASSIFICATION

The RBI has proposed that in addition to bank branches, banking correspondents should be classified into two categories based on their assignments and suggested uniformity in fixing their wages.

About

- The RBI proposed defining three types of delivery points — bank branches, Business Correspondent-Banking Outlet (BC-BO) and Business Correspondent-Banking Touchpoint (BC-BT).
 - ◆ **Banking correspondents are assigned in remote areas** to perform retail banking operations, expanding the reach of banks and helping in financial inclusion.
 - ◆ **BC-BOs** will be able to carry out activities such as opening of bank accounts; opening of term deposit accounts; cash deposits and withdrawals; fund transfers; issuance/blocking of debit cards among many others.
 - ◆ **BC-BTs** will offer limited services such as small-value transactions and remittances with flexible hours.
- Currently, **there is no classification among business correspondents**, while the commissions they get paid vary from bank to bank.
 - ◆ As of 2025, there were over 16 lakh business correspondents engaged by various lenders.

SOIL SAKHIS

The "Soil Sakhis" initiative in drought-prone districts of western Maharashtra is empowering women while improving soil health and agricultural productivity.

About the Initiative

- Launched in **2023** under the **Mann Deshi Foundation's Agriculture and Climate Action Programme**.
- Trains rural women as "**Soil Sakhis**" to promote **soil testing and scientific farming practices**.
- Implemented in **Satara, Sangli, Solapur, Kolhapur, and Pune** districts.

Key Features

- Soil Sakhis collect samples and facilitate **soil testing through laboratories**.
- Farmers receive **actionable reports** for improved crop and nutrient management.
- Soil Sakhis earn about **₹8,000–₹10,000 per month** (excluding petrol allowance).

PRADHAN MANTRI MUDRA YOJANA (PMMY)

The Pradhan Mantri MUDRA Yojana (PMMY) has completed 11 years.

About

- **Launched:** In 2015.
- **Aim:** To support small-scale business ventures for non-corporate and non-farm income-generating activities.
- **Target Group:** New entrepreneurs, small shopkeepers, women entrepreneurs, street vendors, artisans, fruit/vegetable vendors, and small manufacturing units.
- These loans are given by **Commercial Banks, RRBs, Small Finance Banks, MFIs and NBFCs**.
- Under the aegis of PMMY, MUDRA has created four products namely:
 - ◆ **Shishu:** Covering loans upto Rs. 50,000/-.
 - ◆ **Kishor:** Covering loans above Rs. 50,000/- and up to Rs. 5 lakhs.
 - ◆ **Tarun:** Covering loans above Rs.5 lakh and upto Rs.10 lakhs.
 - ◆ **TarunPlus:** Covering loans above Rs.10lakh and upto Rs.20 lakhs.
- **Loans cover term financing and working capital needs** across manufacturing, trading and service sectors, **including activities allied to agriculture** like poultry, dairy, and beekeeping, etc.
- **The interest rate** is governed by RBI guidelines, with flexible repayment terms.

AMENDMENTS TO MINERAL CONCESSION RULES

The Ministry of Mines has notified the Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession (Second Amendment) Rules, 2026 to operationalise recent reforms in the mining sector.

About

- The new rules are based on changes made in the **Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act)** through the 2025 amendment.

Key Features of the Amendment Rules

- **Inclusion of Contiguous Area:** Mining Lease (ML) or Composite Licence (CL) holders of deep-seated minerals are allowed a one-time extension to include adjoining (contiguous) areas.
 - ◆ The extension is capped at **10% of existing area for ML and 30% of existing area for CL**. This aims to ensure optimal extraction of mineral deposits that may otherwise remain unviable.
- **Provisions for Minor and Major Minerals:** The rules provide a clear method to deal with cases where major minerals are found in old minor mineral leases granted before 2025.
 - ◆ **Minor minerals** specifically include building stones, gravel, ordinary clay, and ordinary sand.

- ♦ **Major Minerals** cover all minerals other than minor minerals; examples include Coal, Iron Ore, Zinc, Limestone, Bauxite, and Gold.
- ♦ Minor minerals are regulated by **State Governments**; **major minerals fall under the purview of the Union Government.**

STAGFLATION

The ongoing US-Israel vs. Iran conflict has triggered a sharp energy supply disruption, reviving fears of 1970s-style stagflation.

What is Stagflation?

- ➔ **Definition:** Simultaneous occurrence of stagnant/negative economic growth + high unemployment + high inflation.
- ➔ **Term Coined By:** British politician Iain Macleod (1960s).
- ➔ **Why It's Dangerous:** Normal monetary policy tools fail, raising interest rates fights inflation but worsens unemployment; cutting rates boosts growth but fuels inflation further.

How Does it Occur?

- ➔ In a normal economy, prices and output move along a stable supply-demand curve.
- ➔ A negative supply shock (war, pandemic, sanctions) shifts the entire supply curve leftward.
 - ♦ As a result, at the same price level, producers supply less output due to higher input costs or broken logistics.

SKILLS OUTCOMES FUND

The Ministry of Skill Development and Entrepreneurship (MSDE) has launched a campaign to establish the Skills Outcomes Fund.

About

- ➔ This initiative is designed to create better career opportunities for young people from economically disadvantaged backgrounds.
- ➔ It expands upon the achievements of the Skill Impact Bond, India's inaugural outcomes-based project started by the **National Skill Development Corporation (NSDC) in 2021.**
 - ♦ The Skill Impact Bond utilized private sector resources and knowledge, prioritizing actual job placement and long-term employment over simple training completion.
- ➔ The NSDC will also lead and manage this new fund.
- ➔ Financial support is directly tied to confirmed career results, specifically focusing on hiring and continued employment.

CAFE-III NORMS

The Corporate Average Fuel Efficiency (CAFE) III norms are proposed to be implemented from April 1, 2027, to March 31, 2032, with stricter fuel efficiency requirements for automobile manufacturers.

About CAFE Norms

- ➔ Corporate Average Fuel Efficiency or CAFE norms were first introduced in **2017** under the **Energy Conservation Act, 2001**, as part of India's efforts to curb fossil fuel dependence and air pollution from road transport.
- ➔ Issued by the **Bureau of Energy Efficiency (BEE)**, the fuel efficiency regulations apply to **M1 category vehicles**—passenger cars with seating for up to nine persons and a maximum weight of 3,500 kg.
- ➔ The regulations set limits on corporate average fuel consumption, measured in litres per 100 kilometres, based on the average weight of vehicles sold by an automaker during a financial year.
- ➔ Since fuel consumption and Carbon Dioxide (CO₂) emissions are directly linked, the rules aim to reduce carbon intensity by pushing companies to improve the efficiency of their overall fleet.
- ➔ **Phases of CAFE Norms:**
 - ♦ The first phase, implemented in 2017–18, capped average fuel consumption at 5.5 litres/100 km and emissions at <130 gm CO₂/km.
 - ♦ The second phase, in force since 2022–23, tightened this to 4.78 litres/100 km and <113 gm CO₂/km.
 - ♦ The third iteration, CAFE III (or CAFE 2027), proposes to reduce permissible fuel consumption to a range of 3.72–3.01 litres/100 km, with emissions expected to fall below 91.7 gm CO₂/km.

NATIONAL AGRICULTURE MARKET (E-NAM)

The e-NAM portal reflects increasing market integration, with the number of connected mandis rising from 1,389 in 2024 to 1,656 as of March 2026, spanning 23 States and 4 Union Territories.

About e-NAM

- ➔ **Pan-India electronic trading portal** for agricultural commodities.
- ➔ Integrates APMC mandis into a unified national market.
- ➔ Operated by the **Small Farmers Agribusiness Consortium (SFAC)** under the Ministry of Agriculture.
- ➔ **Objectives:**
 - ♦ **'One Nation, One Market'** for agricultural produce;
 - ♦ Better price discovery, transparency, and competition.

Key Features

- ➔ **Online Trading Platform:** Farmers can sell produce electronically across markets; and removes **geographical barriers**
- ➔ **Quality Assaying:** Scientific quality testing ensures **fair pricing**
- ➔ **Transparent Bidding System:** Reduces middlemen/cartelization; and promotes **competitive price discovery**
- ➔ **Unified License:** Traders can operate across multiple mandis
- ➔ **Online Payment System:** Direct payment to farmers reduces delays & exploitation

e-NAM Portal

- **Single-Window Service:** Commodity arrivals, quality assaying, bidding, payment, all on one platform.
- **Unique Lot ID Tracking:** Each lot tracked from gate entry to final sale via mobile.
- **Live Price Dashboard:** Real-time commodity prices, mandi arrivals, trade volumes, publicly accessible.
- **12-language Interface:** Hindi, English, Gujarati, Marathi, Telugu, Bengali, Tamil, Odia and others.
- **Secondary Sale Module:** Enables resale of already-purchased lots within the platform.
- **Inter-state Trade Facility:** State Unified License enables traders to bid across State boundaries.

MORCHELLA MUSHROOMS

Researchers at Sheri Kashmir University of Agricultural Sciences and Technology, have for the first time successfully cultivated Morchella (Morel mushroom).

About

- Morchella, locally known as **Kangaech in Kashmir**, is a rare, **high-value edible fungus** that naturally grows in **specific high-elevation forest ecosystems** during a narrow rainy season.
 - ◆ It commands a market price of ₹15,000 to ₹40,000 per kilogram.
- The mushroom is prized for its **intense flavour, superior nutritional profile, and medicinal properties** including antioxidant, antitumor, & antimicrobial properties.
- Cultivation of Morchella has long been a major scientific challenge due to its **complex life cycle, symbiotic ecological behaviour**, and highly specific environmental requirements.
- It is **not commercially** cultivated anywhere in India.

RELIEF SCHEME

The Government has expanded the RELIEF scheme under the Export Promotion Mission to support Indian exporters affected by rising freight costs, insurance premiums, and maritime disruptions in West Asia.

Resilience & Logistics Intervention for Export Facilitation (RELIEF) Scheme

- The Government launched RELIEF in March 2026 to support Indian exporters facing higher freight costs, insurance premiums, and war-related trade disruptions in West Asia.
- It is implemented through ECGC and it provides insurance support, risk coverage, and reimbursement assistance, especially for MSME exporters, covering both past and future shipments.
- It covers consignments meant for delivery or trans-shipment to countries including the UAE, Saudi Arabia, Kuwait, Qatar, Oman, Bahrain, Iraq, Iran, Israel and Yemen.

Expansion

- The scheme has been expanded to include Egypt and Jordan as eligible destinations.
- It also clarifies that exporters with new ECGC Whole Turnover Policies from 16 March 2026 are eligible for support under Component II.

NATIONAL FLOOR LEVEL MINIMUM WAGE

Recent factory worker unrest in Noida's industrial belt has accelerated Union Government efforts to revise India's long-stagnant National Floor Level Minimum Wage (NFLMW), with proposals of ₹350-₹450/day currently under deliberation.

About National Floor Level Minimum Wage

- The NFLMW is a baseline wage threshold **set by the Union Government**, below which **no state can legally fix its minimum wage**.
- States must set their own rates at or above this floor, accounting for local skill levels, geography, and occupation.
- The concept originated from the **National Commission on Rural Labour (NCRL)**, **chaired by Jhinabhai Darjee (1991)**, which initially recommended it on a voluntary basis to reduce interstate wage disparities.
- The **Code on Wages, 2019** upgraded it from an advisory guideline to a legally binding statutory floor.

TRUCK MOUNTED ATTENUATORS

The Ministry of Road Transport and Highways is deploying advanced safety systems like Truck Mounted Attenuators (TMAs) to enhance safety on National Highways.

About TMAs

- TMAs are specially designed impact-absorbing safety devices that play a critical role in protecting both workers and road users.
- In the event of a collision, these systems **absorb and dissipate kinetic energy**, reducing the force of impact. This helps:
 - ◆ Protect maintenance crews working ahead of the vehicle;
 - ◆ Reduce injury risks for occupants of the impacting vehicle;
 - ◆ Minimize the severity of accidents in highway work zones.
- In many ways, TMAs act like an **invisible shield** — standing between danger and human life.
- The **deployed TMAs** are equipped with high-intensity wig-wag warning lights, enhancing visibility in low-light and foggy conditions.

PRIVATE GOLD MINING PROJECT

The launch of India's first large-scale private gold mine at Jonnagiri, Kurnool district, Andhra Pradesh, has brought renewed focus on India's gold reserves, production deficit, and the strategic importance of domestic mining.

About

- Gold is a **soft, dense, highly ductile, and corrosion-resistant precious** metal found in nature in its native form.
- Gold is **India's second-largest import after oil**, with nearly 1,000 tonnes imported annually to meet domestic demand.
- **Bihar dominates reserves** at ~43%, followed by **Rajasthan** (~25%) and **Karnataka** (~20%), while Kerala holds significant placer (alluvial) deposits along its rivers and coast.
- **Karnataka accounts for approximately 97% of India's total gold output**, primarily through the Hutti Gold Mines in Raichur.
- **China leads global gold production** with approximately 10% of world output, followed by Russia and Australia.
- Switzerland is the **world's largest gold importer**. **Switzerland dominates global gold exports as well**, refining approximately 70% of the world's gold.

INDIA AS A CENTRE OF JAMUN EVOLUTION

A recent study has revealed that *Syzygium* (Jamun) originated much earlier than previously believed, with India playing a central role in its evolution.

Origin and Evolution

- The origin of *Syzygium* was **earlier believed to be limited to Australia or Southeast Asia**.
 - ◆ Recent fossil evidence from India has challenged this view and established a much older origin.
- Newly discovered **Early Miocene fossils (~20 million years ago)** from the **Kasauli Formation in Himachal Pradesh**, including 11 well-preserved leaves identified as ***Syzygium paleosalicifolium***, confirm its continuous presence in India.
- The genus is now traced back to an **East Gondwanan origin (~80 million years ago)**.
- India acted as a major centre of early diversification, from where the genus later dispersed to Southeast Asia and Australia.

Jamun

- Jamun is a genus of flowering plants that belongs to the **family Myrtaceae**.
- The genus is widely distributed across **tropical and subtropical regions** and includes species of ecological and economic importance.
- **Medicinal Properties:** Jamun holds an important place in traditional systems of medicine such as **Ayurveda and Unani**.
 - ◆ It is particularly known for its **anti-diabetic properties** due to compounds like **jamboline**.
- **Distribution:** Jamun is widely distributed across India, Bangladesh, Pakistan, Sri Lanka, Malaysia, and Philippines.
- **Ecological significance:** The species is often used in **social forestry programmes** as it plays a role in afforestation and reclamation of degraded lands.

BHARAT MARITIME INSURANCE POOL

The Union Cabinet has approved the creation of a 'Bharat Maritime Insurance Pool' (BMI pool) with a sovereign guarantee of ₹12,980 crore to strengthen India's maritime trade resilience.

About

- The BMI Pool is a **domestic insurance mechanism** providing comprehensive coverage across key segments such as hull and machinery, cargo, protection and indemnity (P&I), and war risk.
- It covers **Indian-flagged and Indian-controlled vessels**, including those operating in conflict-prone international waters, and extends protection to cargo movement between India and global ports.
- It is aligned with **Maritime India Vision 2030** and supports India's ambition of becoming a leading maritime nation by 2047.
- Similar state-backed frameworks exist in countries such as the **United Kingdom, Japan, and South Korea**.

Additional Information

- India's maritime sector handles over **70%** of the country's trade by volume and nearly **95%** by value, yet insurance coverage for this vast ecosystem has largely remained in foreign hands.
- This structural vulnerability became evident during recent disruptions in key shipping corridors such as the **Red Sea, Strait of Hormuz and the Gulf of Oman**, when several global insurers sharply increased premiums or withdrew coverage altogether, exposing Indian exporters and shipping operators to heightened financial risk and operational uncertainty.

PROJECT DANTAK

Project DANTAK celebrated its Raising Day marking 65 years of its continuous service in Bhutan since 1961.

About

- Project DANTAK was established on 24 April 1961 through the vision of His Majesty the Third King of Bhutan and then Indian Prime Minister Jawaharlal Nehru to improve Bhutan's connectivity and support its socio-economic development.
- It was assigned the task of building the country's first motorable roads.
 - ◆ By 1968, it had completed key routes, including the Samdrup Jongkhar–Trashigang road and the Phuentsholing–Thimphu highway.
- It is led by the Border Roads Organisation (BRO).

Progress

- Project DANTAK has been a key driver of Bhutan's connectivity and socio-economic development, constructing

over 1,500 km of roads, including the East–West Highway, and major infrastructure such as highways, airports, bridges, hospitals, schools, and communication networks.

- In recent years, it has focused on modernising infrastructure through road widening and upgrading major routes like **Confluence–Haa and the Samdrup Jongkhar–Trashigang highway**, improving safety and travel efficiency.
- It has also shown strong disaster response by quickly restoring connectivity after landslides and road damage.

PRINTED CIRCUIT BOARDS

The Middle East conflict has disrupted global supply chains for key raw materials used in printed circuit boards (PCBs), driving sharp price increases across the electronics industry.

About PCBs

- It is a **layered mechanical structure** that holds and electrically connects **components in a circuit**.
- It is used in almost all modern electronic devices like smartphones, computers tablets, AI servers and smartwatches.
- It provides the **base for assembling electronic parts** and guides the flow of electricity between them.

Raw Materials Used for PCB Manufacturing

- **Resins:** High-purity Polyphenylene Ether (PPE) and epoxy resins serve as critical base materials for laminates — the insulating substrate of the board.
- **Copper Foil:** The primary conductive material, accounting for roughly 60% of total raw material costs.
- **Glass Fibre:** Used as a reinforcing material within the substrate to provide structural strength and insulation.
- **Helium & Bromine:** Qatar provides over a third of the world's helium (used in semiconductor lithography), while two-thirds of bromine (used for etching) comes from Israel and Jordan.

Key Issues

- A strike on Saudi Arabia's Jubail petrochemical complex has **disrupted production of a key material (PPE resin)** used in printed circuit boards.
- **China dominates global PCB manufacturing**, accounting for over **50% of global output** creating single-source concentration risk.
- **India's PCB industry remains heavily reliant** on imported raw materials such as copper-clad laminates, specialty chemicals, and soldering compounds.
- **India imports the bulk of its PCB requirements from China, Taiwan, and South Korea**, making it a strategic vulnerability for defence, telecom, and EV sectors.

India's Policy Interventions

- **Electronics Component Manufacturing Scheme (ECMS), 2025:** Approved by the Union Cabinet in April 2025 under MeitY with an outlay of ₹22,919 crore.
 - ◆ Specifically targets PCBs, SMD passives, Li-ion cells, capacitors, connectors, copper laminates — areas of peak import dependence.
 - ◆ Offers up to 25% capital subsidy and 4–6% incentive on incremental sales — distinct from PLI (which rewards final product sales).
- **PLI for Large Scale Electronics Manufacturing (LSEM):**
 - ◆ Attracted global players (Apple via Foxconn and Tata) to manufacture in India.
 - ◆ India is now the world's second-largest mobile phone manufacturer.
 - ◆ **Limitation:** focused on assembly, not component/PCB manufacturing
- **Semiconductor Mission (India Semiconductor Mission):**
 - ◆ Six semiconductor projects in execution; four more approved in Odisha, Punjab, and Andhra Pradesh.
 - ◆ Aims at a self-reliant semiconductor-to-PCB value chain by 2030.

UNDERGROUND COAL GASIFICATION

The Ministry of Coal has signed Coal Mine Development and Production Agreements (CMDPAs) for four coal mines under the 14th commercial coal auction round, introducing Underground Coal Gasification (UCG) provisions for the first time in India.

About UCG

- Underground Coal Gasification (UCG) is a new technology that converts coal into **synthetic gas** directly within the coal seam, without traditional mining.
- It allows use of deep, thin, or otherwise unmineable coal reserves, expanding India's usable energy resources.

Coal Gasification

Coal gasification is the process of converting coal into **syngas (synthesis gas)** — a mixture **primarily of hydrogen (H₂) and carbon monoxide (CO)** — through a reaction with steam and oxygen at high temperatures. Syngas serves as a feedstock for producing:

- **Ammonia** → used in fertiliser manufacturing
- **Methanol** → used as fuel and chemical feedstock
- **Hydrogen** → clean energy carrier
- **Synthetic natural gas** → substitute for imported LNG.

Importance

- UCG supports cleaner and more efficient energy production alongside conventional coal extraction.

- The syngas can be used for producing fertilizers (like urea and ammonia), as well as methanol, dimethyl ether, and synthetic fuels, potentially reducing imports.

Coal Mine/Block Development and Production Agreement (CMDPA/CBDPA)

- It sets a milestone-based system for commercial coal mine allottees, linking performance security to project timelines to ensure timely development and operation.
- To encourage early production, it offers a 50% incentive on revenue share and allows return of the Performance Bank Guarantee (PBG) if the block becomes operational on time.

National Coal Gasification Mission

- The Government has launched the **National Coal Gasification Mission** with a target of achieving **100 million tonnes of coal gasification by 2030**.
 - ◆ To support this, an ₹8,500 crore incentive scheme has been introduced for both public and private sector projects, alongside major ongoing investments worth over ₹64,000 crore.
- The initiative also promotes advanced methods like **Underground Coal Gasification (UCG)** to utilize difficult-to-access coal reserves while reducing environmental impact.

SACRIFICE RATIO

Rising oil prices are creating new inflation risks after recent global rate hikes that brought down COVID-era inflation. The US reduced inflation with little economic cost, the UK suffered a recession, and India slowed growth but avoided a downturn.

Sacrifice Ratio

- The sacrifice ratio is an economic ratio that measures the effect of rising and falling inflation on a country's total production and output.
- It is calculated by dividing the decrease in production by the percentage drop in inflation, showing how much output is lost for every 1% reduction in inflation.

Importance

- The sacrifice ratio shows the cost of reducing inflation in terms of lost output.

It helps policymakers estimate how much production may fall when inflation is reduced using tools like higher interest rates.

INDEX OF SERVICE PRODUCTION (ISP)

The National Statistical Office has proposed a new Index of Service Production (ISP) with 2024-25 as the base year.

Need of ISP

- The services sector contributes more than 50% to India's Gross Value Added (GVA), yet **there is no equivalent of the Index of Industrial Production** to monitor short-term trends.
- The ISP will fill this gap and complement the IIP, enabling a more comprehensive understanding of economic activity.
- The absence of such an index currently limits real-time assessment of services sector performance.

Use of Deflators

- The index will use **Service Producer Price Indices (PPIs)** for sectors like banking, insurance, and telecommunications to adjust for price changes.
- In sectors where PPIs are unavailable, sector-specific **Consumer Price Indices (CPIs)** will be used as substitutes.

National Statistical Office (NSO)

- The National Statistical Office (NSO), under the Ministry of Statistics and Programme Implementation, is India's central agency for official data. Formed in 2019 by merging the CSO and NSSO, it is headed by the **Chief Statistician of India**.
- **Functions:**
 - ◆ The NSO conducts large-scale socio-economic surveys, compiles national income (GDP/GNP), and sets statistical standards for uniformity.
 - ◆ It provides technical guidance to states, ensures data reliability through digital tools, and coordinates with international organizations.
- **Major Publications:**
 - ◆ **National Accounts Statistics (NAS):** GDP and capital formation.
 - ◆ **Periodic Labour Force Survey (PLFS):** Employment trends.
 - ◆ **Index of Industrial Production (IIP) & ASI:** Industrial performance.
 - ◆ **Consumer Expenditure & Social Consumption:** Poverty and service utilization.
 - ◆ **Statistical Year Book & Energy Statistics:** Comprehensive sectoral and energy data.

BIO-BITUMEN TECHNOLOGY

The Council of Scientific and Industrial Research (CSIR) organised a Technology Transfer Event for its innovative technology titled "Bio-Bitumen from Lignocellulosic Biomass – From Farm Residue to Roads".

Bio-Bitumen

- ➔ **Developed By:** Jointly CSIR-Central Road Research Institute and CSIR-Indian Institute of Petroleum.
- ➔ It has been developed for adoption by the **Ministry of Road Transport and Highways (MoRTH) in road construction.**
 - ♦ The **bio-bitumen technology** utilises **agricultural biomass and crop residues** as feedstock through a **thermochemical conversion process**, producing a renewable and environmentally friendly alternative to petroleum-based bitumen.
 - ♦ The technology has demonstrated **performance equivalent to conventional bitumen** while offering substantial environmental and economic benefits.
- ➔ **Significance:** The initiative will help in **reducing pollution** from crop residue burning.
 - ♦ India currently **imports nearly 50% of its bitumen** requirement, and innovations like bio-bitumen would **significantly reduce foreign dependence** while strengthening domestic capabilities.

Bitumen

- ➔ Bitumen is a **black, viscous mixture of hydrocarbons** produced by the **fractionation of crude oil**, and it serves as a **crucial binder in road construction.**
- ➔ The process of making bio-bitumen involves **collection of post-harvest rice straw, palletisation, pyrolysis to produce bio-oil**, and subsequent **blending with conventional bitumen.**

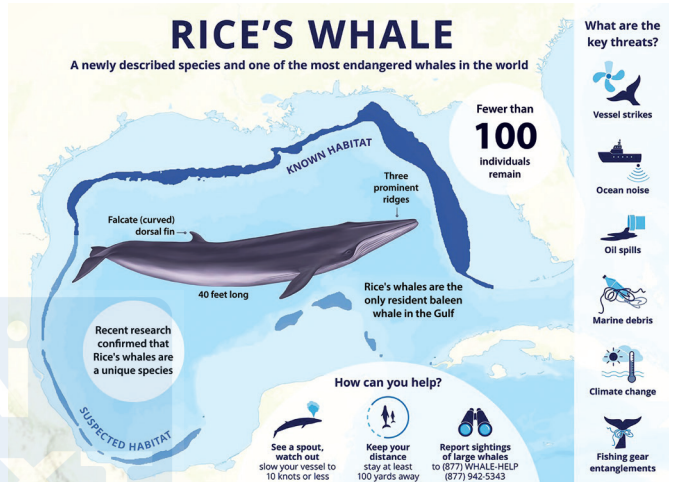
RICE'S WHALE

The US expansion of oil and gas drilling could push the Rice Whale to extinction.

Rice's Whale (*Balaenoptera Ricei*)

- ➔ Belonging to the baleen whale family *Balaenopteridae*, it is one of the rarest whale species, with fewer than 100 individuals remaining.
- ➔ **Range and Habitat:** It is **endemic to the northern Gulf of Mexico** and lives year-round within this region without undertaking long migrations.

- ➔ **Diet:** Primarily feeds on **small fish and squid.**
- ➔ **Threat:** Oil drilling, vessel strikes, and climate change.
- ➔ **Conservation status:** It is listed as **Critically Endangered** on the IUCN Red List.



Additional Information

- ➔ The **International Whaling Commission (IWC)** was established in 1946 as the global body responsible for management of whaling and conservation of whales.
- ➔ Currently, the IWC has more than 80 member countries, including India.

E20 PETROL

India has officially mandated the nationwide rollout of E20 petrol at all fuel stations from April 1, 2025.

About

- ➔ It marks a significant milestone in **India's Ethanol Blended Petrol (EBP) Programme**, which originally targeted 20% blending by 2030 but was advanced to 2025 under the **revised National Biofuel Policy (2022).**
- ➔ The mandate is being implemented jointly by the **Ministry of Petroleum and Natural Gas and the Bureau of Indian Standards (BIS).**
- ➔ Ethanol used in the blend is a **biofuel derived from agricultural feedstocks primarily sugarcane**, maize, damaged food grains, and surplus rice.
 - ♦ It is produced through fermentation and distillation of these crops, making it a renewable and domestically sourced energy input.

- E20 petrol carries a **higher octane rating of approximately 95 RON compared to 91–92 RON of regular petrol** — meaning smoother engine combustion and better anti-knock performance.

Significance

- **Energy Security:** Reduces crude oil import dependence, India imports over 85% of its oil needs, making it highly vulnerable to global price shocks and supply disruptions.
- **Agriculture Linkage:** Creates sustained demand for ethanol-producing crops, direct income support to sugarcane and maize farmers.
- **Climate Commitments:** Biofuel blending reduces net lifecycle carbon emissions, aligned with India's NDC targets under the Paris Agreement.

FOREVER CHEMICALS

The European Union has strengthened water pollution regulations to control harmful chemicals such as PFAS, often called "forever chemicals".

About PFAS

- PFAS (Per- and Polyfluoroalkyl Substances) are a large group of **man-made chemicals**.
- They contain strong carbon–fluorine bonds, making them highly stable and resistant to breakdown.
- These are classified as **Persistent Organic Pollutants (POPs)** under the **Stockholm Convention**.
 - ◆ The **Stockholm Convention on Persistent Organic Pollutants (POPs)** is a legally binding international treaty aimed at protecting human health and the environment from highly hazardous chemicals.

HECTOCOTYLUS IN OCTOPUSES

Recent research has highlighted a novel function of the hectocotylus in octopuses, revealing advanced sensory and reproductive adaptation.

About Hectocotylus

- The hectocotylus is a **modified arm present in male octopuses**, traditionally understood as a structure crucial **role in reproduction**.
- However, new findings establish that it also performs **sensory functions**, making it a multifunctional appendage.
- The hectocotylus **enables male octopuses to identify female mates** through chemical cues.

DECLINE OF LAKES IN JAMMU & KASHMIR

Comptroller and Auditor General of India (CAG) finds nearly half of Jammu and Kashmir's lakes have vanished since 1967, warns of ecological crisis.

Major Causes

- Unchecked human activities and encroachment;

- Weak institutional coordination; absence of a unified regulatory framework, leading to land-use changes.

Major Lakes of J&K, Ladakh UT

- **Dal Lake:** Famous freshwater lake known for houseboats, shikaras, and floating gardens (Raad).
- **Wular Lake:** Wular Lake is the largest freshwater lake in India and has been formed due to tectonic activity. It is fed by the Jhelum River and is recognized as a Ramsar site.
- **Pangong Tso:** It is a high-altitude brackish water lake extending into Tibet, known for its changing colors and strategic importance.
- **Tso Moriri:** It is another high-altitude brackish lake and a Ramsar site.
- **Manasbal Lake:** It is considered one of the deepest freshwater lakes in the region and the Mughal garden Jaroka Bagh, built by Nur Jahan, overlooks the lake.
- **Hokersar Wetland:** Often referred to as the "Queen of Wetlands".
- **Surinsar Lake and Mansar Lake:** They are twin lakes and are Ramsar sites.

INDUS RIVER DOLPHIN

The dolphin is one of the world's most endangered freshwater cetaceans and a flagship species of the Indus river system.

About

- **Cetaceans** are aquatic mammals which include whales, dolphins and porpoises.
- **Indus River Dolphin** was once distributed across the **Indus and its tributaries in Pakistan and northwestern India**.
 - ◆ But its range has drastically contracted due to flow regulation, loss of connectivity, pollution, climate change and entanglement in fishing gears.
- The Indus river dolphin is **functionally blind**, it relies entirely on **echolocation to navigate, hunt and avoid obstacles**.

MICROBIAL METHANE

As per a new study, Microbial methane leaking from non-producing oil and gas wells is being emitted at rates nearly 1,000 times higher than previously estimated.

About

- **Microbial methane (or biogenic methane)** is methane gas produced by microorganisms, specifically **archaea** known as **methanogens**.
- It is produced through the **decomposition of organic matter** in oxygen-depleted (anaerobic) environments.
- It is a major component of the **global carbon cycle**, generated in wetlands, rice paddies, landfills and digestive systems of ruminants. Methane is a powerful **greenhouse gas** when released into the atmosphere, regardless of its origin.

OAK TREES

The Uttarakhand High Court stayed the felling of oak trees in Mussoorie for construction by the Municipal Council.

About

- Oak belongs to the **genus Quercus** in the **Fagaceae family** and holds immense social and ecological importance in the Indian Himalayan regions.
- **Oaks can be separated into three groups**, sometimes considered subgenera: white oaks, red and black oaks.
- **Oak trees are mature at 75 years** and have an average lifespan of 150-250 years. However, the oldest oak trees are over 1,000 years old.
- **Climate Requirements:** Oak trees generally thrive in temperate climates.
- **Oak Trees in India:** In the Himalayas, **35 species of oaks** have been reported between 800 and 3,000 metres above sea level.
- **Oaks found in Uttarakhand** are Banj oak, Moru oak, Kharsu oak, Rianj oak, and Phaliath oak.
- **Significance:** Oak forests assist watershed protection by promoting the recharge of springs.
 - ◆ Their trees host lichens, bryophytes, pteridophytes (all three being moss-like plants), orchids, and other flowering plants, creating layered **microhabitats**.
 - ◆ Birds and mammals such as jays, Himalayan langurs, red giant flying squirrels, and Asiatic black bears feed on oak leaves and acorns, often caching them for leaner periods.
 - ◆ Oak is used as fuel wood and fodder by locals from the forests near their settlements.
- **Threats:** Excessive lopping, grazing, and wood use for fuel and fodder consumption.

PROJECT HIM SAROVAR

Project Him Sarovar has been launched in Ladakh.

About

- **Aim:** The project aims at **scientific snow harvesting** and the creation of water bodies to address the pressing challenge of water scarcity in Ladakh.

- The project will build **storage ponds** to collect melting snow and glacial water.
 - ◆ These ponds will support irrigation and rural water needs.
- The initiative also aims to develop a **local model for climate-resilient water management**.
 - ◆ As valleys in Ladakh rely on snowfall and glaciers for their water needs, unpredictable weather changes are leading to water scarcity, severely affecting the livelihood of villagers.
- The project has received support from the Indian Army, ITBP, BRO, and local communities.
- **Significance:** This will help boost local livelihoods and agriculture in the region. It will address water scarcity, boost irrigation, and enhance climate resilience in region.

SHAHTOOSH WOOL

A Delhi court has convicted a Jaipur-based art gallery owner for attempting to illegally export Shahtoosh shawls.

About

- Shahtoosh Wool is derived from the hair of the **Tibetan Antelope**, also known as **Chiru**. The animal is killed to obtain the wool.
- Trade in Shahtoosh is strictly prohibited in India and has also been banned globally.

Tibetan Antelope (*Pantholops hodgsonii*)

- The Chiru is a **medium-sized bovid** endemic to the high-altitude alpine steppes of the **Tibetan Plateau (3,250–5,500m)**.
- **Habitat:** They inhabit the arid, cold grasslands of Tibet, Qinghai, and Xinjiang in China, with a small population in **Ladakh (Changthang belt), India**.
- **Appearance:** They have a pale fawn to a **reddish-brown coat** with a white belly. Males have black markings on their faces and legs, which are absent in females.
- **Conservation Status:** It is currently classified as **Near Threatened (NT)** on the IUCN Red List. It has been listed under
 - ◆ **Schedule I of the Wildlife (Protection) Act, 1972,**
 - ◆ Appendix I (prohibiting international trade) of **Convention on International Trade in Endangered Species (CITES) since 1975.**

MARINE SPATIAL PLAN

The Odisha government recently signed a memorandum of understanding with the National Centre for Coastal Research under the Union Ministry of Earth Sciences to launch a Marine Spatial Plan (MSP) in the state for integrated coastal and marine planning.

About

- Sustainable ocean planning has been underway in India since **2019**, with collaboration between **India and Norway**.

- In the first phase, it was taken up in two Union Territories, **Puducherry and Lakshadweep**.
- Odisha, with a coastline of over **550 km**, has become the **first state** in the country to implement MSP in the second phase.

What is the Marine Spatial Plan (MSP)?

- Marine Spatial Planning is a **tool for sustainable and integrated ocean management** aimed at boosting the Blue Economy and strengthening climate resilience.
- It enables the sustainable utilisation of marine resources across sectors such as ports, fisheries, aquaculture, tourism, and industry.
- Under the plan, **benthic mapping** is carried out to study underwater ecosystems. Parameters such as salinity and temperature are also analysed to identify suitable zones for tourism, fisheries, seagrass, seaweed cultivation, and other economic activities.

INVASIVE SPECIES

N. Alim Yusuf, a botanist from Malabar Botanical Garden and Institute for Plant Sciences, has received the World Wide Fund for Nature National Award for developing an application to detect invasive plant species in Kerala.

About the Innovation

- The application, **Neophyte ID**, is an AI-powered mobile tool that enables users to identify invasive plant species by capturing images.
- It is built using the advanced machine learning model **YOLOv11**, which allows real-time object detection.
- The app can **identify nearly 100 invasive plant species** found in Kerala.
 - ◆ It is available in **Malayalam and English**, making it accessible to local communities.
 - ◆ It integrates **geospatial tracking** to map the **spread of invasive species**, aiding scientific research and policy intervention.

Invasive Species

- Invasive alien species are **non-native plants or organisms** that spread rapidly and disrupt local ecosystems. They often outcompete native species, leading to **biodiversity loss and ecological imbalance**.
- **The characteristics of invasive alien species are:**
 - ◆ Rapid reproduction and growth,
 - ◆ High dispersal ability,
 - ◆ Phenotypic plasticity (ability to adapt physiologically to new conditions), and
 - ◆ Ability to survive on various food types and in a wide range of environmental conditions.
- **Example:** *Senna spectabilis*, *Lantana camara*, *Eupatorium* and *Dolichandra unguis-cati*.

AMAZON RAINFORESTS

A recent study shows that consecutive droughts in 2023–2024 pushed Amazon rainforest moisture and biomass to their lowest levels in over three decades, indicating severe ecological stress.

About

- The Amazon Rainforest lies within the **Amazon River Basin**.
- The Amazon River is the **world's largest river by discharge volume** and the second-longest river globally, after the Nile. It originates in the Peruvian Andes and drains into the Atlantic Ocean.
 - ◆ **Major Tributaries:** Rio Negro, Madeira, and Xingu
 - ◆ **Watershed Coverage:** Brazil, Peru, Ecuador, Colombia, Venezuela, and Bolivia.
- The forest **stretches across 9 countries**, with approximately 60% of its cover located in Brazil. The remaining forest is distributed across Peru, Colombia, Venezuela, Ecuador, Bolivia, Guyana, Suriname, and French Guiana.
- The Amazon is one of the richest biodiversity hotspots on Earth, hosting approximately 10% of all known wildlife species.

SHEKHA JHEEL BIRD SANCTUARY

India designated Shekha Jheel Bird Sanctuary in Uttar Pradesh as its 99th Ramsar Site, with Uttar Pradesh now having 12th sites on the list.

About

- It is a **freshwater** wetland ecosystem, formed by the **Upper Ganges Canal in Aligarh, Uttar Pradesh**.
- It is a key habitat for migratory birds on the **Central Asian Flyway** and wintering ground for species such as **Bar-headed Goose, Painted Stork** and **various species of ducks and waterfowl**.

India's Latest Additions in Ramsar Site

- **Siliserh Lake (Rajasthan):** 95th Ramsar site
- **Kopra Jalashay (Chhattisgarh):** 96th Ramsar Sites
- **Patna Bird Sanctuary (Uttar Pradesh):** 97th Ramsar Sites
- **Chhari-Dhand Conservation Reserve (Gujarat):** 98th Ramsar Sites.

What is the Ramsar Convention?

- A Ramsar site is a **wetland designated** as one of **international importance** under the Ramsar Convention.
- The Ramsar Convention is one of the oldest **inter-governmental accords** signed by member countries to preserve the ecological character of their wetlands of international importance.
- It was signed on **February 2, 1971** in **Ramsar, Iran** and came into force in 1975.
 - ◆ India became a signatory to the **Ramsar Convention in 1982**.

SENTINEL SPECIES

The Emperor Penguin (*Aptenodytes forsteri*) was recently upgraded from Near Threatened to Endangered on the IUCN Red List.

About

- These are organisms whose health reflects the overall status of their ecosystem. They react quickly and visibly to stressors like pollution, disease, and climate change.

Examples

- Amphibians (Frogs):** Their permeable skin makes them highly sensitive to pollutants and pathogens.
- Canaries:** Historically used in mines to detect toxic carbon monoxide before humans.
- Honeybees:** Monitor pesticide levels; their decline signals pollination crises.
- Polar Bears:** Reflect Arctic health, contaminant buildup, and sea-ice loss.

GEPHAGY

Barbary macaques in Gibraltar have been found to eat soil (geophagy) more often than other populations.

About

- It is the **widespread behavior of eating soil, clay, or earth substances** like chalk or kaolin.
- It is observed **across many animal groups** and also among some human populations, especially in tropical regions.
- It is found in **many cultures worldwide** but especially common in parts of Africa, among pregnant women, children, and rural populations.
- It may be linked to health or nutritional needs, such as relieving nausea, but its exact causes are not well understood.

Barbary Macaque (*Macaca Sylvanus*)

- It is a **unique primate found in Africa** north of the Sahara and is the only wild monkey in Europe. Once widespread across North Africa and parts of Southern Europe, it now survives mainly in small forest areas in Algeria and Morocco, with an introduced population in Gibraltar.
- The species is listed on Appendix I of CITES and The IUCN Red List of Threatened Species classifies it as **Endangered**.

Geophagy Linkages with Barbary Macaque

- Gibraltar macaques frequently eat soil, especially during tourist-heavy periods when they consume many human foods low in minerals. This geophagy likely helps relieve digestive problems or detoxify their diet.
- The behavior is common, socially shared, not linked to reproduction, and appears to be a response to human influence on their feeding habits.






INTERNATIONAL BIG CAT ALLIANCE (IBCA)

Ahead of the global big cat summit, the International Big Cat Alliance (IBCA), is deliberating on a New Delhi Declaration, which, if adopted, will be the first international declaration on big cat conservation.

About IBCA

- It was launched by India in 2023 to facilitate global cooperation for the conservation of seven big cat species:
 - Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar, and Puma.
 - Out of the seven big cats under IBCA, five are found in India: Tiger, Lion, Leopard, Snow Leopard & Cheetah.
- Open to 97 "range countries" where these big cats are found.
- Aims to **mobilise global knowledge, resources, and best practices** to protect big cats and their ecosystems.

Big Cat Conservation Status

Species	Conservation Status	Key Project (Year)	Unique Feature
 Tiger	Endangered (NTCA)	Project Tiger (1973)	Orange coat with black stripes
 Asiatic Lion	Endangered	Asiatic Lion Reintroduction Project (2004)	Only social big cat; lives in prides
 Leopard	Vulnerable	—	Rosette spots; excellent climber
 Snow Leopard	Vulnerable	Project Snow Leopard (2009)	Long tail for balance; powerful hind legs
 Cheetah	Extinct (reintroduced)	Project Cheetah (2022)	Fastest land animal; solid spots

G7 DECLARATION ON DESERTIFICATION

Recently, the G7 Environment Ministers have elevated desertification, land degradation and drought to the core of their agenda, and termed these conditions 'systemic global challenges' and 'security risk multipliers'.

Key Highlights of Declaration

- Scale of the Crisis:** Desertification, land degradation and drought leads to declining soil fertility, water scarcity, and loss of ecosystem services.
 - It directly threatens **food security and livelihoods**, particularly in agrarian economies.
 - Nearly **40% of global land is degraded**, affecting **about 3.2 billion people**.
- Environmental Stress as a Security Threat:** G7 identifies desertification, land degradation and drought as a '**security risk multiplier**'.
 - Over **40% of intrastate conflicts** are linked to land and water disputes.
 - Environmental degradation contributes to resource competition, forced migration, and political instability.
 - It confirms the **climate-conflict nexus**, especially in vulnerable regions like the Sahel.

Land Crisis in India

- Approximately **97.85 million hectares (around 29.7%)** of India's total geographical area underwent land degradation as of 2018–19 (*ISRO Desertification and Land Degradation Atlas*).
 - ◆ India faces desertification across **around 30% of its geographical area** (around 97.85 million hectares).
- **Declining soil health** directly threatens food and economic security, with **over 40% of the population** dependent on agriculture and land-based livelihoods.
- India **became a signatory to the UNCCD in 1994** (ratified 1996) and has committed to restoring **26 million hectares of degraded land by 2030** under the **Bonn Challenge and UNCCD framework**.
 - ◆ India has already restored **18.94 million hectares** against this target.

India's Key Policy Interventions

- **Aravalli Green Wall Project (2023)**: A green corridor across Haryana, Rajasthan, Delhi and Gujarat, **inspired by Africa's Great Green Wall**.
- **National Action Plan to Combat Desertification (NAPCD)**, revised in 2023, integrated with MGNREGS, CAMPA, and PMKSY.
- **Alignment with Global Commitments (UNCCD & SDGs)**: India is a signatory to the **UNCCD** and has committed to the **Land Degradation Neutrality (LDN)**, and restoration of millions of hectares of degraded land.
 - ◆ Desertification, land degradation and drought action supports **SDG 2 (Food Security), SDG 13 (Climate Action) and SDG 15 (Life on Land)**.
- **Green India Mission (GIM)**, revised in 2025 with ₹12,190 crore outlay targeting afforestation over 1 million hectares.
- **Integrated Watershed Management Programme (IWMP)** under PMKSY.

Policy Commitments By G7

- **Shift Towards Integrated Policy Approach**:
 - ◆ There is a need to move beyond sectoral thinking to a **systems-based framework** linking environment, economy and security.
 - ◆ Recognises land as central to sustainable development, climate resilience, and peacebuilding.
- **Land Restoration and Drought Resilience**:
 - ◆ Scaling up sustainable land management, ecosystem restoration, and drought preparedness.
 - ◆ **Ecosystem-based approaches** are critical for long-term resilience.
- **Financing Mechanisms**: Emphasis on **blended finance models** ie public and private investment, aligns with global calls for **green financing frameworks**.
- **Focus Areas Beyond Desertification**: Additional declarations include biodiversity conservation, ocean protection, water

management, circular economy, pollution control, and resilient infrastructure.

- ◆ It reflects a **holistic environmental governance approach**.

UNCCD and COP17 (Ulaanbaatar, Mongolia; Aug 2026)

- UNCCD is the **primary global convention** addressing desertification, land degradation and drought.
 - ◆ **Investment needed** for restoration (2025–30): \$1 billion per day
 - ◆ **UNCCD COP16** (2024, Riyadh, Saudi Arabia): \$12 billion was pledged for land restoration; India showcased the **Aravalli Green Wall** initiative.
- **Theme (2026)**: 'Restoring Land, Restoring Hope'.
- **Expected outcomes**: Translating commitments into action, and focusing on vulnerable regions.

Other Institutional Mechanisms:

- **Bonn Challenge (2011)**: Global pledge to restore 350 million hectares by 2030
- **Kunming-Montreal Global Biodiversity Framework**: Targets 2 and 11 address land restoration
- **UN Decade on Ecosystem Restoration (2021–30)**: Joint UNEP-FAO initiative
- **G20 Global Land Initiative**: Aligned with India's G20 Presidency (2022) goal to reduce degraded land by 50% by 2040

WORLD TAPIR DAY

Recently, World Tapir Day was observed globally to raise awareness about Tapirs.

Tapirs

- Tapirs are large herbivorous mammals.
- Tapirs inhabit jungle and forest regions of South America, Central America, and Southeast Asia.
- Tapirs form an important part of the ecosystem as seed dispersers and form one of the oldest surviving genera in the animal kingdom.
- **Threats** posed are habitat loss, hunting, and human encroachment.

Types and IUCN Red List Status	
Lowland Tapir (<i>Tapirus terrestris</i>)	Vulnerable
Mountain Tapir (<i>Tapirus pinchaque</i>)	Endangered
Malay Tapir (<i>Tapirus indicus</i>)	Endangered
Baird's Tapir (<i>Tapirus bairdii</i>)	Endangered

NILGIRI TAHR SURVEY

Recently, The Tamil Nadu Forest Department has commenced the third synchronised survey of the Nilgiri Tahr (TN's State Animal) under the flagship Project Nilgiri Tahr.

Nilgiri Tahr

- It is the only mountain ungulate in southern India among the country's 12 such species and is the state animal of Tamil Nadu.
- **Historical linkages:**
 - ◆ There are multiple references to Nilgiri Tahr in the Sangam Tamil literature.
 - ◆ Two epics — Silappathikaram and Sivakasindamani — mention descriptions of the Nilgiri Tahr and its habitat.
- **Habitat and Distribution:**
 - ◆ The Nilgiri tahr is found at high elevations on cliffs, grass-covered hills, and open terrain.
 - ◆ Nilgiri Tahr is now largely confined to isolated patches of suitable habitat in the states of Kerala and Tamil Nadu.
 - ◆ The Eravikulam National Park in Anamalai hills, Kerala, is home to the largest population of the Nilgiri tahr
- **Threats :** Its numbers have declined significantly due to habitat loss and hunting.
- **Protection status :** It is classified as Endangered on the IUCN Red List and is protected under Schedule I of India's Wildlife (Protection) Act, 1972.
- **Steps:** Project Nilgiri Tahr was launched in 2023 and focuses on comprehensive conservation strategies, including habitat management, population monitoring, and the use of advanced scientific methods with support from global experts.

DOLPHIN FRIENDS INITIATIVE

The Forest Department, Prayagraj has launched the Dolphin Friends volunteer network to strengthen conservation of the Gangetic dolphin through community participation and river monitoring.

About

- The **Ganges river dolphin (Platanista gangetica)** is one of the world's few obligate freshwater dolphin species, officially described in 1801.
- It **inhabits the Ganga and Brahmaputra river systems** and their tributaries across India, Bangladesh, and Nepal.
- They are uniquely adapted to turbid river environments, the Gangetic dolphin lacks a crystalline eye lens rendering it functionally blind.
- It navigates and hunts entirely through a highly developed **echolocation system, emitting ultrasonic sounds to locate prey.**

Ecological Significance

- The dolphin sits at the apex of the aquatic food chain, regulating fish and crustacean populations and maintaining trophic balance.
- Its presence in a river stretch is a reliable bioindicator of clean, healthy freshwater earning it the title "**Tiger of the Ganges.**"
- The Government of India declared it the **National Aquatic Animal in 2009** on this basis.

Steps Taken

- **Project Dolphin (2020):** Launched on the lines of Project Tiger; focuses on dolphin and aquatic habitat conservation using technology — covering pollution reduction, sustainable fishery practices, and community involvement.
- **National Ganga River Dolphin Day:** Observed on 5 October annually — the date in 2009 when the species was declared National Aquatic Animal.
- **Vikramshila Gangetic Dolphin Sanctuary (VGDS):** Located in Bhagalpur, Bihar, the only dedicated dolphin sanctuary in India. Approximately half the total Gangetic dolphin population is found here.
- **Conservation Action Plan (2016):** Prepared by the Wildlife Institute of India; identifies key threats and maps habitat quality, prey-base depletion, and river traffic impacts.
- **WPA Schedule I:** Same protection tier as tigers and elephants.

METHANE EMISSIONS FROM LANDFILLS

Two of India's waste landfills are among the top 25 global emitters of methane in the waste sector, according to a study by the University of California, Los Angeles.

Key Findings

- The Secunderabad (Telangana) site ranked **4th**, while the Mumbai (Maharashtra) site ranked **12th** globally.
- The highest emitter is near Buenos Aires (Argentina), releasing about **7.6 tonnes of methane per hour**. Globally, **2,994 methane plumes** were detected from **707 waste sites**.

Why Landfills Emit Methane?

- Landfills release methane when organic waste decomposes in the absence of oxygen (anaerobic conditions), making unmanaged dumpsites major emission hotspots.

About Methane

- Methane is a potent greenhouse gas, responsible for nearly **30% of global warming** since the Industrial Revolution.
- Over a 20-year period, it is about **86 times more effective** at trapping heat than carbon dioxide.
- It remains in the atmosphere for a shorter duration (~12 years), but has a **high short-term warming impact**.

EVAPORATIVE DEMAND

A recent study reveals that roughly 30% of global land surface was under drought by end-2025, nearly triple the ~10% recorded in the 1990s, and signals a fundamental structural shift in how droughts form and intensify.

About

- The old drought pattern was driven primarily by precipitation deficit and emerging drought pattern driven by **evaporative demand**.

- ◆ **Evaporative demand** refers to the atmosphere's ability to draw water from the Earth's surface through evaporation and plant transpiration.
- ◆ It is **influenced by factors** like temperature, wind speed, humidity, and cloud cover, and when it is high, it can intensify drought conditions and increase wildfire risk.

Key Concepts

- ➔ **Evapotranspiration (ET):** Potential evapotranspiration is the atmosphere's theoretical demand for water under given temperature conditions — it rises sharply with warming.
- ➔ **Snow Drought:** A condition where reduced snowpack rather than rainfall deficit drives downstream water shortage.
- ➔ **Day Zero:** The point at which a city's municipal water supply system effectively fails made globally prominent by Cape Town's near-crisis in 2018.
- ➔ **Compound Drought-Heat Events:** Simultaneous or sequential occurrence of drought and extreme heat — mutually reinforcing, with heat amplifying evaporative demand and drought intensifying surface heating.
- ➔ **La Niña:** A periodic cooling of central and eastern Pacific Ocean surface temperatures historically associated with increased rainfall in some drought-affected regions. Its failure to reverse drought trends in 2025 underscores the dominance of anthropogenic warming over natural variability.

- by **Gaylord Nelson**, after environmental concerns gained prominence following incidents like the **Santa Barbara oil spill**.
- ➔ Earth Day was first observed in **1970 in the United States** as a response to rising environmental degradation.
 - ◆ The **United Nations General Assembly** officially designated **22 April** as International Mother Earth Day through a resolution adopted in **2009**.
- ➔ **Theme for 2026:** "Our Power, Our Planet".

E100 FUEL, FLEX-FUEL VEHICLES

The government is considering E100 fuel blending and a transition to flex-fuel vehicles to reduce India's dependence on imported crude.

About

- ➔ The steps come amid a **growing energy crisis triggered by the war in West Asia**, which has choked supplies of crude oil and gas.
- ➔ The government has allowed **blends of sustainable aviation fuel (SAF)**, produced from used **cooking oil or ethanol**.
- ➔ The notification legally defines **aviation turbine fuel (ATF)** both as a **complex mixture of hydrocarbons and as synthesised hydrocarbons** blended with cooking oil or ethanol, creating a legal basis for SAF.

What is E100?

- ➔ **E100** refers to fuel **with 100% ethanol content** or near-100%, since small quantities of water improve combustion.
- ➔ **Flex-fuel vehicles** are designed to **run on any mixture of ethanol and petrol**, from pure petrol to E100, with onboard sensors adjusting engine parameters accordingly.
- ➔ Brazil has operated the world's most mature **flex-fuel programme since 2003**, where sugarcane-derived ethanol powers a large share of the vehicle fleet.

WORLD EARTH DAY 2026

Earth Day is observed annually on April 22 to promote environmental protection and sustainable practices.

About

- ➔ **History:** The idea of observing Earth Day was proposed

WHERE INDIA STANDS

-  Ethanol blending **20%** achieved by 2025
-  Next target **E10** (100% ethanol fuel)
-  policy move **E85, E100** added to emission norms

THE SHIFT FROM FOSSIL FUELS TO A MULTI-FUEL FUTURE



PETROL & DIESEL

HIGH IMPORT DEPENDENCE
PRICE VOLATILITY
ENVIRONMENTAL STRESS

CLEANER ALTERNATIVES

ENERGY SECURITY
RURAL BOOST
LOWER EMISSIONS

WHY PETROL IS LOSING GROUND

ECONOMIC PRESSURE

- India imports most of its crude oil
- Large outflows in foreign exchange
- Exposure to volatile global oil prices

STRATEGIC SHIFT

- Reduce dependence on imports
- Shield economy from geopolitical shocks



BAB EL-MANDAB STRAIT

Concerns have risen over the possible disruption of the Bab el-Mandab Strait, following the entry of the Iran-backed Houthis of Yemen into the ongoing Middle East conflict.

About

- The **Bab el-Mandab Strait**, also known in Arabic as the “**Gate of Tears**,” is located at the **southern tip of the Red Sea**.
- It lies between **Yemen** on one side and the **Horn of Africa** on the other. It connects the **Red Sea** with the **Gulf of Aden**, and further with the **Indian Ocean**.
- It is one of the world's most important **maritime chokepoints**.



Strategic Importance

- The Bab el-Mandab accounts for roughly **10–12% of global oil and natural gas shipments**.
- It is strategically important because it connects with the **Suez Canal**, which further links it to the **Mediterranean Sea**.
- It is also linked to the **SUMED pipeline**, making it a vital corridor for global energy and trade flows.
- According to the **US Energy Information Administration**, more than **30 million tonnes of natural gas** passed through this strait in the **first 11 months of 2023**.
 - ◆ It also carried large volumes of **container traffic**, and around **12% of total seaborne-traded oil**.

ANDAMAN SEA

A boat carrying Rohingya refugees and Bangladeshi nationals from Bangladesh to Malaysia capsized in the Andaman Sea.

Andaman Sea

- The Andaman Sea is a marginal sea in the northeastern Indian Ocean.
- It is bordered by Myanmar to the north and east, Thailand and Malaysia to the east, Indonesia to the south, and India's Andaman and Nicobar Islands to the west.
- It connects to the South China Sea through the Strait of Malacca and serves as an important international shipping route, especially between India and China.
- It also supports regional maritime trade through ports in Myanmar and surrounding countries.

SIJIMALI BAUXITE MINE

Recent violent clashes between tribal villagers and police in Odisha's Rayagada district have drawn national attention to the Sijimali bauxite mine project.

About

- Sijimali is a high-grade bauxite reserve spanning 1,500 hectares across the Rayagada and Kalahandi districts of Odisha, situated within the **Eastern Ghats hill ranges**.
- It holds an estimated 311 million tonnes of bauxite ore and was handed over to Vedanta Limited through a government auction in 2023. The project has recently received conditional **Stage-1 forest clearance from the Central government**.

Key Facts

- The bauxite extracted from Sijimali is intended for **refining into alumina**, the primary raw material for aluminium production.
- **Odisha dominates India's bauxite sector**, accounting for 41% of national bauxite resources and approximately 73% of total bauxite production as of 2021-22.
- Key bauxite sites include **Panchpatmali** (operated by NALCO, one of the world's largest bauxite mines), **Gandhamardan** (Bargarh-Balangir, ecologically sensitive), Niyamgiri (where 12 Gram Sabhas rejected Vedanta's mining bid in 2013), and **Sijimali**.

INDONESIA

A magnitude 7.4 earthquake struck the Northern Molucca Sea off Indonesia's Ternate island.

About Indonesia

- **Basic Geography:** World's largest archipelagic state, located between the **Indian and Pacific Oceans**, off mainland Southeast Asia.

- **Major islands:** Sumatra, Java, Kalimantan (Borneo), Sulawesi, Papua.
 - ◆ It **shares land borders** with East Timor (Timor-Leste), Papua New Guinea, and Malaysia.
 - ◆ **Capital:** Jakarta (on the island of Java); new capital being developed at **Nusantara in Kalimantan**
 - ◆ **Largest Muslim-majority nation** by population in the world.
- **Tectonic Setting:**
 - ◆ **Located on the Pacific Ring of Fire**, the seismically active belt where about 90% of the world's earthquakes occur.
 - ◆ It hosts one of the world's highest densities of active volcanoes, stretching from **Sumatra through Java to the Lesser Sunda Islands**.
 - ◆ The **Molucca Sea**, where the recent earthquake originated is a highly active tectonic zone in Indonesia's northern region.
- **Global and Regional Role:**
 - ◆ Founding member of the **Non-Aligned Movement (NAM)** and **ASEAN (1967)**.
 - ◆ ASEAN Secretariat is headquartered in Jakarta.
 - ◆ **Indonesia became a full member of BRICS** at the 16th Summit held under Russia's chairship in Kazan. Member of G20 and hosted the G20 Summit in Bali in 2022.
 - ◆ Member of **IONS (Indian Ocean Naval Symposium)** a maritime cooperation platform conceptualised by India in 2008.



GHAGGAR RIVER

Villages near the Ghaggar River report rising cancer cases linked to polluted water, but lack of data and poor healthcare hinder action.

About

- The Ghaggar River is an intermittent, monsoon-fed river in northern India.
- It originates in the village of **Dagshai** in the **Shivalik Hills** of Himachal Pradesh at about 1,927 metres elevation and flows through **Punjab** and **Haryana** into **Rajasthan**.
- Its main tributaries include the Kaushalya, Markanda, Sarsuti, Tangri, and Chautang rivers.

ATACAMA DESERT

The unique conditions of the Atacama have supported the development of some of the world's most ambitious astronomical projects, including the Extremely Large Telescope.

About

- **Atacama desert** is located in **Chile** stretching into parts of **Peru, Bolivia, and Argentina**, it is considered the **driest non-polar desert on the earth**. It lies between the **Pacific Ocean (west) and the Andes Mountains (east)**.
 - ◆ There are more than 300 clear nights per year, meaning no clouds and no rain.
- **Scientific Significance:** A rare combination of dry climate, high altitude, and isolation from urban light pollution makes the Atacama home to the **world's largest ground-based astronomical projects**. Every year, the Atacama Desert draws thousands of scientists **to investigate the origins of the universe**.

LUZON ISLAND

China conducted military drills including live-fire exercises in waters east of the Philippines' Luzon Island.

About

- It is the largest and most important island of the Philippines.
- It is located in the **northern part of the Philippine archipelago** and is bounded by the **Philippine Sea** to the east, the **Sibuyan Sea** to the south, and the **South China Sea** to the west.
- To the north, the Luzon Strait separates Luzon from Taiwan.

MARINE HEATWAVES

Tropical cyclones passing over marine heatwaves cause 60% more billion-dollar disasters through rapid intensification, warns a new study.

About

- A Marine Heatwave (MHW) is a prolonged period of anomalously high ocean surface temperatures in a specific region. They are characterised by two key parameters:
- **Duration:** Lasting anywhere from several days to several months.
- **Intensity:** Measured as a deviation from the long-term seasonal average, known as a temperature anomaly.

Key Drivers

- **Climate Change:** Oceans absorb more than 90% of excess atmospheric heat, raising baseline temperatures.
- **Ocean Currents:** Warm water pools shift into cooler regions.
- **Atmospheric Systems:** High-pressure systems like the North Pacific High trap surface heat.
- **El Niño:** Elevates Pacific sea surface temperatures, triggering the largest recorded MHWs.

ATLANTIC MERIDIONAL OVERTURNING CIRCULATION (AMOC)

Recent research indicates that the AMOC is at its weakest in 1,600 years and is more likely to experience a severe shutdown or collapse than previously estimated.

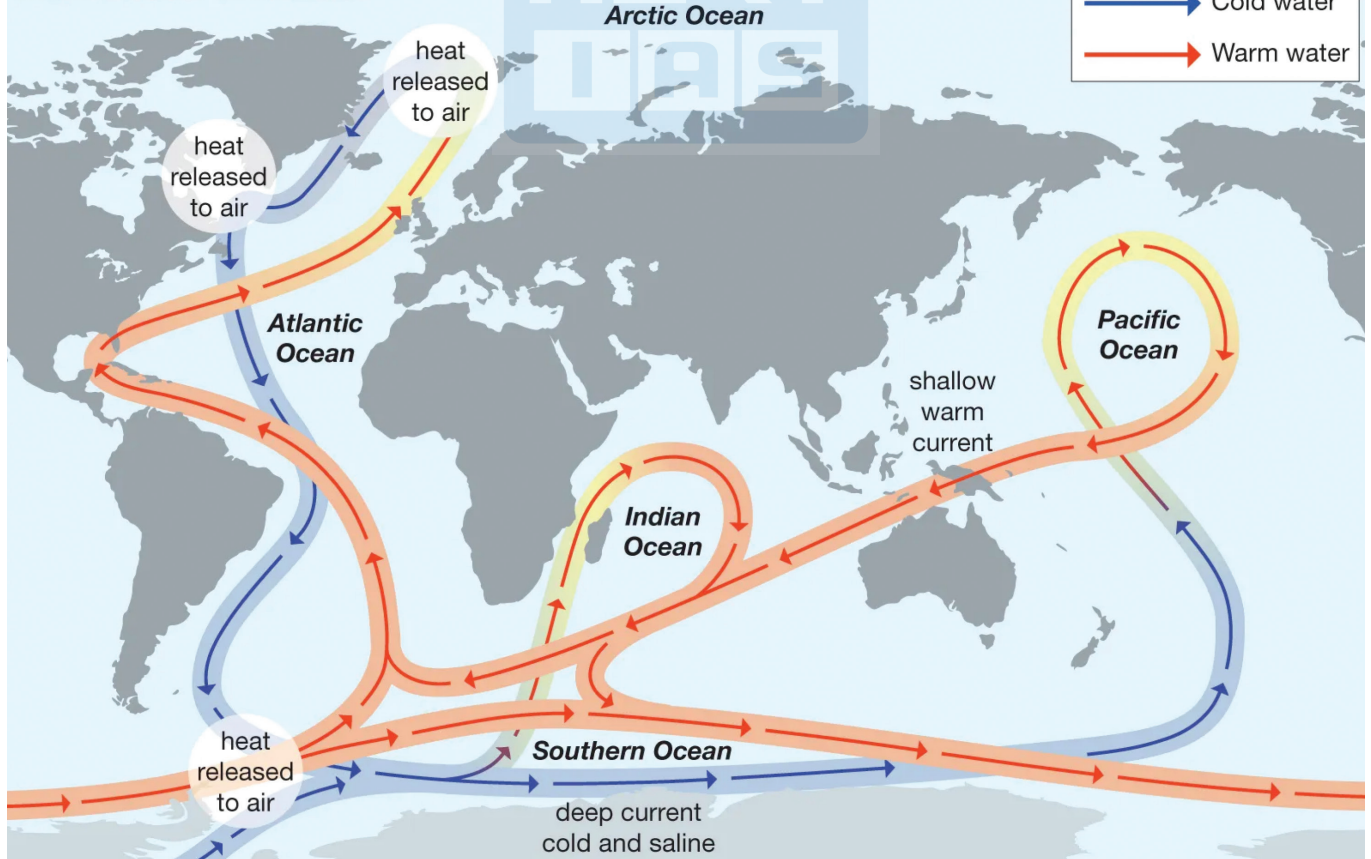
About AMOC

- It is a **large ocean current system** in the Atlantic that moves warm water northward and cold, dense water southward in a continuous cycle.
- It is a **major part of the global ocean conveyor belt** that distributes heat and nutrients across the world's oceans.
- It transports warm surface water from the tropics to the Northern Hemisphere, where it cools and sinks, before flowing back southward as a deep current.
 - ◆ From the South Atlantic, this water spreads into other oceans through the Antarctic Circumpolar Current.

Reasons for Weakening

- Rising temperatures reduce density contrasts, slowing down sinking currents.
- Melting of Greenland ice sheet and increased rainfall dilute salinity, weakening deep-water formation.

Thermohaline circulation



- Studies show weakening since the 1980s, with pauses due to natural oscillations, but anthropogenic drivers dominate long-term decline.
- Antarctic Bottom Water inflows have reduced by approx 12% (2000–2020), warming the deep Atlantic and raising sea levels.

Impacts of Weakening

- **Regional Climate:**
 - ◆ **North America & Europe:** Colder winters, disrupted rainfall.
 - ◆ **Africa & South Asia:** Monsoon weakening, drought risks.
- **Sea-Level Rise:** Slower circulation raises sea levels along the U.S. East Coast and globally.
- **Marine Ecosystems:** Alters nutrient flows, threatening fisheries.
- **Carbon Cycle:** Reduced carbon uptake by oceans, worsening atmospheric CO₂ levels.
- **Extreme Events:** Greater risk of hurricanes and heatwaves due to altered ocean-atmosphere dynamics.

Suggestions

- Evidence shows AMOC is weakening due to global warming and freshwater inflow, raising concerns about a possible collapse with severe global climate impacts.
- Urgent emission reduction, better monitoring, and international cooperation are needed to avoid a climate tipping point.

6

INTERNAL SECURITY

E-3 SENTRY AWACS

An Iranian missile and drone strike on Prince Sultan Air Base (Saudi Arabia) reportedly destroyed a U.S. E-3 Sentry AWACS aircraft.

About E-3 Sentry (AWACS)

- The E-3 Sentry is an **airborne early warning and control aircraft** developed by Boeing for surveillance, command, and battle management.
- AWACS stands for **Airborne Warning and Control System**.
- It is based on the **Boeing 707 commercial platform** and serves as the primary aerial command and control aircraft of the U.S. Air Force.
- The aircraft has been in service since **1977**, with about **32 aircraft in inventory**.
- The aircraft carries a **rotating radar dome (rotodome)** mounted above the fuselage.
- It has a detection range of **over 250 miles (~375 km)**. It is integrated with an **Identification Friend or Foe (IFF)** system to distinguish friendly and hostile aircraft.
- The system can detect **low-flying aircraft by filtering ground clutter**.
- It can **direct fighter-interceptor aircraft** to targets and help maintain control of airspace. In crisis situations, it can transmit data to **top political leadership**.

AWACS in India

- The Indian Air Force operates **three Israeli origin Phalcon AWACS systems** mounted on **Ilyushin Il-76 aircraft**, providing **360-degree coverage with detection ranges of 370–500 km**.
- India has also developed the **NETRA Airborne Early Warning and Control (AEW&C) system** through DRDO, based on the Brazilian **Embraer ERJ-145** platform, for surveillance and command roles.

LWE-AFFECTED DISTRICTS

The Ministry of Home Affairs has revised the classification of districts affected by Left-Wing Extremism (LWE).

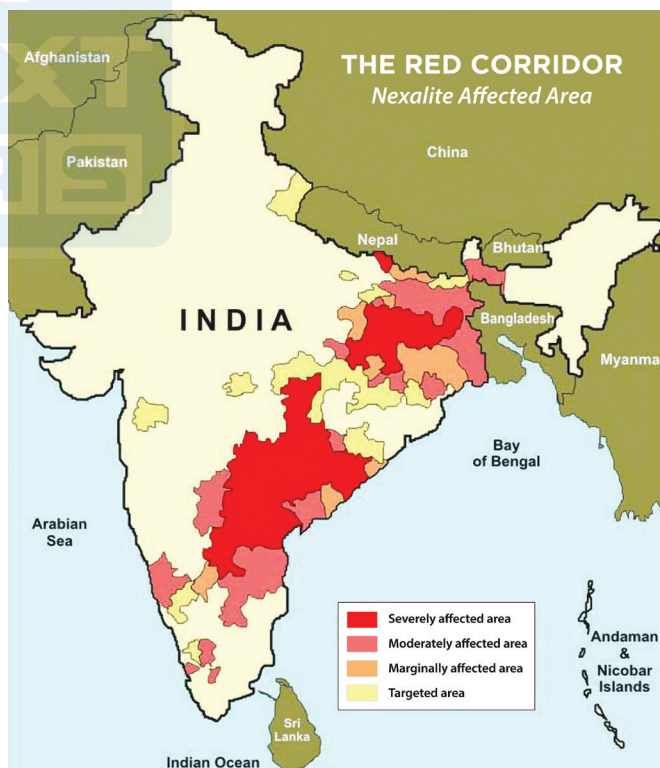
New Classification (2026)

- It replaced the earlier “most affected districts” category with a three-tier system aligned with current ground realities.
 - ◆ **LWE Affected Districts** include **Bijapur** (Chhattisgarh) and **West Singhbhum** (Jharkhand).
 - ◆ **District of Concern** includes **Kanker** (Chhattisgarh).

- ◆ **Legacy Districts** are stabilised areas requiring continued support to prevent relapse.
- ◆ **Thrust Districts** are vulnerable areas prone to possible expansion of Naxal influence.
- A total of 35 districts across nine states fall under Legacy and Thrust categories.

About Left Wing Extremism (Naxalism)

- LWE is a **radical left-wing insurgency** that began in **1967 at Naxalbari (West Bengal)** led by Charu Majumdar, Kanu Sanyal, and Jagan Santhal.
- The insurgency spread covering parts of Chhattisgarh, Jharkhand, Odisha, Maharashtra, West Bengal, Andhra Pradesh, Telangana, Madhya Pradesh, and Kerala. The affected regions are collectively called the **Red Corridor**.
- It employs **guerrilla warfare, targeting of state institutions, extortion, and recruitment of children**.



Trend and Significance

- The **Red Corridor** has reduced from over **200 districts (2005) to 2 districts (2026)**.
- Districts such as **Sukma and Narayanpur** were earlier in the “most affected” category till 2025.

Decline in Naxal Violence Over the Last Decade

Indicators	2004-2014	2014-2024	Decrease
Violent Incidents	16,463	7,744	53%
Security Personnel Deaths	1,851	509	73%
Civilian Deaths	4,766	1,495	70%

- The reclassification enables **targeted resource allocation and alignment of anti-LWE strategy with ground realities**.
- The Union Government has stated in Lok Sabha that India is effectively "Naxal-free".

Government Initiatives

- The **National Policy and Action Plan (2015)** adopts a multi-pronged approach combining security and development.
- The **Security Related Expenditure (SRE) Scheme** reimburses states for security operations, ex-gratia, rehabilitation, and community policing, with **₹1,685 crore released up to 2023–24**, including monitoring districts.
- The **SAMADHAN strategy**, **Surrender and Rehabilitation Scheme**, **skill initiatives (48 ITIs, 61 SDCs)**, and **Operation Black Forest (2025)** (21-day counter-insurgency operation) all support counter-LWE efforts.

INS TARAGIRI

INS Taragiri, a Nilgiri-class stealth guided missile frigate, has been commissioned into the Indian Navy.

About INS Taragiri

- INS Taragiri is the **4th of 7 Project 17A multi-mission stealth guided missile frigates**.
- It was built by **Mazagon Dock Shipbuilders Limited (MDL)**.
- It is named after the **Taragiri hill ranges of Uttarakhand**.
- The ship has **over 75% indigenous content** and involves a supply chain of **over 200 MSMEs**.

Key Features

- The ship is designed for **multi-role operations across air, surface and sub-surface warfare**.
- It can operate as a screen for **Carrier Battle Groups** and undertake independent or small-group missions.
- It features **reduced radar cross-section (RCS)** and a sleeker hull, providing "lethal stealth" in multi-dimensional maritime operations.
- It is equipped with **MF-STAR radar, MRSAM, Barak air defence missiles, and BrahMos missiles**, integrated through a Combat Management System.
- It carries an anti-submarine warfare suite comprising HUMSA sonar, triple torpedo launchers, and Extended Range Anti-Submarine Rockets (ERASR).

- It uses a **Combined Diesel or Gas (CODOG) propulsion system** designed for high-speed and high-endurance operations.
- It can achieve speeds of around **30 knots**.
- It can carry **one helicopter such as Kamov or MH-60R**.

Project 17A

- Project 17A is an Indian Navy programme to build seven stealth guided missile frigates named after mountain ranges.
- The ships include **INS Nilgiri, Himgiri, Udaygiri, Taragiri, Dunagiri, Vindhyagiri, and Mahendragiri**.
- A frigate is a medium-sized, high-speed warship used for escort roles and operations in anti-submarine, anti-air, and anti-surface warfare.

INS ARIDHAMAN

INS Aridhaman, part of India's Arihant-class ballistic missile submarine fleet, has been commissioned as a more advanced platform than INS Arihant (2016) and INS Arighaat (2024).

About INS Aridhaman

- INS Aridhaman is India's **3rd nuclear-powered ballistic missile submarine (SSBN)** developed under the **Advanced Technology Vessel (ATV) programme**.
- It is larger than its predecessors with a displacement of about **7,000 tonnes**.
- INS Arihant (2016) established the **sea leg of India's nuclear triad** and completed its first deterrence patrol in 2018.
- INS Arighaat (2024) strengthened India's continuous underwater deterrence presence.

Key Features

- The submarine has **8 vertical launching system tubes** for missile deployment.
- It can carry up to **24 K-15 Sagarika** missiles (range ~700 km) or **8 K-4/K-5** missiles.
 - ◆ The **K-4 missile has a range of about 3,500 km**.
 - ◆ These are **nuclear-capable submarine-launched ballistic missiles (SLBMs)**.

India's Nuclear Submarine Programme

- The programme is based on the **Advanced Technology Vessel (ATV) project**, initiated over three decades ago.
- It involves collaboration among **DRDO, Department of Atomic Energy, Indian Navy, and private defence firms**, with early technical assistance from Russia.
- It focuses on developing **SSBNs capable of carrying nuclear-armed SLBMs**.

Strategic Significance

- INS Aridhaman strengthens India's **nuclear triad** comprising land-based (Agni), air-based (Rafale, Su-30MKI), and sea-based platforms.

- It enhances India's credible second-strike capability under the "No First Use" doctrine.
- India joins a select group of nations capable of maintaining an **undersea nuclear deterrent**. With its commissioning, India will have **three operational SSBNs at sea**.

TRAWL ASSEMBLY FOR T-72 AND T-90 TANKS

The Ministry of Defence has signed procurement contracts with Bharat Earth Movers Limited and Electro Pneumatics and Hydraulics (India) Pvt Ltd for TRAWL Assemblies for T-72 tank and T-90 tank under the 'Buy (Indian-IDDMM)' category.

About TRAWL Assembly

- A TRAWL Assembly is a **mine-clearing device mounted on the front of a battle tank**, designed to **detect and detonate anti-tank mines safely before the tank passes over them**.
- It uses **heavy rollers that apply pressure to trigger mines**, thereby creating a **safe path for armoured movement**.
- The system has been developed by the Defence Research and Development Organisation to enhance **minefield breaching capability**.
- It can **neutralise anti-tank mines**, including those with proximity magnetic fuses.
- It enables the creation of **vehicle-safe lanes through minefields**, significantly improving combat mobility and survivability.
- Platform Details:**
 - T-72 (Ajeya):** Soviet-origin main battle tank (1973), widely used and upgraded in India.
 - T-90 (Bhishma):** Advanced Russian-origin tank (1992), featuring improved **fire control, composite armour, and electronic countermeasures**.

PROJECT CHETAK

Project Chetak of the Border Roads Organisation (BRO) has celebrated its 47th Raising Day.

About Project Chetak

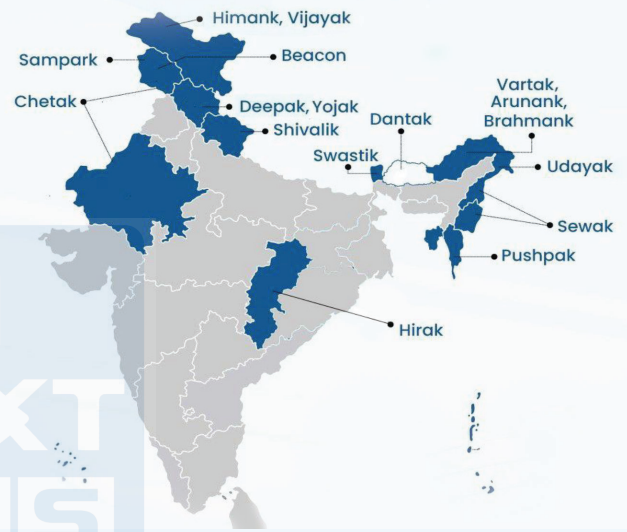
- Project Chetak is one of the **largest and strategically significant BRO projects in terms of geographical coverage**.
- It was **raised in 1980** to develop and maintain road and defence infrastructure in western border regions.
 - It ensures **all-weather connectivity** for defence forces and border communities.
 - It contributes to **national security** and regional economic development.
- It operates across **Rajasthan, Punjab, and northern parts of Gujarat**.
- It supports Defence Forces by maintaining key feeder roads towards the International Border. The project maintains over 4,000 km of road network in the western sector.

- It includes **214 km of Ditch-cum-Bund (DCB)** for border security and flood control.

Border Roads Organisation

- The **BRO** functions under the **Ministry of Defence**.
- It constructs and maintains strategic roads, bridges, tunnels, and airfields in border and remote areas.
- Since 1960, it has built over 64,100 km of roads, 1,179 bridges, 7 tunnels, and 22 airfields.
- It has executed infrastructure projects in **Bhutan, Myanmar, Afghanistan, and Tajikistan**.

STRATEGIC PROJECTS IN BORDER STATES



DOPPLER WEATHER RADAR NETWORK

India has expanded its Doppler Weather Radar network since 2014, increasing from 14 operational units to 50, marking over 250 percent rise.

About

- Managed by the **India Meteorological Department (IMD)**, this system consists of multiple interconnected radar stations that monitor weather patterns across vast regions.
- The network utilizes sophisticated **S-band, C-band, and X-band** radars to deliver high-precision, real-time data.
- This expansion has increased the accuracy of "nowcast" detection (short-term local forecasting) to 91%.
- Working:** The system is based on the **Doppler Effect**, which describes how the frequency of a wave changes relative to the motion of an object.

Key Applications

- Predictive Forecasting:** It monitors the development and trajectory of clouds and storms to forecast rainfall and thunderstorms.
- Disaster Warning:** The network serves as an early warning system for extreme events like cyclones, cloudbursts, tornadoes, and lightning.

➤ **Agricultural Aid:** It provides critical agro-meteorological guidance to help farmers manage crops according to weather shifts.

INDIA'S MILITARY EXPENDITURE

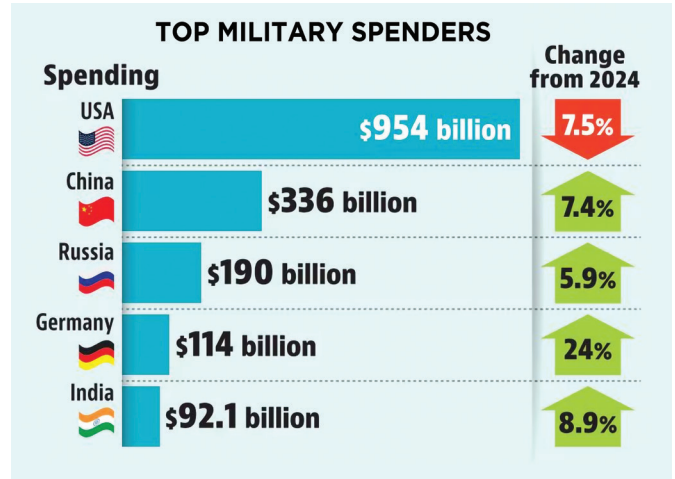
According to the Stockholm International Peace Research Institute, India ranked as the 5th largest military spender in 2025, with defence expenditure of \$92.1 billion (≈₹8.6 lakh crore)

India: Key Highlights

- **Global Share:** Accounts for 3.2% of global military spending.
- **Growth:** Expenditure increased by 8.9% year-on-year, driven by operational needs, procurement, and tensions with Pakistan (May 2025) and the ongoing LAC standoff with China.
- **Arms Imports:** India remains the 2nd largest arms importer (8.2% share), though imports declined by 4% between 2016–20 and 2021–25.
- **Strategic Shift:** Gradual diversification away from Russia towards France, Israel, and the United States; Russia's share fell from 70% (2011–15) to 40% (2021–25).

Global Military Trends

- **Total Spending:** Reached a record \$2,887 billion, marking the 11th consecutive annual increase and 2.5% of global GDP.
- **Top Spenders:** United States, China, Russia, Saudi Arabia, and India.
- **Ukraine:** Largest arms recipient (2021–25) with 9.7% share.
- **Pakistan:** Ranked 31st, with spending at \$11.9 billion (↑11%), largely driven by procurements from China.



SIPRI

- SIPRI was founded in 1966 by the Swedish parliament as an independent research institute.
- Its main objective is to conduct research on issues related to international peace and security, including arms control, disarmament, and conflict resolution.
- It is funded by a combination of government grants, private donations, and project-based funding.
- SIPRI's flagship publication is the SIPRI Yearbook, which provides comprehensive data and analysis on global military expenditure, arms transfers, and other relevant security issues.
- SIPRI is based in Stockholm, Sweden.

EXERCISES			
Name (Edition)	Participants	Venue	Nature
Cyclone-IV (4 th)	India and Egypt	Egypt	Military (Special Forces)
DIVEX (4 th)	India and Sri Lanka	Colombo, Sri Lanka	Naval (Diving Exercise)




GLP-1 THERAPY

Multiple variants of GLP-1 drugs have been recently introduced in the Indian market, and concerns have emerged regarding their on-demand availability.

About

- **GLP-1 medication** was approved by the United States' Food & Drug Administration in 2005.
- **GLP-1 drugs (glucagon-like peptide-1 receptor agonists)** are medications developed to treat both type 2 diabetes and obesity by correcting hormonal imbalance.
 - ◆ They slow down the gastric emptying, increasing the feeling of fullness.
 - ◆ This decreases patients' appetites and thereby leads to their weight loss.

POTENTIAL HEALTH COMPLICATIONS OF GLP-1 DRUGS




ALLERGIC REACTIONS (ANAPHYLAXIS)


- Shortness of Breath
- Red Rash
- Hives
- Abdominal Pain
- Difficulty Swallowing
- Chest Tightness
- Shortness Breathing
- Feeling of Doom

Low Blood Sugar (Hypoglycemia)


- Shaking or Trembling
- Sweating & Chills
- Dizziness
- Weakness
- Faster Heart Rate



- Intense Hunger
- Difficulty Thinking
- Pale Skin
- Nausea



Developmental Abnormalities in the Fetus (For Pregnant Women)



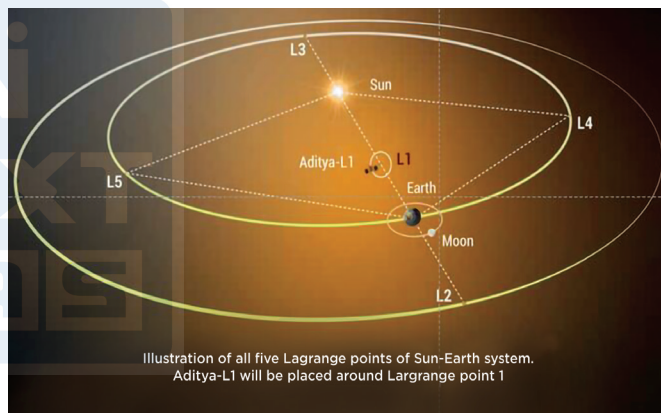
- To ensure **ethical pharmaceutical practices** in the **supply chain of GLP-1**, the Drug Controller General of India has intensified its regulatory surveillance against the drug's unauthorised sale and promotion.
 - ◆ In India, the drug can be prescribed only by endocrinologists, internal medicine specialists and cardiologists.

ADITYA-L1 MISSION

ISRO invites proposals from the Indian solar physics community to analyse data from the Aditya-L1 mission.

Aditya-L1 Mission

- Launched in 2023, **Aditya-L1** is **India's first dedicated space-based solar mission**. It has been designed to study the **Sun and its outer atmosphere**.
- The mission's lifespan is 5 years.
- The spacecraft is positioned at the **Sun-Earth Lagrange Point 1 (L1)**, which allows it to continuously observe the Sun without frequent interruptions such as eclipses or occultation.
 - ◆ The **L1 (Lagrange Point 1)** lies between the **Earth and the Sun**, where the gravitational pull of the two bodies balances the orbital motion of the spacecraft.
 - ◆ This makes it an ideal location for **continuous solar observation**.



Key Instruments:

- ◆ **Visible Emission Line Coronagraph (VELC):** VELC is designed to observe the **solar corona**, which is the outermost layer of the Sun's atmosphere. It helps in studying **coronal heating, coronal mass ejections (CMEs)**, and other dynamic solar events.
- ◆ **Solar Ultra-violet Imaging Telescope (SUIT):** SUIT is used to observe the Sun in the **ultraviolet wavelength**. It helps in studying the **solar photosphere and chromosphere**, and in understanding **solar radiation and variability**.

MISSION MITRA

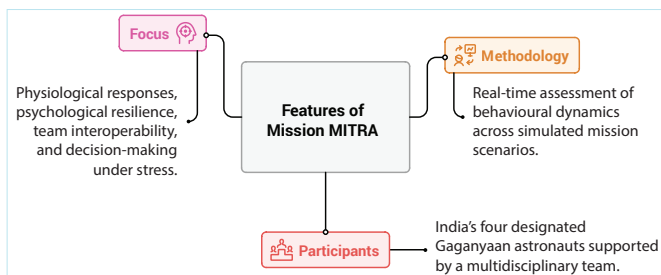
The Indian Space Research Organisation (ISRO), in collaboration with the IAF-Institute of Aerospace Medicine, has launched Mission MITRA in Leh, Ladakh.

What is Mission MITRA?

- **About:** MITRA stands for Mapping of Interoperable Traits and Response Assessment. It is a structured scientific study

designed to simulate and evaluate the human dimensions of long-duration spaceflight missions in a controlled yet extreme terrestrial environment.

- **Nature:** First-of-its-kind team behavioural and physiological study in India's human spaceflight programme.



METEORITES

During the Artemis II mission, astronauts observed meteorite impacts on the Moon.

What are Meteorites?

- A **meteorite** is a solid piece of debris from an object, such as a **comet, asteroid, or meteoroid**, that originates in outer space and survives its passage through the atmosphere to reach the surface of a planet or moon.

Types of Meteorites:

- **Stony:** Composed mainly of silicate minerals
- **Iron:** Rich in iron and nickel
- **Stony-Iron:** Combination of metallic and rocky material

Artemis II Mission

- Artemis II mission is a crewed lunar flyby mission under **NASA's Artemis programme**.
- It was launched on April 1, 2026, marking the first human mission to the Moon's vicinity since Apollo 17 (1972).
 - ♦ The mission carries four astronauts aboard the **Orion spacecraft**.
- It is a 10-day mission, orbiting the Moon and returning to Earth without a lunar landing.

NAPHTHALENE DIIMIDE (NDI)

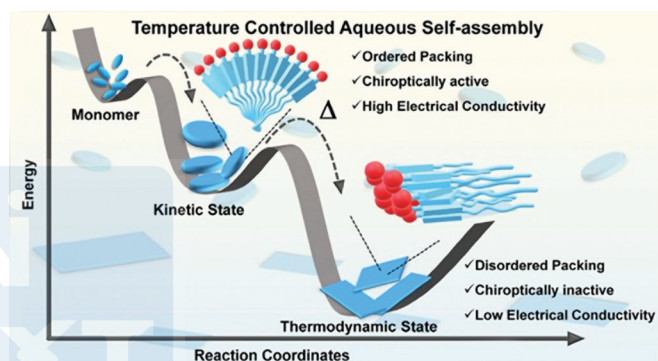
Researchers have discovered that the structural and electrical properties of an organic nanomaterial called Naphthalene Diimide (NDI) can be switched using only temperature.

About

- NDI is a specialised **amphiphilic molecule** meaning it possesses both **water-attracting (hydrophilic)** and **water-repelling (hydrophobic)** parts which enables it to self-organise into complex structures when placed in water.
- In water at room temperature, **NDI molecules assemble through**

noncovalent interactions to form tiny circular nanodisks that are highly electrically conductive and interact with polarised light.

- Upon heating, these **nanodisks undergo structural reorganisation** and transform into two-dimensional nanosheets, which lose the light-interacting properties of the original disks and experience a nearly sevenfold drop in electrical conductivity.
- This phenomenon is an example of **supramolecular self-assembly**, a process where molecules spontaneously organise into well-defined structures using weak noncovalent interactions rather than strong chemical bonds, with the final architecture determined by environmental conditions such as temperature or solvent.



Significance

- The discovery has significant applications in organic electronics, smart sensors, tunable optoelectronics, bioelectronic interfaces, and adaptive materials that can dynamically alter their properties in response to external stimuli.

FATA MORGANA

Videos of ships appearing to float several metres above the ocean surface have gone viral on social media, reigniting scientific interest in the Fata Morgana.

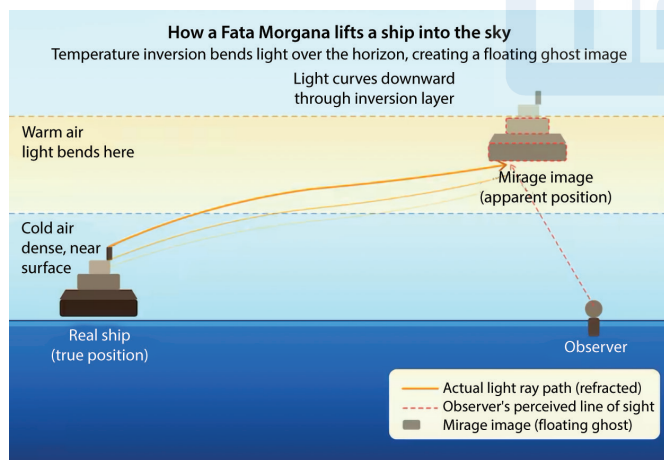
About

- Fata Morgana is a **type of superior mirage, an optical phenomenon** in which light from a distant object, such as a ship, coastline, or iceberg, is bent through layers of air with sharply different temperatures, causing the object's image to appear displaced typically elevated high above its actual position.
- The name derives from the **Arthurian sorceress Morgan le Fay**, whose legends in Italian folklore described castles and cities rising from the sea.

The Physics Behind It

- **Refraction of Light:** Means the bending of light when it passes from one medium into another of different optical density.

- ◆ When light passes from a less dense medium (warm, thin air — where it travels faster) into a more dense medium (cold, dense air — where it travels slower), it bends toward the denser medium.
- **Temperature Inversion:** Under normal atmospheric conditions, air temperature decreases with altitude, the ground absorbs solar radiation, heats the air directly above it, and warmth diminishes as height increases. This is the standard atmospheric lapse rate.
 - ◆ A **temperature inversion is a reversal of this normal order** where a layer of cold, dense air sits directly below a layer of warmer, lighter air. This inverted arrangement is the essential atmospheric precondition for Fata Morgana formation.
- **Atmospheric Ducting and Beyond-Horizon Propagation:** In a temperature inversion, as light from a distant ship travels toward an observer, it enters the inversion layer — the sharp thermal boundary between cold air below and warm air above. At this boundary, light continuously refracts downward — curving along the temperature gradient rather than escaping upward into the sky.
 - ◆ If the temperature difference between the two layers is steep enough, light curves so dramatically that it bends around the curvature of the Earth — reaching an observer who is technically beyond the ship's geometric horizon. Under normal conditions, an object 40 kilometres away would be completely hidden below the horizon.



HAFNIUM-OXIDE MEMRISTOR

Scientists have developed a hafnium-oxide-based memristor, a brain-inspired nanodevice, capable of significantly reducing energy consumption in artificial intelligence systems.

Neuromorphic Computing

- Neuromorphic computing is a field of technology that seeks to **replicate the architecture and functioning of the human brain** in electronic systems.

- In the human brain, **memory and processing occur simultaneously** within synapses, which leads to highly energy-efficient computation.
- This approach is fundamentally different from the **Von Neumann architecture**, which is used by nearly all modern general-purpose computers. In this **memory and processing units are physically separated**, resulting in significant energy consumption due to constant data transfer.

What is a Memristor?

- A memristor is an electronic component that combines the properties of **memory and resistance**, allowing it to both store and process information within the same device.
- Unlike conventional resistors, a **memristor retains its resistance state even after the power supply is switched off**, thereby enabling non-volatile memory.
- In neuromorphic systems, a **memristor functions as an artificial synapse**, where different resistance levels represent the strength of connections between neurons.
- The memristor uses a **p-n junction mechanism** that allows smooth and continuous adjustment of resistance.

Synapse

- A synapse is a junction (connection point) between two nerve cells (neurons) in the brain. It is the place where one neuron passes signals (information) to another neuron.
- These signals are usually transmitted using electrical impulses and chemical substances (neurotransmitters).

GLUFOSINATE

The government has imposed a six-month restriction on imports of glufosinate and its salts, a herbicide used in farming.

Glufosinate-Ammonium

- It is a herbicide used to control a broad range of weeds.
- It is highly water-soluble and has low potential to leach into groundwater.
- It is considered highly hazardous, with risks including neurotoxicity, reproductive harm, cardiovascular effects, and fetal damage. Its volatile nature exposes farmers and nearby populations through inhalation and skin contact.

HUBBLE TENSION

Recently, a global astronomical collaboration achieved a 1% precision measurement of the Universe's local expansion rate.

About

- The **Hubble tension** refers to the **persistent discrepancy** in measuring the expansion rate of the universe, known as the Hubble constant, which indicates how fast galaxies are moving away from each other.

- **Two primary methods yield conflicting results.**
 - ◆ One method is the **Cosmic Microwave Background (CMB)** approach, which studies the afterglow of the Big Bang. Analysis of temperature fluctuations in this radiation suggests an expansion rate of about **68 km/s per megaparsec**.
 - ◆ The other method is the **Cosmic Distance Ladder**, which uses nearby astronomical objects such as Cepheid variable stars and supernovae to calculate how fast they are moving away from the earth. This “local” measurement gives a higher value of about **73 km/s per megaparsec**.
- The difference between these values is termed the **Hubble tension**. It is significant because it may indicate unknown physical processes in the universe or possible systematic errors in measurement techniques, making its resolution crucial for improving our understanding of cosmology and the universe’s evolution.

ULTRALUMINOUS X-RAY SOURCE (ULX)

Scientists from the Raman Research Institute (RRI) have analysed rare, repeating bursts of energy from a distant ultraluminous X-ray source.

What is a ULX?

- The study focuses on **ULX M74 X-1**, located in the spiral galaxy M74, where astronomers observed irregular but recurring X-ray flares.
- **ULXs** are systems in which a compact object—such as a black hole or neutron star—pulls in matter from a companion star.
 - ◆ This process, known as **accretion**, releases enormous amounts of energy.
 - ◆ In some cases, these sources exceed the **Eddington limit**, the theoretical maximum brightness an object can achieve, by more than 100 times.
- The findings are expected to contribute to a **better understanding of ultraluminous X-ray sources** and the physical processes that drive their extreme brightness.

PATHOGEN ACCESS AND BENEFIT-SHARING

The historic WHO Pandemic Agreement (WPA), adopted in 2025, still lacks the much-needed Pathogen Access and Benefit-Sharing (PABS) Annex.

About

- **PABS** seeks to **legally link sample-sharing to guaranteed benefits**, making it mandatory for pharmaceutical manufacturers to provide **20% of real-time vaccines, therapeutics and diagnostics (VTD) production** to the WHO during declared pandemics.
- PABS is **backed by around 100 LMICs**, including India, which represent nearly 80% of the world’s population, however, **opposition comes from developed countries**, which are home to some of the world’s largest pharmaceutical companies.

- Low- and middle-income countries (LMICs) in Africa, Southeast Asia and Latin America, where new pathogens often emerge, **are expected to proactively share biological materials and genomic data** through WHO.
 - ◆ However, **countries that develop life-critical VTDs** using that material are **under no obligation** to reciprocate with fair and timely access to these clinical products.
- **Without a binding legal framework** to enforce fair sharing from samples to solutions, a coordinated global response to cross-border health crises will remain fraught with challenges.

The WHO Pandemic Agreement

- It was adopted by the **World Health Assembly in 2025**.
- The aim is to negotiate a **WHO convention on pandemic prevention**, preparedness and response, that would culminate in a legally binding international instrument.
- Following its adoption, the next crucial step is for an **Intergovernmental Working Group (IGWG)** on the Pandemic Agreement to negotiate the details of the Pathogen Access and Benefit-Sharing (PABS) system.
- The Agreement will officially enter into force **30 days after 60 countries have ratified it**.

PROTOTYPE FAST BREEDER REACTOR (PFBR)

India has achieved a major milestone as the indigenously built Prototype Fast Breeder Reactor (PFBR) at Kalpakkam has attained criticality.

About PFBR

- PFBR is an **advanced reactor** that **generates more fissile fuel** than it consumes.
- India’s PFBR is located at Kalpakkam and operated by Bharatiya Nabhikiya Vidyut Nigam Limited. It uses Uranium–**Plutonium Mixed Oxide (MOX) fuel**.
- It is called a fast breeder because;
 - ◆ It uses **high-energy, fast neutrons** to sustain the fission reaction, rather than the slowed-down thermal neutrons used in standard reactors.
 - ◆ It converts fertile material (like Uranium-238) into fissile material (Plutonium-239).
- **The criticality refers** to the point at which a reactor achieves a **self-sustaining nuclear fission reaction**, where the number of neutrons produced is sufficient to keep the reaction going without external intervention.

Significance of the Achievement

- **Advancement of India’s Three-Stage Nuclear Programme:**
 - ◆ The PFBR marks progress in the **second stage of India’s three-stage nuclear programme**.
 - ◆ It enables the **conversion of fertile material into fissile fuel**.
 - ◆ It lays the **foundation for the third stage**, which focuses on thorium utilization.

➤ **Harnessing Thorium Potential:**

- ◆ India possesses vast thorium reserves, and the PFBR helps generate the required **fissile material (U-233)** for **thorium-based reactors**.
- ◆ **Thorium-232**, is not fissile but can be converted into a fissile material.

➤ **Technological and Strategic Significance:**

- ◆ India becomes only the second country after Russia to develop a commercial fast breeder reactor.
- ◆ It demonstrates advanced indigenous capability in nuclear technology and engineering.

India's Three-Stage Nuclear Programme

➤ **Establishment:** India established the **Atomic Energy Commission in 1948**.

- ◆ In **1956**, Asia's first research reactor, **Apsara**, was commissioned at the Bhabha Atomic Research Centre (BARC) in Trombay.
- ◆ **India was the second Asian nation** to build a nuclear power plant in **1969** at Tarapur, just after Japan and long before China.

➤ India has a three-phase programme of nuclear power visioned by **Dr Homi J Bhabha**, the father of India's nuclear programme.

➤ **First Stage (Pressurized Heavy Water Reactors - PHWRs):** India's nuclear program initially focused on establishing a fleet of PHWRs.

- ◆ These reactors use natural uranium (**U-238**), which contains minuscule amounts of **U-235**, as the fissile material.
- ◆ Heavy water (deuterium oxide) **as both moderator and coolant**.
- ◆ The primary purpose of this stage was to **produce plutonium-239 as a byproduct from the uranium fuel**.
- ◆ **Plutonium-239 is a fissile material** used as fuel in nuclear reactors.

➤ **Second Stage (Fast Breeder Reactors - FBRs):** The second stage of the program involves the **deployment of Fast Breeder Reactors (FBRs)**.

- ◆ FBRs are designed to produce **more fissile material than they consume** by utilizing a fast neutron spectrum.
- ◆ In this stage, **plutonium-239** produced in the first stage is used as fuel along with **U-238** to produce energy, **U-233, and more Pu-239**.
- ◆ **Uranium-233 is another fissile material** that can be used as fuel in nuclear reactors.

➤ **Third Stage (Advanced Heavy Water Reactors - AHWRs):** The final stage of the program entails the **deployment of Advanced Heavy Water Reactors (AHWRs)**.

- ◆ **Pu-239 will be combined with thorium-232 (Th-232)** in reactors to **produce energy and U-233**.
- ◆ Thorium is abundantly available in India, and this **stage aims to harness its potential as a nuclear fuel**.

India's 3-Stage Path to Nuclear Energy Security

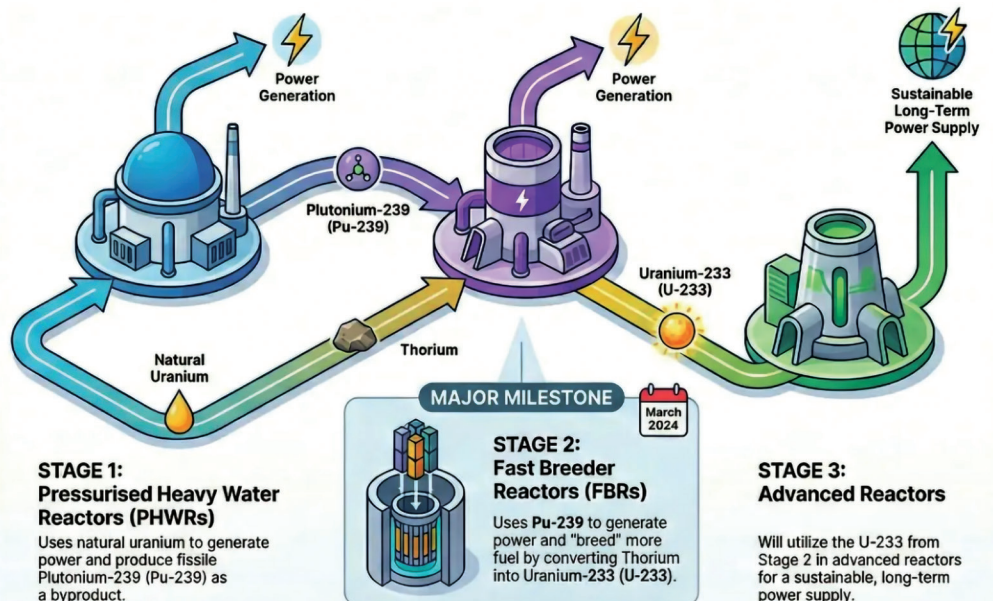
THE FOUNDATION: RESOURCES & PRINCIPLES



India's program is designed to ultimately use its vast thorium deposits as nuclear fuel.



The process converts non-fissionable "fertile" materials (Thorium) into fissionable "fissile" materials (Uranium-233).



SCHOLARSHIPS IN INDIA'S ACADEMIC CULTURE

India's Gross Enrolment Ratio (GER) in higher education remains only 29.5% (2022–23), highlighting the need to make scholarships a core part of academic policy rather than limited financial aid.

Current Status

- Higher education institutions increased from 51,534 (2014–15) to over 70,000 (2025–26).
- The **Central Sector Scheme of Scholarship** provides around 82,000 scholarships annually.
- Private institutions like **Ashoka University** support nearly 50% of students financially, with about 20% receiving full scholarships.

Importance of Scholarships

- Scholarships help bridge the **GER gap** by supporting students facing financial and geographical barriers. They promote social inclusion, diversity, and merit-based access in higher education. Beyond financial support, scholarships can provide mentorship, leadership development, career guidance, and academic exposure.
- Linking scholarships to sectors like **AI, healthcare, and manufacturing** can address future skill shortages.
- They also help identify and nurture talented students from underserved backgrounds.

Major Scholarship Initiatives

- **Central Sector Scheme of Scholarship** for undergraduate and professional courses.
- **National Scholarship Portal (NSP)** as a unified platform for central and state schemes.
- **Corporate and trust-based** merit-cum-means programmes in professional education.

Challenges

- Scholarships are often treated as short-term aid instead of long-term academic support systems.
- Limited scale and uneven regional distribution reduce their impact on national enrolment.
- High education costs continue to discourage families in **tier-2 and tier-3 towns**. Access to information and application processes remain fragmented despite NSP.

Way Forward

- Redesign scholarships as **multi-year commitments** combining financial aid with mentorship and skill development.
- Introduce **region-focused schemes** for low-enrolment districts.

- Encourage private philanthropy through **tax incentives and matching grants**.
- Ensure financial aid remains independent of admission decisions and create performance-based support frameworks for institutions.

REAL EQUITY GAP IN HIGHER EDUCATION

The Supreme Court stayed the UGC Promotion of Equity in Higher Education Institutions Regulations, 2026, observing that some provisions were vague and open to misuse.

Nature of the Equity Gap

- The real equity gap in higher education lies less in student admissions and more in the underrepresentation of disadvantaged social groups in faculty and leadership positions.
- While reservation policies improved student access, progress in professorial, administrative, and decision-making roles has remained slow.
- Lack of disaggregated institutional data further weakens assessment of discrimination and representation patterns.

Key Concerns

- **Structural Employment Lag:** Recruitment gaps persist because higher-level academic positions change slowly over time.
- **Leadership Deficit:** Reserved categories remain inadequately represented in senior university posts.
- **Policy Misalignment:** Existing regulations focus more on grievance redressal, helplines, and penalties rather than proactive inclusion measures.
- **Definition Confusion:** Equity is often reduced to anti-discrimination compliance instead of broader social empowerment.
- **Social Segregation Risks:** Excessive identity-based regulation without social integration may deepen divisions within campuses.
- **Institutional Factionalism:** Identity-based politics in campuses can intensify conflict rather than foster inclusion.

Way Forward

- Increase representation of marginalised groups in faculty, professorial, and leadership positions.
- Reform equity regulations to address structural and institutional barriers, not only procedural grievances.
- Improve collection of disaggregated data on representation and discrimination.

SAMRAT SAMPRATI

The Prime Minister inaugurated the Samrat Samprati Museum (Samprati Sangrahalay) at Koba, Gandhinagar on Mahavir Jayanti (31 March 2026).

About Samrat Samprati

- Samrat Samprati was the 5th Mauryan emperor (c. 224–215 BCE).
- He was the grandson of Ashoka and son of Kunala.
- After Ashoka's death (232 BCE), the empire was divided between Dasharatha and Samprati.
- He is central to the Shvetambara Jain tradition and is called the "Jain Ashoka".
- He is also known as Indrapalit, Sangat, and Vigatashok.
- His life is described in **Sampratikatha**, **Parishistaparva**, and **Prabhavakcharita**.
- He promoted Ahimsa (non-violence), Satya (truth), Asteya (non-stealing), and Aparigraha (non-possessiveness).
- He ruled from **Ujjain and Pataliputra**, ensuring royal patronage to Jain institutions.

RAJA RAVI VARMA

The painting "Yashoda and Krishna" by Raja Ravi Varma was sold for ₹167.2 crore at a Saffronart auction, setting a record for Indian art. The painting was created in the 1890s, during the peak of his career.

About Raja Ravi Varma

- Raja Ravi Varma (1848–1906) was born on **29 April 1848 at Kilimanoor, Kerala**, into the **Koil Thampuran** family of chieftains.
- He worked under **royal patronage of the Travancore royal family**.
- He is regarded as a pioneer of **modern Indian art** for blending European academic **realism and naturalism** with Indian themes.
- He was among the first Indian artists to **use oil paints and master lithographic reproduction**.
- He depicted **Hindu mythological** themes and portraits of Indian and British figures.
- He was among the first to **portray gods and goddesses in realistic human form** with anatomical accuracy and emotional expression.
- In **1894**, he established the **Ravi Varma Fine Arts Lithographic Press** in **Ghatkopar** (later shifted to Malavli near Lonavala).
- The press produced **oleographs (colour lithographs)** of deities such as Lakshmi and Saraswati, enabling mass dissemination of art.

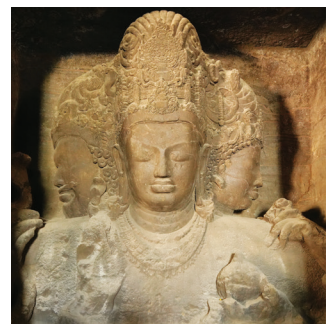
- Notable Works:** Important works include Hamsa Damayanti, Shakuntala, Jatayu Vadham, Lady in the Moonlight, Shakuntala Writing a Love Letter to Dushyanta, and Shri Rama Vanquishing the Sea.
- Awards and Recognition:** He received the **Kaiser-i-Hind Medal in 1904**. His 1873 painting "**Nair Lady Adorning Her Hair**" won the **Governor's Gold Medal** and a **Certificate of Merit** at Vienna exhibition.

ELEPHANTA CAVES

An ASI excavation at Elephanta Island has revealed a 1,500-year-old T-shaped stepped reservoir, measuring 14.7 m in length, 6.7–10.8 m in width, with 20 well-aligned stone steps exposed up to 5 m depth.

About

- Elephanta Caves are a **UNESCO World Heritage Site (1987)** located on **Elephanta Island (Gharapuri)** in Mumbai Harbour.
- The name "Elephanta" was given by the **Portuguese (16th century)** after a stone elephant, while **Gharapuri** means "**city of caves**".
- The caves date between the **5th–7th centuries CE** (around 550 CE) with earlier Buddhist stupa remains (2nd century BCE) indicating prior occupation.
- The **Kalachuris of Mahishmati** are main patrons, preceded by **Konkan Mauryas** and followed by **Chalukyas and Rashtrakutas**.
- The complex includes **7 caves** (5 Hindu in western hill, 2 Buddhist in eastern hill) carved from **basalt of Deccan Trap formation**.
 - Cave 1 (Great Cave) is about 39 m deep with a 27 m square mandapa supported by rows of six columns.
- Architecture:**
 - The layout follows **mandala-based planning** symbolising cosmic order and spiritual balance.
 - Key elements include **mandapa, garbhagriha, dvarapalas, and rock-cut corridors**.
- Sculptures:**
 - Major sculptures include **Trimurti Sadashiva (7m)**, Nataraja, Yogishvara, Ardhanarishvara, Ravanaanugrahamurti.
 - The Trimurti depicts Shiva as **Aghora, Tatpurusha, and Vamadeva**, representing creation, preservation, and destruction.



VINAYAK DAMODAR SAVARKAR

A criminal defamation case involving remarks on Vinayak Damodar Savarkar has brought attention to the origin of the title Swatantryaveer, before a Pune court.

About

- **Vinayak Damodar Savarkar**, commonly known as **Veer Savarkar**, was a key political thinker, writer, and revolutionary nationalist in India's independence movement.
- **Education:** He was educated at **Fergusson College** in Pune before moving to London to study law.
- **Revolutionary Activities:**
 - ◆ In 1904, he founded the **Abhinav Bharat Society**, a secret group committed to an armed revolution against British rule.
 - ◆ In London, he led **India House** and the **Free India Society**, where he organized and trained Indian students in revolutionary tactics.
- **Political Ideology:** Savarkar is central to the development of **Hindutva**. He served as the president of the **Hindu Mahasabha** (1937–1943), where he advocated for the concept of a **Hindu Rashtra** (Hindu Nation).
- **Social Reform:**
 - ◆ Savarkar focused on social improvement. He campaigned against **untouchability** and **caste discrimination**, advocating for equality across all social sections.
 - ◆ He encouraged different castes to **eat and live together** and actively supported **temple entry** for lower castes to reform and unify society.
- **Literary Legacy:**
 - ◆ He wrote **The Indian War of Independence, 1857**, famously recharacterizing the 1857 rebellion as India's first organized struggle for freedom.
 - ◆ He also wrote '**Hindutva: Who is a Hindu?**', where he explained his idea of national identity.



Social Contributions

- **Education and Marriage:** Married to **Savitribai** at age 13; together, they founded India's **first girls' school** at Bhidewada, Pune, in 1848.
- **Balhatya Pratibandhak Griha:** Established in 1863, this was India's first home aimed at **preventing infanticide** and providing refuge to pregnant Brahmin widows and survivors of sexual violence.
- **Satyashodhak Samaj:** Founded in 1873, the "**Seekers of Truth**" society worked to eliminate the socio-economic disadvantages faced by oppressed communities.
- **Terminology:** Phule is credited with being the first to use the term '**Dalit**' to describe the oppressed masses living outside the traditional '**varna system**' (caste hierarchy).
- **Literary Works:** Gulamgiri (Slavery), Shetkarayacha Aasud (Cultivator's Whipcord) and Tiritiya Ratna.

ZOROASTRIANISM

In ancient Persia, the wolf was often viewed as a symbol of evil, a belief deeply rooted in the Zoroastrian ethos. This perception has historically influenced the relationship between humans and wildlife in the region.

About Zoroastrianism

- **Origin:** Founded by **Zarathustra** (Zoroaster) in ancient **Persia** (modern-day Iran) around **1500–1000 BCE**.
- **Monotheism:** One of the world's oldest monotheistic faiths, centered on the worship of **Ahura Mazda** (Wise Lord), the supreme source of truth and wisdom.
- **Historical Shift:** After the Islamic conquest in the 7th century CE, the religion declined in Iran. Between the 8th and 10th centuries, many followers migrated to India, where they are known as **Parsis**.
- **Presence in India:** Parsis are a recognized religious minority. Despite their small size (**57,264** members according to the 2011 Census), they remain a highly influential community.

MAHATMA JYOTIRAO PHULE

Prime Minister Narendra Modi recently paid tribute to Mahatma Jyotirao Phule on his birth anniversary, honoring his legacy as a transformative social reformer.

About Jyotirao Phule

- **Birth:** Born on **April 11, 1827**, in Khatgun village, located in the present-day **Satara** district of Maharashtra.
- **Title:** Originally from the '**mali**' caste with the family name '**Gorhay**', he was honored with the title **Mahatma** on May 11, 1888, by social activist **Vithalrao Krishnaji Vandekar**.
- **Ideology and Influence:** His beliefs were rooted in **liberty, egalitarianism, and socialism**. He was deeply influenced by **Thomas Paine's** book, *The Rights of Man*.

Sacred Literature

- **The Avesta:** The primary collection of sacred texts, including ritual instructions, prayers, and ethical teachings.
- **The Gathas:** The oldest part of the Avesta, consisting of hymns believed to be composed by Zoroaster himself.
- **Core Philosophical Ideas**
- **Cosmic Dualism:** The universe is a struggle between **Ahura Mazda** (Good) and **Angra Mainyu** (Evil).
- **Ethical Triad:** Life is guided by three pillars:
 - ◆ **Humata** (Good Thoughts)
 - ◆ **Hukhta** (Good Words)
 - ◆ **Hvarshta** (Good Deeds)
- **Asha (Truth):** The principle of righteousness and cosmic order.

- **Free Will:** Humans are responsible for choosing between right and wrong, actively assisting the victory of good through moral actions.
- **Judgment and Afterlife:** Souls are judged based on their earthly deeds; the faith envisions an eventual savior (**Saoshyant**) and the final triumph of good.

Religious Symbols and Worship

- **Fire (Sacred Flame):** Represents purity and divine light. It is kept burning continuously in **Fire Temples**.
- **Faravahar:** A winged figure representing the soul's moral progress and the power of choice.
- **Sacred Elements:** Water, earth, and air are also considered sacred; pollution of nature is strictly avoided.
- **Initiation (Navjote):** A ritual where a child is inducted into the faith, receiving the **Sudreh** (sacred shirt) and **Kusti** (sacred thread).
- **Festivals:** **Nowruz** (New Year) is the most significant celebration, marking renewal and the arrival of spring.

AMBEDKAR JAYANTI

On April 14, 2026, India commemorated the 135th birth anniversary of Dr. B.R. Ambedkar. The day is known as Ambedkar Jayanti.

About Dr. Bhim Rao Ambedkar

- **Birth:** Born on April 14, 1891, in **Mhow** (now in Madhya Pradesh) as the 14th child of **Ramji Maloji Sakpal and Bhimabai Sakpal**.
- **Education:** Overcoming severe caste discrimination, he earned prestigious degrees from **Columbia University** and the **London School of Economics**.
- **Titles:** Popularly known as **Babasaheb**, he was posthumously awarded the **Bharat Ratna** in 1990 and the title of "**Bodhisattva**" in 1954.

Major Contributions

- **Architect of the Constitution:**
 - ◆ **Drafting Committee Chairman:** He framed the democratic framework of India, ensuring the inclusion of Fundamental Rights and Equality before law.
 - ◆ **Article 17:** Instrumental in the abolition of untouchability.
 - ◆ **Article 32:** He famously described the 'Right to Constitutional Remedies' as the 'heart and soul' of the Constitution.
- **Social and Political Reform:**
 - ◆ **Caste & Gender Justice:** Led movements like the **Mahad Satyagraha (1927)** and **Kalaram Satyagraha (1930)**. He founded the **Bahishkrit Hitkarini Sabha** for the welfare of the ostracized.
 - ◆ **Affirmative Action:** Championed reservations in education and employment for Scheduled Castes (SCs) and Scheduled Tribes (STs).

- ◆ **Labour Rights:** As Labour Member of the Viceroy's Council, he introduced the 8-hour workday, minimum wages, and maternity benefits.
- ◆ **Political Entities:** Founded the Independent Labour Party (1936), Scheduled Castes Federation (1942), and announced the Republican Party of India (1956).
- **The Hindu Code Bill:**
 - ◆ As India's first Law Minister, he drafted this bill in 1950 to modernize Hindu personal laws and grant equal rights to women in marriage and inheritance.
 - ◆ Although it faced resistance leading to his resignation, its essence was later enacted through four separate acts (e.g., Hindu Marriage Act, 1955 and Hindu Succession Act, 1956).

Literary Works and Economic Thought

- **Key Books:** Annihilation of Caste, The Problem of the Rupee (which influenced monetary policy), Who Were the Shudras?, and The Buddha and His Dhamma.
- **Journals:** Mooknayak (1920) and Bahiskrit Bharat (1927).

Conversion to Buddhism

- In 1956, Ambedkar embraced Buddhism with millions of followers to seek dignity and equality outside the caste system, initiating the Dalit Buddhist movement.

CHANDRA SHEKHAR (1927–2007)

The Prime Minister recently paid tribute to Chandra Shekhar on his birth anniversary, marking his 100th birth year.

Early Life and Education

- **Birth:** Born on **April 17, 1927** (also recorded as July 1), in **Ibrahimpatti**, Ballia, Uttar Pradesh, into a farming family.
- **Education:** Earned a Master's degree in **Political Science** from **Allahabad University** in 1951.
- **Early Influences:** Joined the Socialist Movement as a student, working with **Acharya Narendra Dev** and drawing influence from **Dr. Ram Manohar Lohia**.

Political Journey and Ideology

- **Socialist Roots:** Began in the **Praja Socialist Party**, serving as Secretary in Uttar Pradesh before his 1962 election to the **Rajya Sabha**.
- **The "Young Turk":** Joined the **Indian National Congress** in 1964/65.
- He was famously dubbed a "**Young Turk**" for his integrity, bold views, and opposition to monopoly power.
- **Policy Impact:** Strongly advocated for **bank nationalization** and the **abolition of privy purses**.
- **Journalism:** In 1969, he founded and edited the weekly publication **Young Indian**.

Emergency and Resistance

- **Arrest:** Despite being part of the ruling party, he was jailed under the **Maintenance of Internal Security Act (MISA)** during the **Emergency (1975–77)** for opposing the government.
- **Literary Works:** While imprisoned, he wrote *Meri Jail Diary*. He also authored *Dynamics of Social Change*.

Social Work and Grassroots Connection

- **Bharat Yatra (1983):** Undertook a **4,260 km walk (padayatra)** from **Kanyakumari to Rajghat**, New Delhi, to connect with rural India and understand grassroots challenges.
- **Training Centres:** Established roughly **15 Bharat Yatra Centres** nationwide to train social and political workers.

Tenure as Prime Minister

- **Term:** Served as Prime Minister from **November 10, 1990, to June 21, 1991**.
- **Resignation:** Stepped down in March 1991 after Congress withdrew its support.

JAGADGURU BASAVESHWARA

PM Narendra Modi recently paid homage to Jagadguru Basaveshwara on the occasion of Basava Jayanthi, celebrated on April 20, 2026.

About

- **Life:** A 12th-century philosopher, poet, and statesman born in **1131 AD** in Bagevadi, **Karnataka**, into a Brahmin family.
- **Founder of Lingayatism:** He established the **Lingayat tradition**, which emphasizes a direct and personal connection with the divine through the **Ishtalinga**.
- **Identity:** While Lingayats are often classified as a Hindu subcaste called **"Veerashaiva Lingayats"** and considered Shaivites, Basavanna's teachings sought to transcend traditional social divisions. He served as a minister under **King Bijjala II** of the Kalachuri dynasty.

Social Contributions

- **Equality:** A key figure of the **Bhakti movement**, he advocated for social justice, gender equality, and the total rejection of **caste hierarchy** and discrimination.
- **Anubhava Mantapa:** He established this pioneering forum (often called the **world's first Parliament**) for open dialogue on spiritual and social issues, welcoming people of all backgrounds and genders.
- **Literary Work:** He used poetry, known as **Vachanas**, to spread social awareness and simplify complex spiritual truths.

Beliefs

- **Kayak:** The principle of "work as worship," emphasizing the dignity of manual labor.
- **Dasoha:** The concept of equal distribution of wealth and selfless service.

ADI SHANKARACHARYA

The Prime Minister of India paid tribute to Adi Shankaracharya on his Jayanti.

About

- **Adi Shankaracharya** (approximately **788–820 CE**) was a foundational philosopher, theologian, and saint born in **Kalady, Kerala**.
- **Advaita Vedanta:** He established the doctrine of **non-dualism**, asserting that **Atman** (individual soul) and **Brahman** (universal consciousness) are identical rather than separate entities.
- **Concept of Maya:** Shankaracharya taught that the apparent reality of the physical world is **Maya** (illusion).
- **Path to Liberation:** He emphasized that this illusion dissolves only upon attaining **Jnana** (true knowledge), revealing the oneness of existence.
- **Prasthanatrayi Commentaries:** He authored authoritative **Bhashyas** (commentaries) on the three foundational pillars of Vedanta: the **Brahma Sutras**, the **Bhagavad Gita**, and the **12 major Upanishads**.
- **Devotional Hymns:** Shankaracharya composed over **72 hymns**, including renowned works such as **Soundarya Lahari**, **Sivananda Lahari**, and **Nirvana Shatakam**.
- **The Shanmata System:**
 - ◆ Shankaracharya is credited with organizing the **Shanmata system**, which unified the worship of six primary deities (Shiva, Vishnu, Shakti, Ganesha, Muruga and Surya) under a single philosophical framework:
 - ◆ By presenting each deity as a valid path to realizing **Brahman**, he successfully reduced sectarian conflicts and harmonized various Hindu traditions.

VISHWA SUTRA

The Ministry of Textiles debuted the "Vishwa Sutra" collection at the 61st Femina Miss India grand finale, held on April 18, 2026, in Bhubaneswar, Odisha.

About the Initiative

- Created through a partnership between the **Office of the Development Commissioner (Handlooms)** and the **National Institute of Fashion Technology (NIFT)**.
- The collection integrates **30 state-specific Indian weaves** with the design aesthetics and cultural silhouettes of **30 different nations**, blending traditional craftsmanship with global fashion trends.

Key Features

- **The 30-30 Framework:** Each of the 30 state winners showcased a unique weave from their region, reimagined using international design sensibilities (e.g., **Odisha Ikat** with Greek forms or **Banarasi** with UAE-inspired styles).

VISHWA SUTRA

Weaves of India, for the World



➤ **Kunbi Weave Highlight:** Sadhvi Satish Sail (the winner from Goa) wore the **Kunbi weave**, a traditional Goan fabric symbolizing family (**kun**) and seed (**bi**) which was redesigned as a **Central European skirt silhouette**.

Significance

- **5F Framework:** Directly supports the Prime Minister’s vision: Farm → Fibre → Factory → Fashion → Foreign.
- **Vocal for Local to Global:** Aims to elevate cottage-level industries into an internationally competitive fashion market.

➤ **Soft Power:** Utilizes textiles for **cross-cultural diplomacy**, positioning Indian handlooms as a tool for storytelling on the world stage.

VIRLI KHANDAR EXCAVATION

Ongoing excavations at Virli Khandar (Pauni tehsil, Bhandara district, Maharashtra), led by Dr. Prabash Sahu, are yielding crucial insights into megalithic funerary practices in the Vidarbha region.

Key Findings

- A total of **69 megalithic burials** have been identified, with select burials under detailed excavation.
- The site exhibits a **unique composite megalithic structure**, combining **stone circles with menhirs**, which distinguishes it from nearby sites such as **Pimpalgaon Nipani and Tirota Kheri that predominantly feature dolmen burials**, making Virli Khandar distinct in the region.
- A previously unreported pottery arrangement was found in one burial, where nearly 50 pots were systematically placed, with larger bowls covered by inverted bowls, laid over a layer of black cotton soil above a natural lateritic (murum) base.
- **Recovered artifacts include:**
 - ◆ **Copper objects** (necklace)
 - ◆ **Iron implements** (axes, chisels, ladles, arrowheads)
 - ◆ **Semi-precious stone beads** (notably etched carnelian beads)
 - ◆ Gold earring

Menhirs: Meaning and Significance

- A menhir is a large, upright, human-made stone, usually tapered at the top, either standing alone or forming part of a megalithic complex.
- The term is derived from Brittonic words meaning “long stone”.
- Menhirs are associated with burial markers, ceremonial practices, and in some cases astronomical alignments.



VIRLI KHANDAR EXCAVATION

Related Megalithic Context

- The **Mudumal Megalithic Menhirs (Telangana)**, dating back **3,500–4,000 years**, are included in India's **UNESCO Tentative World Heritage List** and are considered a possible **megalithic astronomical observatory with solar alignments**.
- Globally, the **Grand Menhir Brisé in Brittany, France (20.6 m tall)** is among the largest known menhirs.

Significance

- The site provides strong evidence of **regional variation in megalithic traditions**, especially the rare **stone circle–menhir combination**.
- It enhances understanding of **ancient burial systems, material culture, and ritual practices** in central India.

Iron Age Megalithic Culture in India (c. 1200 BCE – 300 CE)

- It represents a significant archaeological phase in India marked by the **use of iron technology** and **distinctive burial practices** involving **large stones (megaliths)**.
- It is found across **Peninsular India**, especially Deccan Plateau, South India (Karnataka, Tamil Nadu, Andhra Pradesh), Vidarbha (Maharashtra); and Eastern India (Odisha).

Types of Megalithic Burials:

- **Sepulchral (Burial) Monuments:** Stone circles; Dolmens (table-like structures); Cists (stone-lined graves); Menhirs (upright stones); and Cairn circles (heap of stones)
- **Non-Sepulchral / Memorial:** Cenotaphs (symbolic burials without bodies).

Key Features of Megalithic Culture:

- **Iron Technology:** Extensive use of **iron tools and weapons** like axes, spearheads, arrowheads.
 - ◆ It marks the transition from **Bronze Age to Iron Age**.
- **Pottery: Black-and-red ware (BRW)** is characteristic, often found in burials with grave goods.
- **Grave Goods:** Objects buried with dead are iron tools, copper ornaments, beads, reflecting **status differentiation, and belief in afterlife**.
- **Skeletal Remains:** Extended or secondary burials; sometimes absent due to preservation issues.

LAWS ON RETURN OF ANTIQUITIES

U.S. authorities have returned 657 antiquities worth nearly \$14 million to India as part of ongoing investigations into international trafficking networks.

What is Antiquity?

- Under the **Antiquities and Art Treasures Act, 1972** (effective 1976):

- ◆ **General objects (≥100 years old):** Sculptures, coins, paintings, inscriptions, and artefacts of historical, cultural, or scientific value.
- ◆ **Manuscripts/documents (≥75 years old):** Items of literary, historical, or aesthetic importance.

International Legal Framework

- The **UNESCO 1970 Convention** defines cultural property and emphasises **international cooperation to curb illicit trade**.
- It requires **source countries to prove ownership (at their own cost)** when claiming return of antiquities.

Indian Legal Framework

- **Pre-Independence:** Limited protection mechanisms.
- **Antiquities (Export Control) Act, 1947:** Regulated export of antiquities.
- **Ancient Monuments and Archaeological Sites and Remains Act, 1958:** Focused on monument protection.
- **Antiquities and Art Treasures Act, 1972:**
 - ◆ Prohibits export of antiquities **without Central Government permission**.
 - ◆ Mandates licensing of dealers by the Archaeological Survey of India (ASI).
- Constitutional provisions distribute responsibility for heritage across **Union, State, and Concurrent Lists**.

Procedure for Return of Antiquities

- **Pre-1947:** Depended on cultural diplomacy and goodwill; no global framework existed.
- **1947–1976:** Relied on bilateral negotiations and domestic laws, with weak international enforcement (India ratified UNESCO Convention only in 1977).
- **Post-1976:** Stronger legal basis—unauthorised export is illegal, making recovery easier through legal claims and international cooperation.

Notable Recovered Antiquities

- **Bronze Avalokiteshvara (Sirpur, Chhattisgarh)** with inscription of craftsman Dronaditya.
- **Red sandstone Buddha in *abhaya mudra*** (gesture of protection).
- **Dancing Ganesha** sculpture from Madhya Pradesh.

Additional Information

- In 2024, India and the United States of America signed the first ever '**Cultural Property Agreement**' to prevent and curb the illicit trafficking of antiquities from India to the USA.
- The Cultural Property Agreement (CPA) is aligned with the **1970 UNESCO Convention** on the means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, to which both countries are States party.

INTERNATIONAL BOOKER PRIZE 2026

Six books have been shortlisted for the International Booker Prize 2026, with the winner to be announced on 19 May 2026 at Tate Modern, London.

About the Prize

- Formerly the **Man Booker International Prize**, it is awarded annually for long-form fiction or short story collections translated into English.
- Eligible works must be originally written in a non-English language and published in the **UK/Ireland between 1 May 2025 and 30 April 2026**.

Shortlist 2026

- The shortlist spans a century of history across regions shaped by power, from 1930s Taiwan to post-revolution Iran and Nazi Germany.
- **On Earth As It Is Beneath** by **Ana Paula Maia** (Portuguese; translated by **Padma Viswanathan**) depicts a dystopian penal colony.
- **The Nights Are Quiet in Tehran** by **Shida Bazayr** (German; Ruth Martin) traces an Iranian family's journey from revolution to exile.
- **She Who Remains** by **Rene Karabash** (Bulgarian; Izidora Angel) explores the "sworn virgin" tradition in the Albanian Alps.
- **The Director** by **Daniel Kehlmann** (German; Ross Benjamin) examines complicity under Nazism.
- **The Witch** by **Marie NDiaye** (French; Jordan Stump), earlier longlisted in 2016, explores generational power.
- **Taiwan Travelogue** by **Yang Shuang-zi** (Mandarin; Lin King) explores colonial memory and won the 2024 National Book Award (Translated Literature).

Additional Information

- **Past Winner (2025): Heart Lamp** by **Banu Mushtaq** (Kannada; Deepa Bhashthi) became the first Kannada work to win.
- **The Booker Prize:** It is a separate award and awarded for the best English-language novel; Indian winners include **Arundhati Roy** (*God of Small Things*), **Kiran Desai** (*Inheritance of Loss*), and **Aravind Adiga** (*White Tiger*).

INDIA'S FIRST WATER NEUTRAL COACHING DEPOT

The Kankaria Coaching Depot in Ahmedabad has become India's first water-neutral railway depot by treating and reusing its wastewater.

Key Achievements

- It conserves nearly **1.60 lakh** litres daily and **5.84 crore litres** annually.
- This system reduces freshwater dependence and serves as a replicable sustainability model for Indian Railways.

Treatment Process

The depot uses a multi-stage method to make water safe for reuse:

- **Phytoremediation:** A process where living plants clean contaminated soil or water by absorbing pollutants. It is most effective in areas with low contamination levels to ensure steady plant growth.
- **Filtration:** Involves passing water through wetlands, sand, and carbon filters.
- **Disinfection:** Involves using Ultraviolet (UV) light to eliminate microorganisms.

BioNEST

The BIRAC-BioNEST Incubation Centre was recently inaugurated at the CSIR-CFTRI (Central Food Technological Research Institute) in Mysuru.

About BioNEST

- It was launched by the **Biotechnology Industry Research Assistance Council (BIRAC)** to foster India's biotech innovation ecosystem.
- **Objective:** The scheme aims to establish bioincubators that bridge the gap between **industry and academia**, transforming scientific research into market-ready commercial products.
- **Funding:** Financial support is aligned with the government's umbrella scheme, '**Biotechnology Research Innovation and Entrepreneurship Development**' (Bio-RIDE).

Support and Services

- **Infrastructure:** Provides startups with access to high-end laboratories, specialized advanced equipment, and scale-up validation facilities.
- **Mentorship:** Offers comprehensive guidance in **Intellectual Property (IP) management**, legal and regulatory requirements, certifications, and resource mobilization.
- **Networking:** Acts as a unique platform for knowledge exchange, technical mentorship, and business networking.
- The new **BIRAC-BioNEST Incubation Centre** specifically supports startups working in cutting-edge food and biotech sectors, including:

- ◆ Nutraceuticals and Botanicals
- ◆ Precision fermentation
- ◆ Probiotics and postbiotics
- ◆ CRISPR-based technologies

CFTRI

- ➔ **CSIR–Central Food Technological Research Institute (CFTRI)**, Mysuru is a constituent laboratory of **Council of Scientific and Industrial Research**, New Delhi.
- ➔ It came into existence during 1950.
- ➔ Its vision is to pursue in-depth research and development in the areas of food science and technology.
- ➔ **Key areas of research CSIR-CFTRI include:**
 - ◆ Engineering Sciences
 - ◆ Technology Development
 - ◆ Translational Research
 - ◆ Food Protection and Safety
- ➔ CFTRI has its Resource Centres at **Hyderabad, Lucknow and Mumbai**.

BIRAC

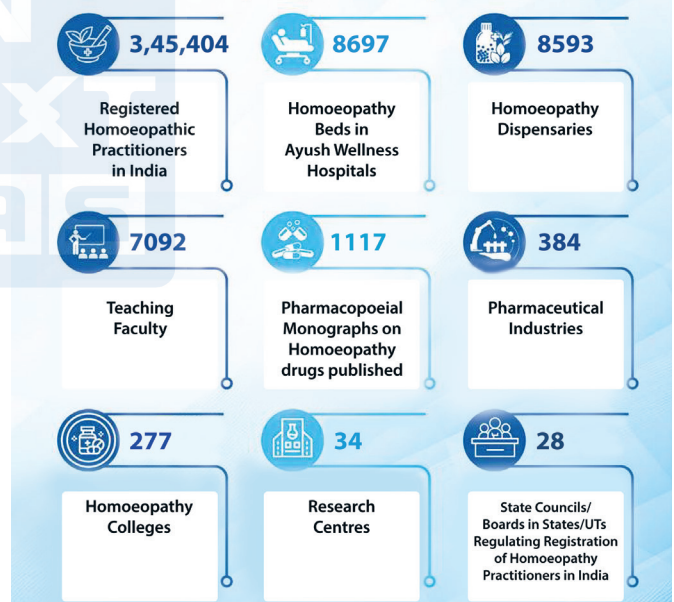
- ➔ **Biotechnology Industry Research Assistance Council (BIRAC)** is a not-for-profit Section 8, Schedule B, **Public Sector Enterprise**, set up by the Department of **Biotechnology (DBT)**, Government of India as an Interface Agency.
- ➔ It strengthens and empowers the **emerging Biotech enterprise** to undertake strategic research and innovation, addressing nationally relevant product development needs.
- ➔ BIRAC provides access to risk capital through **targeted funding, technology transfer, IP management and handholding schemes** that help bring innovation excellence to the biotech firms and make them globally competitive.

- ➔ **Origin:** The term is derived from the Greek words **Homois** (similar) and **Pathos** (suffering). It was formalized by Dr. Hahnemann in the late 18th century, with his work **Organon of Medicine** serving as its foundational text.
- ➔ **Methodology:** Medicines are prepared from natural plant, mineral, and animal sources through **dilution and succussion**.

Homoeopathy in India

- ➔ **History:** Introduced around **1810**. A major milestone occurred in **1839** when **John Martin Honigberger**, a disciple of Hahnemann, successfully treated **Maharaja Ranjit Singh**.
- ➔ **Current Status:** India has one of the world's largest homoeopathic workforces, with over **3.45 lakh registered practitioners** and **291 educational institutions**.
- ➔ **Regulation:** The **National Commission for Homoeopathy (NCH)**, established under the 2020 Act, began operations on **July 5, 2021**, as the primary regulatory body.
- ➔ Homoeopathy is a pillar of **AYUSH** (Ayurveda, Yoga and Naturopathy, Unani, Siddha, Homoeopathy, Sowa-Rigpa) under the **Ministry of AYUSH**, established in 2014.

Homoeopathy Landscape in India



WORLD HOMOEOPATHY DAY 2026

World Homoeopathy Day is observed annually on April 10 to commemorate the birth anniversary of Dr. Samuel Hahnemann (1755–1843), the German physician who founded the system.

Theme of 2026

- ➔ **Theme:** "Homoeopathy for Sustainable Health."
- ➔ The theme emphasizes affordable and accessible healthcare, aligning with **Universal Health Coverage** and United Nations Sustainable Development Goal 3 (**SDG 3: Good Health and Well-being**).

About Homoeopathy

- ➔ **Principle:** Based on the natural law of healing, "**Similia Similibus Curantur**" (Like cures likes). This means a substance that causes symptoms in a healthy person can treat similar symptoms in a patient when given in minute doses.

FRAILITY

A study published in the journal *Cell Stem Cell* highlights the potential of stem cell therapy to treat frailty.

What is Frailty?

- ➔ A state in which **biological aging** is **speed-up** marked by lower endurance and slower recovery.
- ➔ It stems from cumulative effects like **chronic inflammation**, muscle loss, vascular aging, immune dysfunction, and stress, rather than a single disease.

- Since it has no single molecular target, research usually manages consequences instead of reversing the condition.

Statistics

- **Global:** Affects up to **25%** of people over age 50.
- **India:** The 60+ population will reach nearly **20% by 2050**. The condition is likely common but rarely diagnosed.

BABU JAGJIVAN RAM

Prime Minister Modi paid tributes to Babu Jagjivan Ram on his birth anniversary.

About

- **Babu Jagjivan Ram** was a freedom fighter and social reformer born on **5 April 1908** in Chandwa village (present-day Bihar).
 - ◆ He studied at **Banaras Hindu University** and later graduated from **University of Calcutta**.
- **Role in Freedom Struggle:** He was inspired by Mahatma Gandhi and actively participated in the national movement.
 - ◆ He took part in the **Civil Disobedience Movement** and the **Quit India Movement**.
- **Social Justice Contributions:** He founded the **Akhil Bharatiya Ravidas Mahasabha** and the **All India Depressed Classes League** to mobilize marginalized communities.
 - ◆ He was instrumental in the enactment of the **Protection of Civil Rights Act, 1955**.
- **Political Career:**
 - ◆ He was a member of the Constituent Assembly of India.
 - ◆ He was a **Cabinet Minister for 35 years**- the longest serving minister handling several key portfolios.
 - ◆ As Food & Agriculture Minister, he is credited with the **Green Revolution** and as Defence Minister he led India to the historic **1971 war**, which saw the birth of Bangladesh.
 - ◆ He served as the **Deputy Prime Minister** of India in **1979** under **Morarji Desai**.

Babu Jagjivan Ram (1908–1986)

Background

- **Early Life:** Born on **April 5, 1908**, in Chandwa village in Bihar. He studied at **Banaras Hindu University** and graduated from the **University of Calcutta**.
- **Freedom Struggle:** Inspired by Gandhi Ji, he participated in the **Civil Disobedience** and **Quit India** movements.
- **Political Career:** A member of the **Constituent Assembly** and a Cabinet Minister. He served as **Deputy Prime Minister** in 1979.

Constitutional & Social Role:

- **Committee Work:** Served on the **Advisory Committee on Fundamental Rights** and **Sub-Committee on Minorities** to protect weaker sections.
 - ◆ Argued for **caste-based reservations** in government and legislatures.

- ◆ He advocated that the Constitution must prohibit **"untouchability"** (Article 17).
- ◆ Founded the **All India Depressed Classes League** and **Akhil Bharatiya Ravidas Mahasabha**.

Administrative Reforms

- **Labour:** He got the **Industrial Disputes Act** introduced and established a welfare framework for organized and unorganized workers.
- **Agriculture:** As Minister, he is credited with the **Green Revolution** and establishing **Krishi Vigyan Kendras**.
- **Defence:** Led India during the **1971 War**, resulting in the birth of **Bangladesh**.
- **Infrastructure:** Nationalization of air transport was one of the most significant developments of his term, he also worked for the expansion of postal/telegraph network into rural areas.
- **Reservations:** The provision for State intervention for the overall advancement of socially backward classes by way of reservation in public employment and reservation of seats in legislatures for the Scheduled Castes and Scheduled Tribes also owes its success to leaders like Babu Jagjivan Ram.

Legislative Impact

- He was instrumental in enactment of the **Protection of Civil Rights Act, 1955**.

OPERATION NUMKHOR

Operation Numkhor, a nationwide crackdown on vehicle smuggling and forged registration rackets, is likely to be discussed in the upcoming Indo-Bhutan Joint Customs Group meeting.

About Operation Numkhor

- Launched by the **Customs (Preventive) Commissionerate, Kochi** in September 2025.
- Targets the **smuggling of premium second-hand vehicles via Bhutan** and the use of forged registration documents, allegedly involving Motor Vehicle Department (MVD) officials.
- Involves **state-wide raids and seizures** across multiple states.

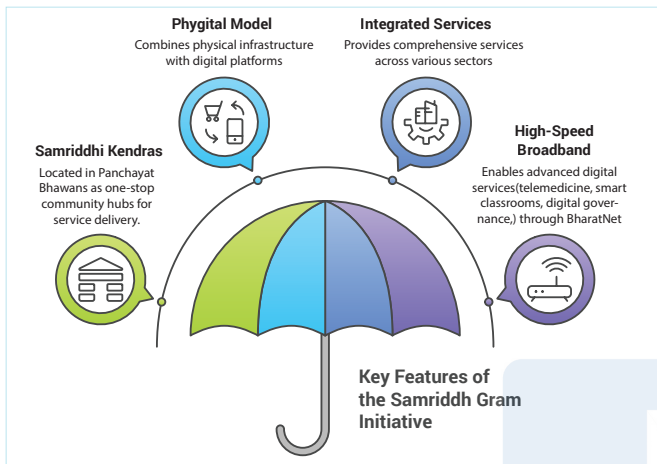
SAMRIDDH GRAM INITIATIVE & WSIS PRIZES 2026

The **Samriddh Gram Initiative** was recently nominated for the **World Summit on the Information Society (WSIS) Prizes 2026** under **Action Line (AL) C6: Enabling Environment**. This marks the global recognition of India's use of digital infrastructure for inclusive rural development.

About the Samriddh Gram Initiative

- It is an **Integrated Phygital Service Delivery Model** enabled by **BharatNet**.
- **Authority:** The initiative is led by the **Department of Telecommunications**, under the **Ministry of Communications**.

- **Phygital Model:** It integrates physical and digital service delivery methods to provide various citizen-centric services directly in rural areas.
- **Operational Support:** Field operations and community mobilization are supported by the **Digital Empowerment Foundation**.
- India's inaugural **Samridhi Kendra** was recently opened in **Umri village**, located in the **Guna district of Madhya Pradesh**.



World Summit on the Information Society and WSIS Prizes

- The World Summit on the Information Society is a global multi-stakeholder platform established in 2004 to advance digital development and inclusive information societies.
- The **WSIS Prizes, launched in 2012** under the WSIS Stocktaking Process, recognise **ICT-driven projects** contributing to sustainable development and the **Sustainable Development Goals**.
- The prizes serve as a global mechanism to identify and promote impactful digital initiatives, recognising stakeholders as winners and champions for advancing WSIS Action Lines and the Global Digital Compact.

RIGHT TO SAFE TRAVEL

The Supreme Court of India has held that the right to safe travel on National Highways (NHs) is part of the right to life under Article 21.

Constitutional Interpretation

- The Court clarified that Article 21 imposes a positive obligation on the State to ensure a safe environment for commuters.
- Deaths due to avoidable hazards such as **illegal parking, potholes, or unsafe infrastructure** amount to a failure of this duty.

Key Directions by the Court

- The Court imposed an immediate ban on construction or operation of new dhabas, eateries, or commercial structures within the right-of-way of NHs.

Alarming Statistics

National Highways constitute only about 2% of India's road network but account for nearly **30% of road fatalities**, indicating serious safety gaps.

- It **prohibited parking or stopping of heavy and commercial vehicles on highways**, carriageways, or paved shoulders, except at designated lay-bys or wayside amenities, to prevent accidents in blind spots.
- **District Magistrates** have been directed to **remove or demolish all unauthorised structures** within 60 days.
- No authority can grant licenses or approvals within highway safety zones without prior clearance from NHA or PWD.
- A **District Highway Safety Task Force** must be established in every district to monitor and enforce safety norms.

Significance

- The ruling expands Article 21 to include road safety, making the State accountable for preventing avoidable highway deaths.

B'NEI MENASHE

Around 240–250 members of the B'nei Menashe community from Manipur and Mizoram arrived in Tel Aviv under Operation Wings of Dawn. Their settlement is planned in centres such as Nof HaGalil.

Who are the B'nei Menashe?

- The **B'nei Menashe ("sons of Manasseh")** belong to the **Mizo and Kuki** communities of Manipur and Mizoram (about 7,000 population).
- They claim descent from the **Tribe of Manasseh**, one of the **Ten Lost Tribes of Israel**, exiled after the **Assyrian conquest (722 BCE)**.

Migration Narrative and Identity Formation

- Their tradition traces migration through **Persia (Iran) and Afghanistan to Northeast India**, though **historical and genetic evidence is inconclusive**.
- **Identity evolved through:**
 - ◆ 19th–20th century Christian missionary influence
 - ◆ Local revivalist movements
 - ◆ Interaction with Jewish groups like **Amishav** and **Shavei Israel**
- From the **1980s**, many **adopted Judaism** and its practices.

Recognition and Migration to Israel

- In **2005**, Israel's Chief Rabbinate recognised them as "**Lost Seed of Israel**".
- Migration occurs via **Aliyah (return migration)**, supported by:
 - ◆ Jewish Agency for Israel (JAFI)
 - ◆ Israeli government programmes
- **Thousands have migrated** in phases since the 1980s.

DATA RECAP

- The 97th Constitutional Amendment Act, 2011 inserted Part IX-B in the Constitution under Articles 243-ZH to 243-ZT dealing with cooperative societies.
- Article 43B was added as a Directive Principle of State Policy to promote voluntary formation and democratic functioning of cooperative societies.
- The right to form cooperative societies was made a Fundamental Right under Article 19 through the 97th Constitutional Amendment Act.
- The Multi-State Cooperative Societies Act was enacted in 2002 to regulate cooperatives operating across multiple states.
- OCI and PIO schemes were merged in 2015, and OCI cardholders receive lifelong visa facilities but do not enjoy voting rights in India.
- The RBI proposed a single objective criterion of ₹1,00,000 crore asset size for classification as NBFC-UL (Upper Layer NBFC).
- A company requires a minimum Net Owned Fund of ₹10 crore to register as an NBFC with the RBI.
- Housing Finance Companies require a minimum capital base of ₹20 crore for RBI registration.
- Australia is an important source of critical minerals such as lithium, cobalt, and rare earth elements required for clean energy transitions.
- The Australia–India Critical Minerals Research Hub was established in 2023 with funding support of USD 5 million to strengthen critical mineral research and innovation.
- India and Australia upgraded their relationship from a Strategic Partnership in 2009 to a Comprehensive Strategic Partnership in 2020.
- India and South Korea elevated their ties to a Special Strategic Partnership in 2015, expanding cooperation into defence, technology, and strategic sectors.
- India secured the inclusion of the African Union in the G20 during its presidency, amplifying the representation of more than 1.4 billion people in global governance.
- India supported the Loss and Damage Fund under global climate negotiations, helping secure international pledges exceeding USD 700 million for climate-vulnerable countries.
- The International Solar Alliance promoted by India includes more than 100 countries working to expand renewable energy access globally.
- India advocates a “phase down” rather than “phase out” of coal to balance climate commitments with developmental energy needs.
- Buddhism was introduced to Sri Lanka in the 3rd century BCE by Mahinda, the son of Emperor Ashoka.
- Samrat Samprati was the 5th Mauryan emperor who ruled around 224–215 BCE and is regarded in Jain tradition as the “Jain Ashoka”.
- Elephanta Caves, a UNESCO World Heritage Site since 1987, are located on Elephanta Island (Gharapuri) in Mumbai Harbour.
- The famous Trimurti Sadashiva sculpture at Elephanta Caves is about 7 metres high and represents Shiva’s three aspects—creation, preservation, and destruction.
- Vinayak Damodar Savarkar founded the Abhinav Bharat Society in 1904 to organize armed revolutionary activities against British rule.
- The sacred text of Zoroastrianism is the Avesta, while the Gathas are believed to be hymns composed by Zarathustra himself.
- The Mahad Satyagraha of 1927 led by Ambedkar demanded equal access to public water resources for Dalits.
- Excavations at Virli Khandar in Maharashtra have revealed 69 megalithic burials linked to Iron Age funerary traditions.
- Under the Antiquities and Art Treasures Act, 1972, an object over 100 years old can be classified as an antiquity.
- The Antiquities and Art Treasures Act, 1972 prohibits export of antiquities without permission from the Central Government.
- In India, GLP-1 drugs can currently be prescribed only by endocrinologists, cardiologists, and internal medicine specialists.
- Aditya-L1, launched in 2023, is India’s first dedicated space-based solar mission designed to study the Sun and its outer atmosphere.
- Aditya-L1 is positioned at the Sun–Earth Lagrange Point-1 (L1), which enables uninterrupted observation of the Sun without frequent eclipses.
- The Visible Emission Line Coronagraph (VELC) onboard Aditya-L1 studies the solar corona, coronal heating, and coronal mass ejections (CMEs).
- Artemis II, launched on 1 April 2026, is NASA’s first crewed lunar flyby mission since Apollo 17 in 1972.
- Fata Morgana is a type of superior mirage caused by temperature inversion and atmospheric refraction, making distant objects appear elevated above the horizon.
- India’s Prototype Fast Breeder Reactor (PFBR) at Kalpakkam attained criticality, making India the second country after Russia to develop a commercial fast breeder reactor.
- Left Wing Extremism (LWE) began in 1967 at Naxalbari in West Bengal under leaders Charu Majumdar, Kanu Sanyal, and Jagan Santhal.
- The SAMADHAN strategy and Operation Black Forest (2025) form important components of India’s counter-LWE operations.
- INS Taragiri is the 4th stealth guided missile frigate under Project 17A and contains more than 75% indigenous content.
- INS Aridhaman is India’s 3rd nuclear-powered ballistic missile submarine (SSBN) and strengthens the sea-based leg of India’s nuclear triad.
- INS Aridhaman can carry up to 24 K-15 Sagarika missiles or 8 K-4/K-5 submarine-launched ballistic missiles, with the K-4 missile having a range of about 3,500 km.

TEST YOURSELF

Objective Questions

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SUBJECTIVE QUESTIONS

1. "The emerging global order is marked more by strategic fluidity than stable alliances." Discuss the changing nature of global power politics and evaluate India's potential role as a balancing and shaping power.
2. India's policy of "strategic de-hyphenation" has strengthened its diplomatic flexibility in West Asia. Critically analyse.
3. "India seeks to act as the voice of the Global South while simultaneously deepening ties with major powers." Examine the opportunities and contradictions in this approach.
4. Discuss how Digital Public Infrastructure (DPI) has emerged as an important instrument of India's soft power diplomacy.
5. India-Sri Lanka relations are shaped as much by civilizational ties as by contemporary strategic compulsions. Discuss with reference to maritime security, Tamil issues, and China's presence in the Indian Ocean Region.
6. The fishermen dispute in the Palk Strait reflects the intersection of livelihood concerns, environmental sustainability, and diplomacy. Examine.
7. India-Australia relations have evolved from sectoral cooperation to a comprehensive strategic partnership. Discuss the significance of this transformation in the Indo-Pacific region.
8. Critical minerals are becoming central to twenty-first century geopolitics. Examine the role of India-Australia cooperation in ensuring resilient supply chains and energy transition.
9. Despite their democratic and community-oriented structure, many cooperatives in India continue to remain financially weak and dysfunctional. Analyse the reasons.
10. Political interference and weak governance remain the biggest obstacles to the success of India's cooperative movement. Critically examine.
11. How are Non-Banking Financial Companies (NBFCs) different from traditional banks? Examine their growing importance and associated regulatory challenges in India's financial system.
12. "Size alone cannot determine systemic risk in the financial sector." Critically analyse in the context of RBI's revised methodology for identifying NBFC-ULs.
13. Free Trade Agreements often produce uneven gains among trading partners. Discuss with reference to the India-Australia Economic Cooperation and Trade Agreement (ECTA).
14. Internet shutdowns in India raise important questions regarding the balance between national security and civil liberties. Discuss.
15. Critically analyse the legal and constitutional issues associated with internet shutdowns in India.
16. "The right to internet access has emerged as an essential component of democratic governance." Examine in light of the Supreme Court's judgment in Anuradha Bhasin v. Union of India.
17. Frequent internet shutdowns may weaken India's digital economy ambitions and democratic credentials. Discuss.
18. Climate diplomacy is increasingly becoming an arena of geopolitical competition as well as cooperation. Discuss India's approach towards climate justice and equitable energy transition.
19. India's emphasis on "phase down" rather than "phase out" of coal reflects the developmental concerns of the Global South. Critically analyse.
20. India's aspiration to become a global leader depends not only on economic growth but also on its ability to project civilizational values such as pluralism, coexistence, and humanitarianism. Discuss.